



**MARKED THEME AND INTONATION'S ROLE IN ACHIEVING
TOPICAL COHERENCE IN SPOKEN DISCOURSE IN ENGLISH**

A thesis submitted in fulfilment of the requirements for
the degree of Doctor of Philosophy in Language and Communication

by

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Dedication

To the memory of Saint Pope Kyrillos VI of Alexandria,
to the memory of my beloved and dedicated father,
and to my nephew Daniel.

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Abstract

The present study focuses on the negotiation of "topical coherence" (Geluykkens, 1999). Using a Map Task, it investigates how the interaction between 'Thematic Structure': Theme and Rheme and 'Information Structure': Given and New (Halliday and Matthiessen, 2014; Halliday, 1967a, b) achieves coherence in informal English discourse. The starting point for investigation of topical coherence is the idea that Theme and Given coincide in unmarked cases. The study examines instances where the two systems do not coincide and examines the meanings that are generated through this divergence in order to reveal what effect this divergence has on the spoken interaction. Marked Themes by being usually realised in their own tone groups are information units with information foci and thus informationally foregrounded (Tench, 1996). The focus of information will fall on the Theme as well as on the Rheme. The study examines what role the intonational realisations of the marked Theme, tonicity, tonality and key system will have in structuring map task interactions and in facilitating the successful completion of a map task. Data gleaned from map task shows that marked Theme aids the interlocutors in their negotiation as it is used to foreground previously mentioned information (e.g. a landmark or location on the map) by taking it as point of departure to more easily guide the hearers to the intended location. The data shows also that the previously mentioned information within the marked Theme is made tonic, projected as if it were New and marked Theme is presented as an information unit, in separate tone group, to attract hearers' attention to the importance of the information within the marked Theme. Therefore, the interaction between word order and intonation contributes to guiding the hearers more easily to the intended location. The data also shows that there is an interaction between key and marked Theme. Marked Theme is uttered on high key in contexts that demand the projection of particular information within the marked Theme to draw hearers' attention to the exact location on the map and on mid key to denote the addition of information and to confirm and clarify the details. The information uttered on high key within the marked Theme is previously introduced information (i.e. recoverable). It is concluded that marked Theme aids the interlocutors of the map task in their interaction about the route and contributes to achieving a coherent interaction on the topic of the map task, the route.

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Transcription Conventions and Intonation Symbols

...	Dysfluency
[]	Overlapping speech
,	Short pause
()	Extra- linguistic feature like coughing or laughing
< >	Unclear or inaudible word(s)
...	Tone group boundaries
\	Falling Tone
/	Rising Tone
–	Level Tone
∨	Fall- Rise
∧	Rise- Fall
UPPER CASE letters	Prominent syllable
lower case letters	Non- Prominent syllable
UPper case letters	First syllable is prominent
uppER case letters	Second syllable is prominent
\UPper case letter	First syllable is tonic; it carries the tone
Upp\ER case letter	Second syllable is tonic; it carries the tone
H	High Key
M	Mid Key
L	Low Key

List of Acronyms

SFL	Systemic Functional Linguistics
FSP	Functional Sentence Perspective
CD	Communicative Dynamism
PP	Prosodic FSP factor
IC	Intonation Centre
NP	Noun Phrase
HCRC	Human Communication Research Centre
IG	Instruction Giver
IR	Instruction Receiver

CHAPTER ONE: INTRODUCTION

1.1 Research Background

The current study is interested in topical coherence (Geluykkens, 1999); a type of coherence that is achieved between the interlocutors across the interaction when they are negotiating in order to reach an agreement on the topic of their discussion. In the interaction, successful communication is bound by the interlocutors' ability to communicate their meaning (Grice, 1975). To achieve successful communication, interlocutors employ syntactic and prosodic features to structure their message in a way that ensures that their meaning will be more easily communicated, consequently having a coherent interaction. The interlocutors use such features as cues to guide the hearers to the informationally salient parts of their message. In the current study, the use of marked Theme pattern which is a word- order aspect (Halliday and Matthiessen, 2014) and the way it is realised prosodically in terms of tonality, tonicity and key are examined to uncover their role in structuring English interaction. In the current study, the notion of Theme is conceptualised in Halliday's (ibid) Systemic Functional Linguistics (SFL) and the focus is English language so SFL description of Theme is English- specific.

Marked Theme is a word- order aspect; it is realised by the initial occurrence of a Circumstantial Adjunct or a Complement (ibid) as Example 1.1 below from the data collected in the current study illustrates. The emboldened is the marked Theme:

Example 1.1

So on my map there is like the old mine and the swamp.

Marked Theme and its intonational realisations belong to the text forming resources, Theme system and Information system. These two systems with other text forming resources, lexical relations and cohesive devices form the textual metafunction of SFL (Halliday and Hasan 1976; Halliday and Matthiessen 2014). Through these textual sources, the textual metafunction enables the presentation of the ideational and interpersonal information as a flow of information within a contextually bound text (O'Grady, 2017a).

Information system of Given- New, works through intonation to organise the information in the discourse through three systems, tonality, tonicity and tone¹. Tonality is the segmentation of speech into series of tone groups that represent what the speakers decide to present as pieces of information (Tench, 1996). Tonicity refers to the focus of information (ibid); “it expresses what the speaker decides to make the main point or burden of the message” (Halliday, 1970: 40). It reflects the informational status of information (Halliday and Matthiessen, 2014). Key is the pitch height of the onset, the first prominent syllable within the tone group whether high, mid or low (Brazil, 1997). As for Theme system, in English which is the focus of the current study, it organises the text through “giving the clause its character as a message” (Halliday and Matthiessen, 2014: 64) which is achieved by making an element within the clause the point of departure. So, “Theme is the point of departure of the clause message” (ibid). It is worth stating here that Theme is studied in relation to other languages. Rose (2001) presents a study of Theme in many languages such as Chinese, French, Gaelic, German, Japanese, Tagalog and Vietnamese. In Spanish, for example, as in English, Theme is indicated by the initial position within the clause (e.g. Arús, 2010, 2017). Other languages are different from English with the way of realising Theme for example, in Japanese, Theme is indicated by the particle ‘wa’ which occurs immediately prior to what is chosen as Theme (e.g. Teruya, 2009).

Theme organises the text also as thematic choices are chosen in a way that orients the clause to the rest of the discourse (Halliday and Matthiessen, 2014) to enable building a coherent text. So, in case of marked Theme, Example 1.1 above, the speaker has chosen to make the Circumstantial Adjunct ‘*on the map*’ rather than the Subject ‘*there*’ which is an unmarked Theme, the point of departure of the clause message. In other words, marked Theme is chosen vs the unmarked Theme in which the syntactic Subject ‘*there*’ is usually chosen as the Theme of the clause. Marked Theme signals that the clause message is approached from an unusual angle such as location (O’Grady, 2016).

With relation to previous work, the textual role of Theme and Information systems is considered in the literature. Studies for example Halliday (1967a, 1970), Brazil, Coulthard and John (1980), Brazil (1981, 1997), Davies (1989), Tench (1991) and

¹ The role of intonation system of Tone, the pitch movement, in contributing to structuring the map task dialogue is beyond the scope of the current study due to time and space limitation. But it is planned to be examined in future research.

O'Grady (2013a, 2016) have examined intonation's role in achieving coherence in the spoken discourse. Several other studies (e.g. Fries, 1981, 1995; Downing, 1991; Martin, 1995; Matthiessen, 1995; Davies, 1997; Berry, 1995, 2013a, b; Ghadessy, 1995; Forey, 2002) have considered the role of Theme in structuring the text in terms of the thematic choices and their effect in making a coherent text. But the focus of these studies has been largely on examining Theme's organising role in the written text. As a result, Theme's role in organising the spoken discourse is somewhat neglected. So there is a gap in the literature with relation to how Theme is realised prosodically in a way that structures the spoken discourse. It is important to mention here that the focus on Theme's role in the written text is the result of Halliday's separation of Theme into two components, point of departure and Information (O'Grady, 2017a: 257) as to be explained in detail in 2.3, p. 21. Yet, the separation has been influential as it has drawn the attention to the role of intonation in structuring the information in the text (O'Grady, *ibid*) as the studies cited above show. But, the interplay between word- order and intonational realisations in structuring the spoken text is still less considered as described already. Backlund (1992) examines the thematic choices in telephone conversations but she does not examine their prosodic realisations. But, in a recent article, O'Grady (2017a) examines the role of Theme as an unfolding orienting device in spoken discourse in relation to key choice. O'Grady's study is the first in terms of examining the interaction between Theme and its prosody especially with relation to key. More importantly, O'Grady's study (*ibid*) draws the attention to the importance of examining the prosody of the Theme in order to uncover its organising role in the spoken discourse: "the full semiogenic meaning making potential of Theme, as an unfolding orienting device in spoken discourse, can only be revealed by examining the prosodic realisation of the Theme choice" (*ibid*: 1). He also adds that the examination of the prosodic realisations of Theme enables a more delicate understanding of the functions realised by Theme in spoken discourse. So, by examining marked Theme and its prosody, the current study attempts to add to the knowledge of the interplay between intonation and Theme in structuring the spoken discourse.

Besides the gap in the literature with relation to examining Theme's role in the spoken discourse, focusing on the marked Theme rather than the unmarked Theme comes out of the researcher's pedagogical motives. To improve her written and spoken English, the researcher, as an English foreign language learner is interested to learn more about how thematic choices are constrained by the demands of the discourse in a way that leads to

the use of an unusual structure such as the marked Theme and prosodically learning how marked Theme is realised given that it is an unusual structure. In other words, whether marked Theme will also be prosodically foregrounded. The researcher as an English foreign language lecturer, is interested in transferring the findings to her English foreign language learners to expand their knowledge on the importance of the thematic choices and prosody in creating texture.

Marked Theme has a spatial orientation because as described already it signals that the clause message is approached from an unusual angle such as location (O'Grady, 2016). The type of data used in the current research to examine marked Theme's organising role is related to marked Theme's function and spatial orientation. The data is generated through a method called map task, presented in detail in Chapter Four in which two participants, an instruction giver (IG) and an instruction receiver (IR), interact verbally about the route of the map to aid the latter to draw the route on her/his version of the map (Anderson *et al.*, 1991; Brown, 1995). Map task is used as a means of generating data in the current research, rather than recording daily conversation interactions, because of its spatial orientation. The topic of the map task's interaction is constrained because it is about the route. Salience of locations on the maps was more likely to produce marked Themes as it did (i.e. using spatial location as a Theme as in Example 1.1 above). So, ordinary conversation would have been freer and therefore this could not guarantee that the speakers would produce marked Theme structures. In other words, the spatial orientation of the map task enhances the opportunities of generating marked Theme.

With relation to SFL views on the thematic choices and the accenting of information, the constrained nature of the map task related to topic of the route allows an easy discussion of the map task speakers' reasons of using marked Theme and the way they choose to realise it prosodically. As explained in detail in 2.3, p. 26 and 3.3, p. 44, the choice of the point of departure and the tonic accenting of information are constrained respectively by the discoursal demands and by the speakers' assessment of the information regardless of whether the information is previously or not previously mentioned in the discourse (Halliday and Matthiessen, 2014). The constrained context of the map task in terms of the researcher's awareness of the speakers' intention in communication related to describing the location of the landmarks and the route layout allows to more easily discuss reasons of using marked Theme and how it is realised prosodically in the map task interaction. So, the motives of using map task dialogue in the current study is related both to the

spatial orientation and the constrained nature of the map task and their relation to marked Theme's function and SFL views on Theme choice and accenting of information. The justification of choosing map task is mentioned only in passing here as it is discussed in more detail in 4.2, p. 73.

Using map task dialogue to examine the organising role of the marked Theme in the spoken discourse has also practical and pedagogical motives in everyday life and for teaching English to foreign language learners respectively. While the map task data has artificial nature, its language is similar to that used in real world situations that have spatial orientation such as the language used in tour guide book, tourist information desk or desk information centres in cities and navigation systems in cars. It is also similar to the language of directing people to buildings and locations in a face to face interaction and asking for directions on phone. The communicative ends that the map task speakers will be achieving through using marked Theme and its prosody in the map task interaction can be transferred to such real life situations in order to draw the attention to the importance of using marked Theme and the way it is realised prosodically in the interaction. Pedagogically, based on the researcher's experience as an English foreign language lecturer, the focus on marked Theme is basically related to fact that Kurdish and Arabic English foreign language learners do not show awareness on the use of marked Theme in their spoken and written English. So, map task dialogue could be used as a teaching tool to draw the students' attention to English native speakers use of the marked Theme and the way they realise it prosodically and what communicative needs are achieved through using it. So, with relation to real life and pedagogical needs in mind, the current study attempts to add to the knowledge of what marked Theme and its tonality, tonicity and key achieve in the interaction.

So, the starting point of the current study's investigation of the interplay between word-order and intonation is the correspondence and non- correspondence between Theme system and Information system mentioned above. Halliday (1967b: 205) showed that "the functions 'given' and 'new' are not the same as those of 'theme' and 'rheme' [...] the two are independently variable [...] there is a relationship between them such that in the unmarked case [unmarked Theme] the focus of information will fall on something other than the theme". In other words, Theme and Given coincide in unmarked cases as the information focus does not usually fall on the Theme (Halliday and Matthiessen, 2014). With relation to the tonicity system, marked Theme enables the investigation of the non-

correspondence of the two systems. In cases of marked Theme, usually realised as independent tone groups (Tench, 1996), the focus of information will fall on the Theme as well as on the Rheme. So, the study examines the meanings that are generated through this divergence and what effect this divergence (information focus falling initially) has on the map task interaction. Tonality of the marked Theme is examined to see what effect marked Themes by being realised in their own tone groups will have in the map task interaction. Key of the marked Theme is examined to see if there is an interplay between key choice and marked Theme choice and how marked Theme's key choice contributes to structuring the map task interaction.

Due to marked Theme's function of signalling that the clause message is approached from an unusual angle, it is expected that marked Theme aids map task interlocutors to more easily describe route line through making the details about the landmarks' location the point of departure of their clause message. Although the specific contexts for the occurrence of the marked Theme in the map task interaction cannot be predicted until the map task dialogue is analysed, it is expected that making the location of the landmarks the point of departure of the clause message guides the interlocutors directly to other locations on the map which enables them at a given point of interaction to keep the interaction flow about the route. In other words, the interlocutors are expected to more easily find the landmarks. It is expected also that there will be interaction between marked Theme pattern and its intonational realisations. The interplay is expected to occur as marked Theme is an unusual structure and signals unusual function, so it will be realised in a way that foregrounds the information expressed in it. It is expected that marked Theme is made salient such as uttering it in separate tone group henceforth containing information focus to attract the interlocutors' attention to the importance of the information expressed by marked Theme for route description. On key choice, it is expected that there is an interplay between key choice and the marked Theme in the sense that marked Theme is uttered on a pitch level that contributes to orienting it to the rest of the discourse about the route.

1.2 Research questions and motivations for the study

The research questions examined in the present study are:

Q1. How does marked Theme function as a device for structuring the map task interaction? In other words, how does making the point of departure of the message from an unusual angle contribute to the structuring of the map task dialogue?

Q2. What is the role of the intonational realisations of the marked Theme in structuring of the map task dialogue? With relation to (i) the occurrence of the marked Themes within their own information units; (ii) marked Theme containing tonic accented information; (iii) the key of the marked Theme (the pitch level that marked Theme is uttered on).

Reference is made in 1.1 above to the underlying motives for carrying out the current study. Yet, the following is a detailed description of these motives drawing on the above research questions:

1. A personal motive of learning and teaching English

- i. Aiming to improve her spoken and written English in relation to the thematic choices and their effect in developing the text, the researcher, as an English foreign language learner is interested to learn more about how thematic choices are constrained by the demands of the discourse in a way that leads to the use of an unusual structure such as the marked Theme and how it is realised prosodically given that it is an unusual structure.
- ii. As an English foreign language lecturer, the researcher is interested in transferring the finding on the role of the marked Theme and its prosody in structuring English discourse to the English foreign language classroom to widen her students' knowledge on the use of the marked Theme. The researcher has experienced her students' difficulty with organizing their text, both spoken and written, with relation to the thematic choices. They show tendency to use only the unmarked Theme choice in speaking and writing. However, raising their awareness of changes in texture in spoken or written text will help them learn how English native speakers make their thematic choices in order to realise the meanings they intend to communicate. So, researching such area will add to the researcher's knowledge on the thematic choices and how they are constrained and then transfer the findings to the classroom to help the students improve their spoken and written English.
- iii. Raising the English foreign learners' awareness that the experiential content of the Themes in a text is sensitive to different genres (e.g. Fries, 1995) as referred

to in 2.2, p. 20 as this is important for their future careers. The researcher's students are planning to work as tourist guide, designer of tour guide books and work at tourist information centres or desk information centres in cities. These careers involve describing locations in their home countries to tourists and visitors. To be successful in such future careers, they need be aware that the language in such fields has spatial orientation. So, they should provide clear information about locations by knowing what should be thematised and they should describe the locations in a way that captures the tourists' attention and make them excited and interested in them.

- iv. Using the current study's findings on the role of the marked Theme and its prosody in the spoken discourse in comparative and contrastive studies between English and other languages for example Kurdish or Arabic to find out whether other languages have similar or different structures for organising their discourse. The findings of these comparative and contrastive studies can be used as pedagogical resources to help English foreign language learners improve their written and spoken English. The similar structures help English foreign learners easily learn how marked Theme and other structures build English text. The different structures make the learners aware that English language has different requirement for building a coherent text. So, they will avoid the interference of their native language on the thematic choices of their written and spoken English texts as they will not help them build a coherent text.

So, the personal motive has pedagogical implications; it draws on Forey and Thompson's (2009: 4) argument on the thematic choices' role in building the text: "a fundamental assumption of [...] much of the work within SFL is the commitment to understanding the nature of a range of texts and genres that embody different forms of meaning- making in the wider community, in such a way that the insights can be applied in educational contexts".

2. Academic motive of the gap in the literature with relation to examining the role of marked Theme in structuring the spoken discourse.

- i. As stated in 1.1 above, most of the previous literature on the textual role of Theme has considered Theme's role in structuring the written text whereas the spoken discourse is neglected because of Halliday's separation of Thematic and the

Information systems in which the latter works through intonation. This separation has led to neglecting the role of Theme in structuring the spoken dialogue, with exception of O'Grady (2017a) who examines the interplay between Theme and key in organising political discourse. So, due to the focus on Theme's role in structuring the written text, not much is known about the way Theme is realised prosodically in contributing to structuring the spoken discourse especially with relation to marked Theme as no previous research is carried out to examine its role in the spoken discourse with relation to its tonality, tonicity and key. Therefore, Theme's role in spoken discourse stands in need of clarification. Examining Theme's prosody allows a better understanding of its function in the spoken discourse drawing on O'Grady's (ibid) argument referred to in 1.1 above that Theme's role in the spoken discourse can be revealed by examining its prosody. So the current study aims at extending previous research on the role of Theme in contributing to structuring the spoken discourse by knowing more about the interplay between word- order and intonation.

- ii. With relation to the use of the marked Theme, the study aims at adding to the literature on the reasons of the occurrence of the marked Theme.

1.3 Thesis Structure

This study comprises 8 chapters. Chapter One as shown above has described the focus of the study that is examining the effect of marked Theme choice and the way it is realised prosodically on the level of tonality, tonicity and key in contributing to organising the spoken discourse. Key terms in the study: Theme, marked Theme, tonality, tonicity and key have been briefly defined. A brief picture of the extent of research that has been carried out on the textual role of Theme and marked Theme in particular in written and spoken text has been presented. Reasons that have led to the neglect of Theme's role in organising the spoken discourse and the focus on the written text have been referred to. The motives underlying examining marked Theme and intonation in the spoken discourse, the use of the map task data, the research questions examined and the general expectations for the outcome of the current research have been outlined. The chapter concludes with the description of the structure of the thesis.

Chapters Two and Three are the literature review chapters. Chapter Two is on the concept of theme/Theme and Chapter Three is on the Information system and prosody. Chapter

Two traces the emergence and development of the concept of theme/Theme and outlines the available accounts of theme/Theme in the literature. The chapter starts with Henry Weil's work on word-order. Then it moves to the accounts on theme/Theme. The accounts are presented around the way theme/Theme is being approached. The accounts include (i) the work of the Czech scholars Mathesius' combining theme (Davidse, 1987), Firbas' semi-combining theme (O'Grady, 2017a) and Daneš thematic progression notion; (ii) Halliday's separating Theme², separating Theme (point of departure) from Information. The accounts on theme/Theme are presented to show how theme/Theme is approached in the literature, shed lights on the similarities and differences among the approaches to theme/Theme and more importantly show how Halliday's separating Theme in comparison with the other accounts of theme/Theme is useful in the current study in terms of: (i) identifying Theme and Information as separate systems; (ii) accounting for intonation role in structuring the information in text (i.e. considering it as text forming resource); (iii) examining the interplay between Theme and intonation in structuring the spoken discourse. The accounts on theme/Theme are not explained to show the account that is more accurate; the accounts are accurate in their own context as each has approached theme/Theme for a different purpose. The chapter also considers the effect of the separation of Theme and Information in creating the gap in the literature in terms of the lack of interest in examining the textual role of Theme in the spoken discourse.

Works of SFL linguists that have adopted Halliday's Theme are also referred to in Chapter Two as they show that the thematic choices are made in a way that contributes to organising the text. SFL linguists' views on the extent of Theme, the inclusion of the clause Subject and the textual element within the thematic element, are presented to show how they have extended Halliday's views on the extent of Theme and to discuss what significance or differences the inclusion of the Subject would make to the analysis of the marked Theme under study. The chapter concludes with summing up the views on the concept of theme/Theme outlined in it.

Chapter Three presents the concepts of given and new/ Given and New and prosody. The chapter outlines the different interpretations on given and new/ Given and New concepts such as Halliday, Prince, Chafe and Clark *et al.* These interpretations are presented to

² Halliday's Theme is written with an initial capital like other functions in SF model (Halliday and Matthiessen, 2014: 89)

show: (1) how Halliday's binary division of information (either Given or New³) vs the non- binary argument (information is in a scale of givenness and newness) and (2) how Halliday's view that information is presented in subjective way (i.e. projected as if it is New through making it information focus) irrespective of being previously or non-previously mentioned in the discourse are useful to examining the way map task interlocutors present the information within the marked Themes of the map task dialogue.

The account on given- new/ Given and New concludes with summing up the views on Information system outlined in the chapter. Chapter Three also presents an account of the system of key, the pitch height of the onset syllable, the first prominent syllable within the tone group.

Chapter Four is the methodology chapter. It describes data collection method, map task method that is used to elicit speech for the current research. The chapter defines map task, describes its design and outlines the advantages and the disadvantages of using it as a data collection tool. The advantages of using map task dialogue to examine the textual role of the marked Theme are discussed with relation to the design of the map task. As the choice of the point of departure and tonic accenting of information are constrained respectively by the context and the speakers' assessment of information regardless of whether it is previously or not previously mentioned in the discourse, the controlled context of the map task in terms of the researchers' awareness of the speakers' intention in communication that is related to describing the location of the landmarks and the route layout, allows to easily discuss the use of the marked Theme and the way it is realised prosodically. The chapter also discusses other reasons of using the map task including aspects related to the relation between map task design such as the interaction on landmarks' location and marked Theme's function of signalling that the clause message is approached from an unusual angle such as place.

The methodology chapter describes also data collection procedures that are carried out in two stages. The description on the data collection includes the following: reasons for having two stages of data collection, the recruiting of the participants in the two stages and details about the participants, data collection procedures in the recording studio and tasks given to the participants, the maps used in the two stages and the preliminary results

³ Halliday's Given and New are with initial capital to indicate that information for him is presented as if it is given (i.e. as if it is given = Given) or as if it is new (i.e. as if it is new = New) irrespective of the actual state of information in the discourse.

of the data collected in these two stages on the use of the marked Theme. The methodology chapter concludes with the description of the ethical procedures carried out prior to starting with the research.

Chapters Five and Six are the analysis chapters. The analysis on the use of marked Theme is presented in Chapter Five and the analysis of the intonational realisations tonality, tonicity and key of the marked Theme is presented in Chapter Six. Chapter Five will show that the interlocutors of the map task approach the clause message from unusual locations to more easily guide each other around the map while interacting about the route. Chapter Six will show that the interlocutors of the map task present marked Themes within their own information units and project the recoverable information within the marked Theme as if it is New to attract each other attention to the information in the marked Themes due to its importance in aiding them in their map task. Chapter Six will show also that there is interaction between key choice and the projection and additive meanings denoted by the marked Themes in the map task interaction.

Chapter Seven discusses the above findings on the role of marked Theme and its prosody in discourse described in Chapters Five and Six with relation to theories and findings of previous studies in the literature on the function of the marked Theme and its prosody in text. The chapter will show that the current research has added to the knowledge on the interplay between intonation and marked Theme in structuring the spoken discourse and to the knowledge on why speakers use marked Theme. The findings on the use of the marked Theme and its prosody and map task interaction are discussed with relation to the possible practical applications in the real life and in the classroom setting.

Chapter Eight presents the conclusions reached at in the present study and suggestions for further research on the marked Theme and its prosody.

CHAPTER TWO: LITERATURE REVIEW/ THEME

2.1 Historical emergence of theme/ Theme

Henri Weil (1844), a German Philologist, was one of the first scholars to give priority to the structuring of the texts by examining word-order in ancient and modern languages aiming at comparing them⁴. Weil (ibid) showed that word- order in the sentence reflects speakers' order of ideas and argued that "a sentence contains a point of departure [...] and a goal of discourse. The point of departure is equally present to the speaker and to the hearer; it is their rallying point, the ground on which they meet. The goal of discourse presents the very information that is to be imparted to the hearer" (cited in Firbas, 1974: 12). Weil mentioned also that "the point of departure [...] culminates with a goal" (cited in O'Grady, 2016: 10).

Weil's identifying criteria of the two parts of the sentence show that the known information is made the point of departure as it is equally present to the speakers and the hearers and the unknown information the goal of the discourse as it is the information to be communicated to the hearers. By equating the point of departure with the known information, the point of departure "serves as a link between what is said and what is to be said, and between what is known and not known" (ibid: 10).

Weil did not schematize his views on sentence parts as a system or structure, yet his two parts of the sentence have contributed to showing the order of presenting information in terms of being known and unknown. Weil also did not use the term 'theme' yet the emergence of what is now known as theme/Theme goes back to the influence of his views on Mathesius.

Mathesius (1939) the co-founder of the Prague School was influenced by Weil and his work was an elaboration on Weil's views on the structure of the text. As part of his studies on text structure, Mathesius formulated the notion of Functional Sentence Perspective (FSP) depending on Weil's views (Firbas, 1974). Mathesius' work, by using FSP to describe the information structure, word- order and the dichotomy of psychological subject and predicate of Czech sentence, was an elaboration on the structure of text. Mathesius distinguished between the sentence as a unit with a grammatical and semantic

⁴ Weil's (1844) is available in English translation.

structure and the utterance which is the actual realization of the sentence structure used to convey a message in the process of communication that happens in a context. Drawing on Weil's views on word-order and the two parts of the sentence, Mathesius interpreted an utterance from two perspectives: the communicative point of view and the contextual point of view. On the communicative perspective, Mathesius (1939, 1975) argued that the elements of an utterance have the structure of theme (what the speaker is speaking about) and rheme (what the speaker says about the theme). And on the contextual point of view, Mathesius said that the information in an utterance is to be classified into: known (old, given) information and unknown (new) information.

Mathesius had several views on what theme might be as the available reviews on Mathesius work show (Daneš, 1964; Firbas, 1987). He described theme as point of departure, theme and basis or foundation (cited in Firbas, 1987: 140). As for the point of departure, Mathesius clearly pointed out that theme might not always be or coincides with the point of departure for the utterance (Daneš, 1964), therefore, he later dropped the term point of departure and he used the terms theme and foundation synonymously (Daneš, 1972: 217).

Mathesius (1939: 171) in his other definition of theme "that which is known or at least obvious in the given situation and from which the speaker proceeds in his discourse" (cited in Davidse, 1987: 64) clearly equated what is known with the point of departure. It could be argued that Mathesius' equating point of departure with what is known suggests that there is correspondence between his two aspects of the utterance, the communicative and the contextual mentioned earlier. Davidse (1987) refers to this equation as the combining approach to theme. Some linguists (e.g. Van Dijk, 1977; Dik, 1978) followed the combining approach. Others like Firbas, one of the FSP scholars, did not fully accept equating theme with what is known as to be explained in 2.2, p. 15, while others like Trávníček (1961), a Prague scholar who was influential in Halliday's view on Theme, did not agree on equating theme with information which led later to the separating approach to Theme by Halliday. The separation of Theme from Information allows to examine the role of the Theme realised by the linear position in the clause and the role of the information system realised by intonation in the structuring of the map task dialogue. The separation helps to see how these two layers, Theme and Information interplay during the interaction to structure it.

To conclude, Mathesius' organization of the utterance into theme and rheme was the basis of a well-established research that was made in the field (Davidse, 1987). The following sections present the works of Firbas, Daneš and Halliday on theme/Theme and highlight the important extension and development they have made on Mathesius' work. The works of these three linguists on theme/Theme and information are presented because they are relevant to the current context in terms of addressing Theme and Information. Firbas used Mathesius' contextually given feature and initial position criterion as factors to identify thematic element, Daneš used theme initial position feature as a way of developing the text through his notion of Thematic progression and Halliday used Mathesius' features, theme and information but separated them through considering them as two independent systems that have an organising role in text.

2.2 FSP and the combining and semi-combining approaches to theme

Firbas' (1992) initial position and contextually given criteria are different from Mathesius' as Firbas did not use them as theme defining criteria. Firbas referred to the contextual given feature as the contextual factor (retrievability, context- dependence/ irretrievability context- independent) and point of departure as word order factor, the linear arrangement of the sentence elements. They form part of what Firbas called Communicative Dynamism (CD) phenomenon which he introduced into FSP and he used CD to identify thematic and rhematic elements. CD is the measure of the sentence elements' contribution to the development of the communication where the element with the least communicative degree is the theme. On the written level, the distribution of the CD degree is the outcome of the interplay of the contextual and the word order factors with the semantic factor (i.e. the amount of information presented by the sentence elements). Firbas called these factors the non- prosodic FSP factors. On the spoken level, intonation joins the interplay of these factors as CD fourth participant which Firbas referred to as Prosodic FSP factor (PP).

Firbas introduced CD into FSP theory that describes what happens within the sentence at the moment of communication for the communication to be completed. The theory shows that the sentence is perspectivised towards the element that completes the communication. Sentence elements show different CD degrees as they contribute differently to the completion of communication. For Firbas, the element that contributes the least to the

development of communication is thematic (i.e. theme is the least dynamic element within the sentence) whereas the rhematic element is the element with the high CD and is capable of completing the communication. So, for Firbas any element could be thematic because of the CD phenomenon. The different degrees of CD among sentence elements reflect the competitive relationship between the sentence elements in terms of the FSP factors. So, the thematic and rhematic elements may contain more than one element that are made into further divisions in terms of their CD degree. For example, in case of the contextual factor, if several elements are context dependent, the ranking or gradability of context dependence is determined in terms of their contribution to the development of communication and are identified into sub-thematic elements, theme and theme proper. This equally holds for the rhematic elements. Because of the CD phenomenon, the property of the context dependence/ context independence is graded non- binary phenomenon (i.e. in a scale between context dependent and context- independent). The non- binary argument of the context dependent and context- independent features explains how the information in the sentence is in a scale in terms of their contribution to the development of communication.

In determining degrees of CD, the non- prosodic factors interplay and operate counter to each other. There are contexts where one of the FSP factors is more important than the others and can assert itself in the distribution of CD. In the case of the contextual factor, any element could be thematic whether retrievable (i.e. context- dependent) or irretrievable (context- independent) as long as it has the lowest degree of CD. Therefore, Firbas' (1964; 1992) approach could be considered as semi- combining as it does not allow the absolute equating of theme with what is contextually given. The context dependent information is thematic because it always has low CD degree hence it contributes the least to the development of communication. Irretrievable context- independent information is thematic when all the sentence elements are context- independent. In other words, they have the same CD degree in terms of the contextual factor. Yet, the contextual factor cannot operate if the sentence elements are of equal CD in terms of the retrievability/ irretrievability feature (i.e. if all sentence elements are context- dependence or context- independent). Therefore, semantic factor will come into play to determine the thematic and rhematic elements. Similarly, if the amount of information presented by the sentence elements is of equal CD, the last resort is the

linearity factor where the level of CD basically increases from left to right and the theme therefore appears in the left most position.

On the spoken level, usually the degrees of PP reflect the distribution of degrees of CD as determined by the non- prosodic FSP factors. So the element of the high CD (i.e. rheme or rheme proper) that is determined by the interplay of the non- prosodic FSP factors is the most prominent syllable. Firbas called it ‘intonation centre’ (IC) that is the tonic syllable for Halliday (Halliday, 1967a; Halliday and Matthiessen, 2014). The highest CD element will be bearer of IC. Yet, if the sentence is made in more than one tone group, there will be competing intonation centres. The element that is cable of carrying the communication forward is identified in terms of semantic factor, amount of information presented by the sentence’s elements. However, there are cases where the prosodic and non- prosodic CD distribution might not correspond in which IC falls on an element that is not rhematic and has low CD degree. Yet, the non- rhematic element will complete the communication as it has high CD degree because of its prosody. In other words, the element that completes the communication is determined by the prosodic factor as the speakers make the non- rhematic element the intonation centre although it is not rhematic. This is kind of similar to Halliday’s view to be reviewed in 3.3, p. 424 on the tonic accenting of information although it is previously mentioned in the discourse (i.e. actually given information) as it is the news that the speakers want to communicate to the hearers.

The following made up examples demonstrate how the non- prosodic factors interplay and operate counter to each other:

Example 2.1

A STUDENT wrote the paper

Example 2.2

A student wrote A PAPER

In Example 2.1, ‘*the paper*’ is theme, ‘*a student*’ is the rheme and ‘*wrote*’ operates as a transition that links the theme and rheme. Depending on the contextual factor, ‘*the paper*’ has least CD because it is contextually dependent in this example and it contributes the less to the development of communication. ‘*A student*’ has the highest CD as it is contextually independent hence, communication is perspectivised towards it because it

fulfils it. In the spoken level, '*a student*' is the bearer of IC, the non-prosodic and prosodic distributions are in perfect correspondence. However, if Example 2.1 is amended as in Example 2.2, '*A student wrote a paper*', the contextual factor will not operate because '*a student*' and '*a paper*' are context-independent hence they carry equal CD. In such case, CD is determined through other factors, the semantic or word order and the choice between these two factors is still to be determined in terms of the sentence itself. In Example 2.2, '*a student*' and '*a paper*' have equal CD in terms of the semantic content. Therefore, the word order factor asserts itself in the CD distribution in which '*a student*' is thematic and '*a paper*' is rhematic and carries the IC.

Therefore, because of the CD phenomenon any element could be thematic. So, theme is not invariably linked to the initial position or is always contextually given either. Daneš (1987) showed that theme might not always refer to the known information. Daneš (1964: 75) seems to follow Firbas' CD phenomenon as he defined theme as having "the minimal utterance dynamism". Yet, Daneš' other definition (1960: 228), "the thing already known and spoken about" shows that he was influenced by Mathesius' equating theme with what is contextually given. Daneš' (1974) main contribution to theme is the notion of Thematic progression that is of relevance to the current study's aim of exploring the role of thematic choice in developing the text. Thematic progression "concerns the ways that texts develop the ideas they present. [More specifically] thematic progression concerns where Themes come from- how they relate to other Themes and Rhemes of the text" (Fries, 1995: 320). Martin (1992: 120) describes Thematic progression "as ways in which lexical strings, reference chains, Themes and Rhemes may interact in text to develop it" and Fries (1995: 320) shows that "patterns of thematic progression are formed by a systematic relation between the Theme- Rheme selections and experiential selections in a text".

Daneš (1974) proposed three types of typical thematic progression patterns. The three patterns are cited here from Fries (1995: 320) and are illustrated in Diagram 2.1 below. The first type is the linear thematic progression, the content of the Theme of a second sentence (Theme 2) derives from the content of the previous Rheme (Rheme 1), the content of Theme 3 derives from Rheme 2, etc. The second type is theme, constant theme or theme iteration as Fries (ibid) labels it, the same Theme enters into relation with a number of different Rhemes. The result of this type of thematic progression is that the Themes in the text constitute a chain of (typically) co-referential items which extends through a sequence of sentences or clauses. The third type of Theme is the derived theme

as Fries (1995) describes it, the passage as a whole concerns a single general notion, and the Themes of the various constituent clauses all derive from that general notion. In other words, successive Themes are related to a single preceding Theme (Martin, 1992).

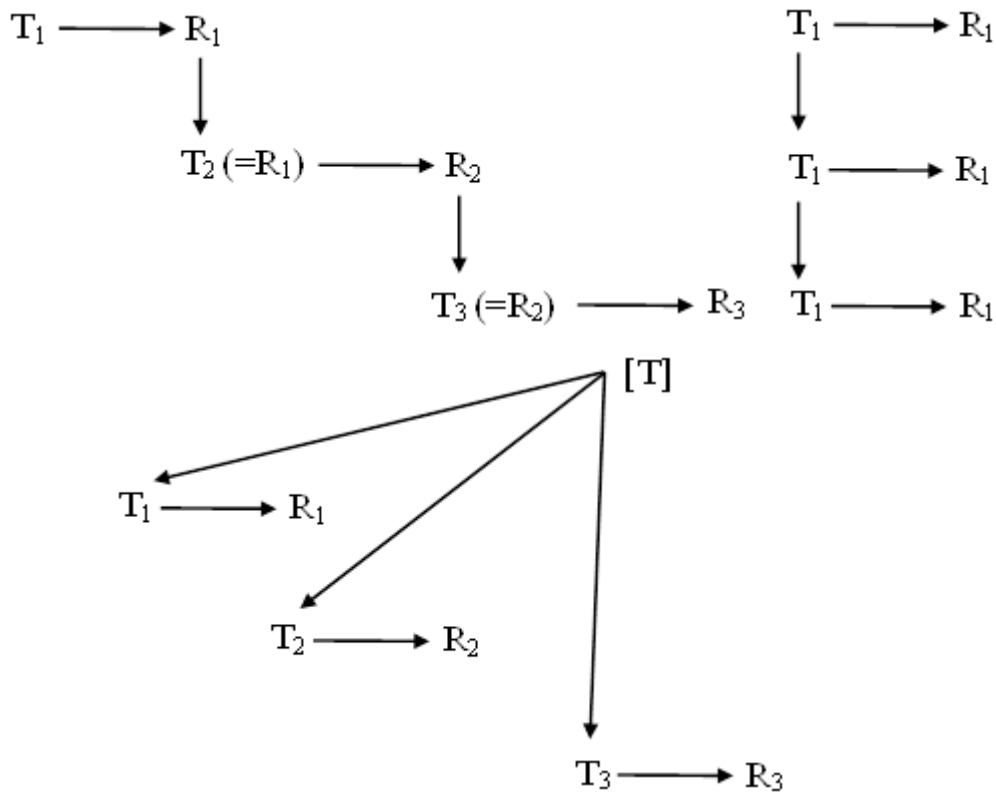


Diagram 2.1 Daneš thematic progression types adopted from Fries (1995: 319)

Fries (1995; 1981) has extended Daneš thematic progression by integrating it into SFL model and adding three other methods which Fries refers to as hypotheses on how theme choice develops a text. Fries grounds his four hypotheses on recognising the importance of thematic selection in how a text is organised with respect to text’s genre/ topic. By investigating a number of short (one or two paragraph) texts, Fries (1995: 319) argues that “the kinds of meanings that are made thematic would vary depending on the purposes of the writers”. Drawing on Daneš’ thematic progression, Fries’ first hypothesis proposes that there is a correlation between thematic progression patterns and genre, spoken and written varieties in English. In relation to the genre of the current study, that is the spoken genre, Fries notes that the patterns of the thematic progression that is typical of the spoken genre is the linear thematic pattern (type one) already described above. Thematic progression as a method of structuring the text is not examined in the current context as the main focus is exploring what is made thematic, a marked Theme in particular, in orienting the clause message to the rest of the discourse in describing the route.

Fries' (1995) second hypothesis proposes that the experiential content of the Themes manipulates the readers'/ listeners' reaction to the text in terms of the simplicity/ complexity of the text. The simplicity/ complexity of method of text development is correlated with the experiential content of Themes in the text. The hypothesis claims that a text that is based on just a few experiential meanings being presented in it will be perceived by the readers/ hearers as having simple method of developing the idea of the text. Yet, the hypothesis has not been empirically validated yet.

The third hypothesis proposes that the experiential content of the Themes varies with genre type and the experiential content is distributed in the text in a way that best orients the reader/listener to information. Fries (ibid) discusses the sensitivity of Theme experiential content and its distribution in text using example of tour guide book. Fries (ibid) suggests that tour guide books are expected to contain large number of references to spatial locations and these spatial references will not be randomly distributed in the text. The basic purpose of tour guide texts is to present and explain the various sights to the readers. References to spatial locations are typically present to orient the readers to the location of these sights. Therefore, because of the purposes of tour guide texts, references to spatial locations will play an orienting role. This orienting role will lead authors of tour guide texts to place a greater proportion of their references to spatial locations within the Themes of the text. The fourth hypothesis proposes that the experiential content of the thematic choices is related to the generic structure of the text.

As for Fries' third and second hypotheses, the role of the thematic choices in building the text is examined in terms of the use of the map task's interlocutors of the marked Theme vs unmarked Theme as point of departure in contributing to structuring the text. Yet, the choice of the marked Theme is related to the experiential element that is chosen by the map task's interlocutors to function thematically, a Circumstantial Adjunct or a Complement rather than a usual unmarked Theme (e.g. a Subject) and how the marked Theme contributes to structuring the map task (i.e. uncovering the role the experiential element within the marked Theme in the map task). As for the hearers' reaction and Fries second hypothesis, in the map task, the hearers are considered in terms of the effect of making the point of departure from an unusual angle. More specifically, the relation between using marked Theme and drawing the hearers' attention to the location of the landmarks.

2.3 Separating approach to theme and Halliday SFL Theme

As noted in 2.1, the separating approach to theme was initiated by Trávníček's (1961) who criticized Mathesius equating the point of departure with what is known. Trávníček (ibid) argued that "the Theme does not always coincide with given information. The really general and essential feature of the Theme [...] is that always occurs at the beginning of the sentence" (cited in Davidse, 1987: 66). This separation has led to the emergence of the 'separating approach' to theme in which theme is described as "the point from which the speaker proceeds" (cited in Firbas, 1964: 268). Halliday was influenced by Trávníček's stance and he separated Theme from the Information system when he incorporated Prague school theme into his SFL model. Halliday's approach to Theme is separating (Halliday, 1967b; Halliday and Matthiessen, 2014). He adapted Mathesius' theme by separating the Theme (point of departure) from the foundation (the contextually known information) and defined Theme as "the point of departure of the clause message" (Halliday and Matthiessen, 2014: 89). He distinguished Theme and information as two separate systems identifying them by linear position and intonation respectively. So, unlike Mathesius, Halliday identified Theme only by its linear position within the clause.

The reason behind Halliday's separation, besides being influenced by Trávníček's stance of considering theme as the element that always occurs at the beginning of the sentence (Davidse, 1987), is recognizing the importance of the clause initial position in English language in organising the clause as a message (Halliday and Matthiessen, 2014; O'Grady 2017a). In other words, clause initial position has an organising role in text. It was mentioned previously in 1.1, p. 2 that Halliday (Halliday and Matthiessen, 2014: 64-5) considered Theme as a text forming resources as he argued that "In English, the speakers/writers organise their clause as a message by making the element that expresses what the message is about as the point of departure of the message that is thematised by making it initially. One part of the clause is enunciated as the theme; this then combines with the remainder so that the two parts together constitute a message and the structure is expressed by the order- whatever is chosen as the Theme is put first" and "in English, organising the clause as a message is related to sequencing where a necessary link is found between occurring initially in the clause and thematic realization".

Halliday's separation of Theme from Information and identifying Theme in terms of word- order allows to examine the point of departure of the clause separately from the way it is realised prosodically (the distribution of information realised by means of

intonation) then see how they (i.e. word- order and prosody) interplay together to contribute to structuring the map task dialogue. In the current study, Halliday's separating approach allows to explore the importance of making a marked Theme as a point of departure in the map task dialogue and the way it is realised prosodically in contributing to the map task dialogue.

Halliday's recognition of the organising role of the initial position of the clause in contributing to the textuality of the text as a whole is reflected by recently bringing into focus the orienting function of the Theme to the rest of the discourse. Halliday defined Theme as "the element which serves as the point of departure of the message; it is that which locates and orients the clause within its context" (Halliday and Matthiessen, 2014: 89). O'Grady (2017a) mentions that focusing on Theme's textual role in terms of being an orienting device reflects the recognition that Theme choices are motivated by the discursual demands and are not independent from the co-text. In other words, they are chosen in a way that develops the text as a whole. So, while Halliday (1985: 67) held the argument that thematic choices are constrained by the discursual demands precisely when he (ibid: 67) mentioned that "the thematic organisation of the clauses expresses, and so reveals, the method of development of the text", he did not explicitly spell his argument out. This argument comes more into recognition by works (e.g. Berry, 1989; Francis, 1989, 1990; Fries 1981, 1995; Matthiessen and Martin, 1991; Martin, 1995; Matthiessen, 1995). Martin (1995), for example, drawing on Halliday's (1985) earlier description of Theme as what the message is about, suggests going beyond this description. Martin (1995) argues that Theme choice is more than what the message is about; it has to be understood through its contribution to the development of discourse not through the experiential semantics of lexical items such as 'about'. He argues (ibid: 223) also that patterns of thematic selection provide important insights into the ideational and interpersonal interpretation of texts". Also on the relation between Theme choice and the discursual demands, Matthiessen (1995) shows that Themes are selected in such a way that enables the growth of the experiential meaning within the text. Matthiessen's view is in line with Fries' (1995) presented in 2.2 above that Theme choice has a role in developing the text in that it is related to the rest of the discourse to ensure the development of the topic into a coherent text.

Berry's findings on the differing thematic needs of developing the texts are in line with Matthiessen's views on the experiential content role in building the text. Berry (1995,

2013a, b) examines the role of Theme in developing a text in terms of thematic choices in the informal spoken and formal written English varieties. Berry (1995, 2013a) focuses on finding what thematic choices build the informal spoken English, that is the kind of discourse examined in the current study, and what thematic choices build the formal written English and whether these two varieties have similar or different thematic needs. Berry (2013a) suggests that there seems to be a difference between informal spoken English and formal written English regarding the referential meaning options chosen in their Subject Themes. Themes, ‘*I*’ and ‘*you*’, which Berry (ibid: 294) labels as “interactional Themes”, are typical of informal spoken English as speakers talk about themselves and refer to their hearers in conversation. Interactional Themes are expected to occur in the map task as it is a form of informal speech. Whereas Themes that refer to aspects of the discourse topic which she labels as “informational Themes” (ibid) which refer to the aspects of the discourse topic are typical of the formal English written texts as they provide information about the topic of the text. Berry (ibid) finds also that using interactional Themes in the formal written text does not help in topic development as interactional Themes are not typical of formal written text.

On the level of the spoken discourse, O’Grady (2017a) shows that Theme’s orienting function can be revealed by examining key, the pitch height of the onset, the first prominent syllable within the tone group as key has an orienting role in the spoken discourse. In the current study, key of the Theme is examined to see the interplay between Theme and key in organising the text through signalling the expectations. More details to be provided on the orienting role of key in Chapter Three.

Halliday (Halliday and Matthiessen, 2014) categorised the thematic selections into two types, unmarked Theme and marked Theme and identified Theme as culminating with the first experiential element in the clause that is either participant, circumstance or process calling it the ‘topical Theme’. Thematic selections that are included under the unmarked category which Halliday identified in terms of the mood of the clause, are: in the declarative mood, the Theme is usually the Subject; in yes/no interrogative mood the finite and Subject; in Wh interrogative mood the wh element and in imperative mood the

predicator⁵. The following examples from the map task dialogue collected in the current study illustrate these typical cases. In the examples, Theme is emboldened:

a) Indicative

Declarative: Subject:

Example 2.3

The route goes above fenced meadow

WH- interrogative: Wh-word:

Example 2.4

Where is trig point in regards to that?

Yes/no interrogative: finite + Subject:

Example 2.5

Do you have fenced meadow?

b) Imperative

Finite:

Example 2.6

Snake it left and up slightly ever so slightly

Example 2.7

Let's go through it ⁶

So, Themes of the above examples are all 'unmarked Themes'. The 'marked Theme' is the case in which the first experiential element functioning as Theme is either a Circumstantial Adjunct or a Complement. For example, in the declarative mood, a marked Theme occurs when the first experiential element that functions as Theme is a Circumstantial Adjunct or a Complement rather than the Subject. In Example 2.3 above Theme is conflated with Subject. The below examples from the map task dialogue illustrate marked Theme cases. The most usual form of marked Theme is the Circumstantial Adjunct; it is realised by an adverbial group or prepositional phrase as in Examples 2.8 and 2.9 respectively. Least likely to be thematic is a Complement, which is

⁵ On the Theme of the imperative mood, Matthiessen (1995) argues that Theme is the elided Subject 'you'. Although Halliday considered the process as the Theme of the imperative, he at times seems to accept Matthiessen's view of the elided Subject.

⁶ The analysis of the imperative example is according to Halliday and Matthiessen (2014: 103). But in earlier versions of IFG, 'Let's' is marked as the interpersonal Theme and verb is marked as the topical Theme.

a nominal group that is not functioning as Subject; something that could have been a Subject but is not as in Example 2.10 below. So, Complement is the most marked type of Theme in a declarative clause because “there must be a very good reason for making [a Complement...] thematic- it is being explicitly and strongly foregrounded as the Theme of the clause [...] and enunciates it as the speakers’ point of departure, as what the undertaking is all about” (Halliday and Matthiessen, 2014: 73-4). Examples 2.10 and 2.13 on the Complement and imperative are taken from Halliday and Matthiessen (ibid: 73, 103) as these cases did not occur in the map task data collected in the current study. In the examples, Theme is emboldened:

a) Indicative

Declarative:

Example 2.8

Diagonally I have a cactus

Example 2.9

On my map there is like the old mine and the swamp

Example 2.10

This responsibility we accept wholly

Interrogative: Yes/ no interrogative

Example 2.11

On the map have you got a monument?

Interrogative: Wh- interrogative

Example 2.12

Next to the old... old mine what have you got?

b) Imperative:

Example 2.13

You be quite

The unmarked Theme is chosen unless there is good reason for making a Circumstantial Adjunct or a Complement thematic (Halliday and Matthiessen, 2014). This is very clear in the case of the declarative clause in which the Subject is usually the Theme. Halliday (ibid) did not state the reasons for the use of the marked versus unmarked; he only argued that the choice is related to what the speakers enunciate as their point of departure and that the choice is related to the speakers/writers' selecting the desired Theme (Halliday, 2004). Yet, based on the orienting function of Theme and that thematic choices are motivated by the discoursal demands in a way that ensures the development of the text, it could be argued that the use of the marked and unmarked Themes is constrained by the discoursal demands. In other words, the point of departure of the clause message whether marked or unmarked is made in a way that ensures building the text into a coherent whole.

Similarly, Thompson (2014), who examined the thematic choices of the written texts in terms of marked and unmarked Themes and their role in developing the text, argued that the choice of marked Theme versus unmarked Theme is constrained by contextual pressures, that is context constrains the way the clause is constructed and what is chosen to be its point of departure. Thompson (ibid) agreed with Halliday (Halliday and Matthiessen, 2014) that Subject is the Theme unless the context demands making a Circumstantial Adjunct or a Complement thematic to enable organising the text. Thompson (2014) extended Halliday's argument on the marked Theme choice in the clause complex in which the initial β clause can function as marked Theme for the whole complex. In clause complex there is a paratactic clause (α) (i.e. independent clause) and a hypotactic clause (β) (i.e. dependent). The order of occurrence of these two clauses is not fixed; it could be progressive ($\alpha^{\wedge} \beta$) or regressive ($\beta^{\wedge} \alpha$) (Halliday and Matthiessen, 2014: 552). Yet, the usual order of occurrence is the progressive. So, in the case of the regressive sequence as the made up Example 2.14 illustrates, Thompson (2014) treated the hypotactic clause (β) '*if he goes to the shop*' as Theme for the whole clause complex and considered it as a case of marked Theme. The subject '*he*' of the (α) clause as the Subject of the clause complex.

Example 2.14

If he goes to the shop he will bring back some milk

As mentioned, Thompson examined the thematic choices in the written text. Yet, O'Grady (2017a: 280) reports instances of regressive clause complex in spoken political

discourse. In the current context, instances of marked Theme in the clause complex are not looked at as they did not occur in the map task dialogue.

On the use of the marked Theme, Martin and Rose (2007) state that the initial occurrence of a Circumstantial Adjunct or a Complement gives it more prominence than other position in the clause and Downing (1991) argues that the occurrence of the Circumstantial Adjuncts initially provides emphatic point of departure. Davies (1997: 55) argues that marked Theme does not occur usually because it indicates “changes/ shift or stages in the progression of the discourse” and Martin and Rose (2007: 179) state that the occurrence of an item other than the Subject initially in declarative clauses “signals a new setting, or a shift in major participants; that is they function to scaffold discontinuity”. Forey (2009: 152) and Forey and Sampson (2017: 138) state that a marked Theme is “a Theme where a text producer consciously or unconsciously affects the organisation of the text by choosing something [a Circumstantial Adjunct/ a Complement] other than the Subject in a declarative clause as the starting point of his or her message.”

Similarly, O’Grady (2016) argues that the use of marked Theme could be seen in terms of marked Theme’s function of signalling that the clause is approached from unusual angle. O’Grady (ibid: 12) says that “Marked Theme are significant in that they signal that the point of departure for the clause is not what it would have been had all things been equal. The perspective being developed in the clause is approached from an unusual angle”. O’Grady, in another position (O’Grady, 2017a) expresses similar views to Martin and Rose’s on giving extra prominence to the Circumstantial Adjunct/ Complement and on the function of the marked Theme of signalling a shift in the discourse. O’Grady (ibid: 276) states that “[...] marked Theme signal[s] either transitions within a narrative or that the Thematic element requires extra prominence in order to show that the perspective being developed within the clause is approached from an unusual angle”.

Studies discuss the importance of the marked Theme choice in organising different types of text and for the interpretation of the message (e.g. Martin, 1995; Goatly, 1995; Berry, 1996; Stainton, 1996; Davies, 1997). Stainton (1996) for example, who examines the thematic choices in workplace texts, argues that the use of the marked Theme in workplace texts is motivated and therefore it has an important role in the success and interpretation of the text. In the workplace text also but on the clause complex level, Forey (2009) examines the importance of the projecting clauses in the thematic position which

she identifies as a marked Theme type in construing the way the projected clause is to be interpreted with relation to the writer's view point and identity in memos, letters and reports. Forey (2009: 163) observes that the writer thematises Circumstantial Adjunct by placing it prior to the projecting clause to construe the way in which the projected clause is to be interpreted with relation to the writer's point of view which Forey (ibid) calls "thematising subjective viewpoint projection".

On Theme's role in organising the text, Goatly (1995) examines the role of the marked Theme in developing Housman's poems *A Shropshire*. Coffin (2006) examines the thematic occurrence of the Circumstantial Adjuncts of time in structuring history text chronologically. Martin (1995: 234), in a detective novel text specifically the part of inspecting a location in a murder case, observes that "the thematic foregrounding of locative information organises the description of the room as a kind of tour" as seen through the detective's eyes and that "Theme orients the readers to objects in the room" (ibid: 237). Forey and Sampson (2017) discuss the role of Theme in organising the text through examining thematic choices of the declarative clauses. Drawing examples from one text, that is a speech delivered at a conference, Forey and Sampson (ibid) observe that marked Theme choice is limited. With relation to the few marked Theme examples used in the speech, Forey and Sampson (ibid: 136) argue that "the limited use of marked Themes [...] emphasises the importance [of the thematised element that is 'now' in '**Today** we must be vigilant'], highlights that our immediate actions have a dramatic influence on the future in [**Your future** will be my past], and foregrounds [...] 'in our home', to invoke an image of warmth and security- our home- before introducing the Subject- that is, tuberculosis in [**In our home**, Tb came for my eldest sister, Marion].

The current study explores the reasons of the occurrence of the marked Theme, approaching the clause message from an unusual angle and its role in structuring the map task interaction. Based on the role of the thematic selection in developing the text (Fries, 1981, 1991; Matthiessen, 1995) and marked Theme's signalling that the clause message is approached from unusual angle (O'Grady, 2016), the current study argues that the interlocutors of the map task will make their point of departure landmarks' location to more easily describe and guide each other to other landmarks therefore aiding them in building their negotiation about the route.

2.3.1 Halliday's extend of Theme and simple and multiple Themes

Halliday (Halliday and Matthiessen, 2014) specified that Theme extends from the beginning of the clause up to and including the first experiential element functioning in transitivity that is a participant, circumstance or process as mentioned in 2.3, p. 23. The experiential element is called the 'topical Theme' which is the thematic element. So, Theme of the clause consists of the topical Theme together with anything else that precedes it. Halliday (ibid) identified two types of Theme in terms of whether there is element(s) prior to the topical Theme: simple Theme includes only a topical Theme. Multiple Theme is the case of having textual and/ or interpersonal elements prior to the topical Theme. These elements are part of Theme and they function as Textual and interpersonal Themes. Example 2.15 represents simple Theme and 2.16 and 2.17 represent multiple Theme, textual and interpersonal respectively. These examples are taken from the map task dialogue collected in the current study. Examples 2.15 and 2.16 are from the dialogue of group four and Example 2.17 is from the dialogue of group twelve. The whole dialogue script of these two groups are presented in Appendix K. In the examples, the whole Theme is emboldened; the interpersonal and textual Themes are italicized:

Example 2.15

directly above the mushroom house there is a gold mine

Example 2.16

but before the hills and the farm there is a forest

Example 2.17

I think from tree we can see where we go then

The structure of the multiple Theme denotes the three metafunctions of Hallidayan linguistics: the textual, interpersonal and the experiential. The three types of Themes are realized in the sequence, (textual), (interpersonal) and experiential/topical Theme. The experiential Theme is obligatory as it is the thematic element as described already; it is the only element that has the potential to function as what the clause is about. The textual and the interpersonal Themes are optional as the round brackets indicate; they are only part of the Theme field and they do not in their own exhaust the Thematic potential of the clause (i.e. they do not have experiential meaning). Halliday (ibid) considered them as

part of the Theme field because they help the speakers set up the scene for introducing the main concern of the message. Halliday (Halliday and Matthiessen, 2014: 66) mentioned that “Theme always starts from the beginning of the clause. It is what sets the scene for the clause itself and positions it in relation to the unfolding text” and that as the clause has its character as a message, so it should be organized in a way “whereby it fits in with, and contributes to, the flow of discourse” (ibid).

The textual Theme is any combination of (i) continuative, (ii) structural and (iii) conjunctive elements in that order and the interpersonal Theme is any combination of (i) vocative, (ii) model, (iii) mood- marking elements. Example 2.18 taken from Halliday (ibid: 81) shows that the maximum number of Theme elements in the multiple Theme is seven. In the example, the whole Theme is emboldened; the textual Themes are italicized; interpersonal Themes are underlined:

Example 2.18

***Well but then surely Jean wouldn't the best idea** be to join the group?*

Well	But	Then	Surely	Jean	wouldn't	the best idea	be to join the group
Cont	Stru	Conj	Model	Voc	Mood-marking		
Textual			Interpersonal			Topical	
Theme							Rheme

Textual Themes link a clause to a preceding clause (ibid). The textual continuatives are small set of words for example, ‘yes’, ‘no’, ‘oh’, ‘ok’, ‘well’. They signal a move in the discourse, for example, a response in dialogue, or a new move to the next point if the same speaker is continuing (ibid: 81). The structural elements or the textual conjunctions generally refer to a conjunction, such as ‘and’, ‘because’, ‘if’, ‘but’, etc. The textual conjunctions have an orienting role as they create expectations about the upcoming information. For example, ‘and’ indicates that what follows will be in line with whereas ‘but’ indicates what follows will contradict with what has proceeded. The textual conjunctions link unit of discourse through lexio- semantic relations of enhancement, elaboration, and extension. Enhancement, “a clause enhances the meaning of another by qualifying it with reference to time, place, manner, case or condition” (ibid: 410). Elaboration, “one clause elaborates on the meaning of another by further specifying or

describing it” (Halliday and Matthiessen, 2014: 395). Extension, “one clause extends the meaning of another by adding something new to it” (ibid: 405). Textual conjunctives (discourse Adjuncts) “are adverbial groups or prepositional phrases [e.g. ‘*for this reason*’, ‘*as a result*’] which relate the clause to the preceding text. They cover roughly the same semantic space as textual conjunctions” (ibid: 81).

Textual Themes and the way they are realised prosodically are examined to see how they contribute to structuring the map task. The role of the interpersonal Themes in the map task interaction is beyond the scope of the current study especially that their occurrence in the map task interaction was very limited as to be explained in 6.3.1, p. 1279. Therefore, interpersonal Themes are not described any further in the current context so for more details, see Halliday and Matthiessen (ibid: 81-82).

2.4 Other SFL views on Theme

SFL linguists such as Fries, Berry, Thompson, Matthiessen, Martin, Davies, Rose, Forey and Fawcett among others were/are influenced by Halliday’s view on Theme. They agree(d) with Halliday on Theme initial position recognition criterion. They also agree(d) with Halliday on the marked Theme, the initial occurrence of a Circumstantial Adjunct or a Complement. They have extended Halliday’s work by exploring the importance of thematic position in organising the text in terms of the thematic choices as works cited in 2.3 above show. So, they are not different from Halliday in any significant way in terms of Theme definition and marked Theme case.

Yet, there is disagreement on Halliday’s extent of Theme in terms of the inclusion of one experiential element within the Theme in the marked Theme case. For example, Thompson and Thompson (2009) support(ed) Halliday’s position of including only one experiential element. They argue(d) that including the Subject with the Theme compromises the grammaticality of the category of Theme and blurs the distinction between the ideational and textual metafunctions. Authors for example Berry (1996, 1975), Davies (1988, 1994, 1997), Martin and Rose (2007), Forey (2009), and Fawcett (2009) disagree with Halliday on the extent of Theme. For them, Theme of the clause is everything up to the main verb of the clause including the syntactic Subject⁷ whereas for

⁷ Berry (1996: 29) calls the syntactic Subject ‘Subject Theme’.

Halliday the Subject is not part of the Theme of the clause if there is an experiential element prior to the Subject. Halliday did not allow for the presence of two experiential elements as his Theme extends from the beginning of the clause up to and including the first experiential element functioning in transitivity (participant, circumstance or process) as mentioned in 2.3.1 above. For example, Berry (1996), in the case of the marked Theme unlike Halliday allows the inclusion of the Subject within the Theme field. Example 2.19 below from the interaction of group seven of the map task dialogue illustrates the difference between Berry's and Halliday's views on the extent of the Theme. The full data script of the dialogue of group seven is presented in Appendix K. In the example, the whole marked Theme is underlined and the point of departure, the marked topical Theme is emboldened:

Example 2.19

and then **below the cactus** I have a castle

For both Halliday and Berry, Theme in the above example is marked Theme. But, Berry's Theme is '*and then below the cactus I*' with the Subject '*I*' included within the Theme. Halliday's Theme is '*and then below the cactus*' with the Subject '*I*' falling within the Rheme. Yet, the inclusion/exclusion of the Subject '*I*' in Example 2.19 above within the Theme field would come up with the same marked Theme, '*below the cactus*'. So, in relation to the context of the current study, the extent of marked Theme would not make a difference to exploring the role of '*below the cactus*' as a point of departure in contributing to structuring the map task dialogue. Syntactic Subject is not the point of departure in the marked Theme case; it occurs after the Circumstantial Adjunct or Complement. Drawing on Halliday's view on Theme, having two Themes for one clause contradicts with Theme's definition as the point of departure of the message; it is that which orients and locates the clause to the rest of the discourse. It means that the clause message has two points of departure which is not possible. But, with relation to the context of the current study, following Halliday's or Berry's views on the extent of Theme will not make a difference as the study examines the contribution of the point of departure of the clause message to structuring the map task interaction which is the same for both Halliday and Berry, a Circumstantial Adjunct or a Complement in the case of the marked Theme.

At clause complex level, Davies (1997), Martin and Rose (2007), Forey (2009) argue that Theme extends up to and includes the Subject of the main clause. Martin and Rose (2007) label the Subject of the main clause Subject/ Theme. Martin (1992) and Forey and Sampson (2017) argue that the extent of Theme is motivated by the purpose of the analysis. In the case of the current study, the unit of analysis is the clause so marked Theme operating within the clauses are examined. Marked Theme realized as a whole clause is not examined especially that it does not occur in the map task dialogue. So, in case of the current research, as already noted, including the Subject of the clause with the marked Theme will not make a difference as the interest is on the point of departure in the case of the marked Theme that is the existence of a Circumstantial Adjunct or a Complement initially.

With relation to the above views on the extent of Theme in the marked case, Fawcett (2009), one of the founders of the Cardiff Grammar model which is a different version of Systemic Functional Grammar, argues for the inclusion of the syntactic Subject⁸ within the Theme field in case of the marked Theme⁹ and he considers it as a case of having two Themes. Fawcett (ibid: 60-61) defends his position by stating that “the Subject Theme is selected independently, so generating clauses with two experiential themes [...] the Subject remains a Subject Theme, irrespective of whether or not there is also a thematised [circumstance or participant]”.

Fawcett (ibid) accepts SFL Theme initial position criterion in the clause yet he approaches it based on meaning. He considers thematic choices as discourse functions or purposes. He argues that Theme choices are thematic meanings; they represent meaning probabilities that arise in situations which the speakers make their Theme choices from. Fawcett suggests that thematic meanings refer to various discourse functions or discourse purposes that a system of Theme presents to the language users to choose from. For Fawcett, the choice from the meaning probabilities that arise in discourse depends upon Theme’s discourse purpose or function which makes it necessary to be placed initially. In other words, the discourse function of the Theme provides the motivation for using one or other of the various types of ‘Theme’. The meaning may change as the result of making another Theme choice depending for example on the mood of the clause.

⁸ Fawcett (e.g. 2008: 182) calls the syntactic subject ‘Basic Theme’

⁹ While Berry uses the term marked Theme, Fawcett treats marked Theme in his realization rules as marked but he does not use the term.

Fawcett (2009) describes Theme in terms of meaning because he believes that meaning would better clarify the concept of Theme than form. So, referring to the SFL view on Theme, Fawcett argues that initial position criterion is not enough and is not adequate to explain the nature of Theme as it depends on form and not meaning. Fawcett's argument against the inadequacy of the initial position is valid to an extent. For Fawcett, revealing the nature of Theme is related to its meaning and this will help see why the speaker chooses an element rather than another as Theme. But, Halliday's identification of Theme is structural as he took Theme as a source of structuring the speaker's clause as a message, what the speaker decides to make the point of departure of the message and thereby communicate his/her meaning. For example, the case of approaching the clause message from usual (unmarked Theme) or unusual angle (marked Theme) in a way that best structures the clause as a message and ensures communicating it to the hearer. In the current context, approaching Theme in terms of the SFL structural approach, initial position criterion, is useful to examine map task interlocutors' motives of using marked Theme (i.e. approaching the clause message from the unusual angle) when describing the location of landmarks and the route line to each other.

Fawcett's (ibid) semantic approach to Theme shows that he approaches Theme from the higher strata whereas Halliday built it bottom up from the lower. For Fawcett, the selection of Theme is driven by speaker's meaning whereas for Halliday is mainly taken as a matter of structure or word- order. As the current context is interested in exploring the role of the point of departure of the clause message in structuring the map task dialogue, SFL way of approaching Theme, the initial position criterion, is useful and relevant to the current study's aims as initial position has a role in structuring the text. The approach will help with accounting for the reasons of approaching the clause message from an unusual angle (i.e. the use of the marked Theme) in the map task interaction and its role in structuring the map task interaction.

Yet, Fawcett's (ibid) probabilities in situation, in which speaker's selection of the thematic meanings depend on, is similar to speaker's selection of the marked or unmarked Theme (Halliday and Matthiessen, 2014). For Fawcett, the selection of Theme is driven by the meaning the speaker presents to the hearer whereas for Halliday is mainly taken as a matter of structure or word- order, approaching the clause message from usual (unmarked Theme) or unusual angle (marked Theme) in a way that best structures the clause as a message and ensures communicating it to the hearer. In the two approaches to

Theme, the choice is constrained by the discursual demands of using marked or unmarked Theme to organise the clause as a message (i.e. the choice of what the speaker has made his/her point of departure). The decision of having a marked or unmarked Theme depends on what the speaker has decided to make his/her point of departure: the unmarked choice in which the mood making elements are the Themes and the marked Theme in which a Circumstantial Adjunct or a Complement is the Theme as mentioned in 2.3, pp. 23-26. However, the choices made are not co-text independent; they are constrained by the discursual demands to ensure that the clause message is located and oriented towards the rest of the discourse which develops the text into coherent whole. Therefore, approaching the clause message from the usual (use of unmarked Theme) or the unusual angle depends on the discursual demands.

Yet, Fawcett's (2009) probabilities in situation and Theme's discursual function, in which speakers' selection of the thematic meanings depend on, is similar to SFL Theme argument about the thematic choices. Thematic choices in the two approaches are determined by the discursual demands. Fawcett's (ibid) Theme selection is driven by the discourse function or meaning which the speakers want to present to the hearers. The choice of the thematic meanings depends on what happens in the discourse. SFL Theme selection is constrained by the discursual demands (Halliday and Matthiessen, 2014) and is chosen in a way that ensures the development of the text (Fries, 1991, 1995; Mathiessen, 1995; Berry, 2013b). For example, the use of the marked Theme vs unmarked Theme (Halliday and Mathiessen, 2014) examined in the current study depends on the speakers' decision of what to make their point of departure in a way that best organises their clause as a message and contributes to the structuring of the map task interaction. In the current study, approaching Theme in terms of the initial position criterion is relevant to examining the map task interlocutors' way of structuring their clause to describe the location of landmarks and the route line.

On how theme is identified, Fawcett (2009) argues that initial position criterion used to identify SFL Theme is problematic because it considers any element that occurs initially as the Theme or as part of the Theme. Fawcett (ibid) does not agree also on considering the finite and the Subject in yes/ no question, relative pronouns, exclamative elements and finite in the imperative as Theme choices. For Fawcett (ibid), these elements are not made thematic by choice; they naturally occur initially due to the Mood system. Yet, mood making elements are thematic choices in that they could have been produced or not

produced; they represent cases of the unmarked Theme choice as pointed out in 2.3, pp. 23-26 above and the speakers use them as they do not choose to use marked Theme. In the context of the map task, the reasons of the occurrence of the marked Theme (making a Circumstantial Adjunct or a Complement initially) could be accounted for against seeing why the map task interlocutors have chosen to use marked Theme while negotiating about the route.

Fawcett (2009) disagrees with Halliday on including the textual elements (e.g. *and*, *but*) with the thematic field. He argues that such expressions are placed initially only because they have structural function, signal relations between units of discourse. Fawcett suggests that they should be ignored and should not be included within the Theme. But textual elements that occur prior to the thematic element help the speakers set up the scene for introducing the main concern of the clause message and position the clause in relation to the unfolding text (Halliday and Matthiessen, 2014) through creating expectations about what follows in discourse (e.g. '*but*' indicates contradiction; '*and*' indicates what follows is in line with the prior discourse) as pointed out in 2.3.1, p. 30. The speakers would not have placed such elements before the topical Theme, otherwise. Therefore, it is worth to consider them as part of Theme field. So, including the textual Themes within the marked Theme field will help examine what role they have in positioning the clause message in relation to the unfolding map task dialogue.

The discussion so far has centred on the concept of Theme. Some reference was also made to the Information Structure: Given- New. In the next chapter, more details will be added on the Information Structure and focus will be also made on the issue of the correspondence between Thematic structure and Information structure as being of importance in the present context.

2.5 Summary of theme/Theme

This chapter outlined theme/Theme's accounts available in the literature. The chapter showed that theme/Theme is approached differently. It is important to remember that referring to the accounts of theme/Theme was not to decide which is more accurate as mentioned in 1.3, p. 10. Each of the above accounts is accurate in its own context as they have approached theme/Theme for a different purpose. In case of Halliday, the separation of Theme and Information is influential as it has drawn the attention to the role of

information in structuring the text being marked through intonation. In relation to the current context, Halliday’s separating approach allows to explore the role of marked Theme and its prosody in organising the map task as two separate text forming resources. Tables 2.1 and 2.2 below summarise the main points of the above theme/Theme’s accounts and the extension of Theme respectively.

Table 2.1 The summary of the accounts of theme/Theme

Scholars		Approach	Definition
Czech	Mathesius	Combining/ equating theme with what is contextually given	that which is known or at least obvious in the given situation and from which the speaker proceeds in his discourse
	Firbas	Semi- combining/ did not allow the absolute equating of theme with the context dependent information; theme is identified according to CD, measure of the ability of pushing the communication forward	theme is the least dynamic element within the sentence theme is not invariably linked to initial position or is always contextually given either
	Daneš	Influenced by both Mathesius’ approach and Firbas’ approach to theme	the thing already known and spoken about; the minimal utterance dynamism.
SFL	Halliday Matthiessen Fries Berry Thompson Martin Davies Forey and others	Separating point of departure and information	the point of departure
	Fawcett	Approaching Theme semantically/ thematic meanings refer to various discourse functions or discourse purposes that a system of Theme presents to the language users to choose from	the point of departure

Table 2.2 Views on the extension of Theme

Scholar	Theme Extension	Marked Theme
Halliday Matthiessen Thompson	Everything up to and including the first element functioning in transitivity (process, participant or circumstance). Inclusion of only one experiential element within the Theme	In the marked Theme, the Subject is not included with the thematic element
Berry Fawcett	Everything up to the main verb of the clause. Inclusion of more than one experiential element with the Theme	In case of the marked Theme, the Subject is included with the thematic element

CHAPTER THREE: LITERATURE REVIEW/ INFORMATION AND PROSODY

3.1 Given and new: an introduction

This chapter presents given and new concepts. It includes an introduction to the emergence of the two terms and their relation to the combining and separating approaches to theme/Theme. The chapter presents the most commonly referred to interpretations of given and new/ Given and New that have emerged in the literature: Halliday and Matthiessen (2014); FSP (Firbas, 1992); Chafe (1994, 1987); Prince (1981) Clark *et al.*: Haviland and Clark (1974), Clark and Clark (1977) and Clark and Haviland (1977). The proposal of various interpretations and alternative definitions of given and new/ Given and New has led to a considerable confusion in terminology and in the functions of given and new/ Given and New. In the present work, it is a good opportunity to describe these interpretations and compare them to: i) bring the differences and similarities among them with relation to their ways of approaching given and new/ Given and New and ii) show why Halliday's approach to Given and New is used in the present context to investigate how information in the map task is distributed and structured into Given or New to contribute to structuring the map task dialogue. Reference will be made to Thematic system presented above, highlighting the issue of the correspondence (i.e. unmarked Theme case) and non- correspondence (i.e. marked Theme case) between the Information and the Thematic structures.

3.2 The Emergence of the Given and New Terms

Halliday (Halliday, 1967b; Halliday and Matthiessen, 2014) proposed Information structure of the Given and New to distinguish them from 'theme' and 'rheme' terms that were used in the work of the Prague scholars in their account of Czech and English word order (Mathesius, 1961; Firbas, 1966). Unlike Halliday, Prague scholars do not distinguish given and new as separate functions. For them, as mentioned in 2.2, given and new are identifying criteria of theme and rheme because Prague scholars have one theme system (i.e. a combined theme) as detailed below.

Information within a sentence is being addressed a long time ago before Halliday's (1967b) proposal of the Information structure. To the best of the researcher's knowledge, the first mention of information goes back to the German philologist Henri Weil (1844).

Weil, as pointed out in 2.1 above, divided the sentence into two parts: a point of departure (an initial notion) and a goal of discourse. Weil (1844) defined point of departure as “equally present” to both speakers and hearers which means that it is the shared information or the common ground or point in which they meet whereas the second part of the sentence, the goal of discourse, is information that is to be communicated to the hearers (Weil, *ibid* as cited in Firbas, 1974). It could be argued that Weil defined the first part of the sentence in terms of information that is given (i.e. mentioned in the discourse in Halliday’s sense) or known or old (i.e. hearers already know it but is not necessarily mentioned in the discourse, but they have it in their mind). However, Weil (1844) did not provide any details on the information conveyed by the goal of discourse except that it is the information to be communicated to the hearers. But, it could be argued that since the speakers are trying to communicate it to the hearers, it means the latter do not know it yet (i.e. new to them) and it is the point of the sentence/ clause or the news the former are trying to communicate to the latter in the Hallidayan sense.

Following Weil, Mathesius (1939) addressed the information aspect in his description of the content of the sentence. Mathesius was influenced by Weil and developed the arguments on the content of the sentence further. Mathesius described information in the utterance in terms of a ‘contextual criterion’: on whether the information is derivable or not derivable from the preceding context or situation. Depending on the contextual criterion, Mathesius classified the utterance into two parts and he distinguished the information in these two parts into: Known (old, given) information and Unknown (new) information. The Known (old, given) information refers to the part of the utterance that presents information that is known to the hearers because it is derived from the preceding context or situation whereas the Unknown (new) information is the non- derivable information; it is that part of the utterance that the speakers present as a piece of new (unknown) information (seen from the point of view of the hearers).

Like Weil, Mathesius (*ibid*) considered the Known information as point of departure of the utterance but he referred to it as ‘theme’. For Mathesius, contextually given information is not a separate function; it is merely one of the criteria for identifying theme. Mathesius’ identification of theme as the given part of the utterance (i.e. contextually given) has led to the emergence of the combining approach to theme (Davidse, 1987) as point out in 2.2 above. Mathesius (1939) was influenced by Weil’s ideas; it is likely that Mathesius chose to combine the contextually given feature to his theme because Weil

himself saw the point of departure of the utterance as equally presents to both speakers and hearers (i.e. the common ground between the speakers and the hearers in which the former have chosen to start speaking about and built the communication on).

Because of contextually given identifying criterion of Mathesius' theme, the combining and separating approaches to theme described in 2.2 and 2.3 above have emerged (Fries, 1978). These two approaches to theme have made the views about the information in the utterance vary. The scholars who support(ed) Mathesius combining approach (e.g. Daneš, 1964; Sgall, 1973; Van Dijk, 1977; Dik, 1978) consider(ed) given information as the theme. Firbas (1964; 1992) approached given information role rather differently from Mathesius as for him given information is not the theme rather it is one of theme identifying criteria. As pointed out earlier in 2.2, Firbas (1992) did not fully support Mathesius equating of theme with the given information and he did not recognise the division of approaches to theme into separating and combining because his theme is not necessarily contextually given. For Firbas, any element could be thematic whether given or new as long as it has the lowest CD, communicative dynamism that is the ability to push the communication forward. So Mathesius' contextually given feature still holds for Firbas' theme but it is subject to different scale from that of Mathesius' that is the CD scale as explained in 2.2 above.

Yet, others like Trávníček (1961) argued against assigning the contextually given criterion to theme, but he did not go any further in suggesting for example that information should be established as a feature in its own. Trávníček's main reason for arguing against Mathesius equating given with theme was that theme should be defined only as point of departure, which was one of Mathesius' criteria for identifying theme, as pointed out earlier in this section. Halliday was influenced by Trávníček's views and he supported the separating approach. Halliday (Halliday, 1967b; Halliday and Matthiessen 2014) established given and new as independent functions from theme and rheme. So, Mathesius' theme as point of departure and basic/foundation are made into Halliday's Theme and Given respectively. Halliday (Halliday and Matthiessen, 2014) recognised the function of these two systems as text forming resources as previously mentioned in 2.3 above. It was also pointed out that there is correspondence between the two systems in that Theme equals Given and Rheme equals New when the focus of information falls towards the end of the clause, as Halliday (1967b: 205) put it "the functions 'given' and 'new' are not the same as those of 'theme' and 'rheme'[...] the two are independently

variable[...] there is a relationship between them such that in the unmarked case the focus of information will fall on something other than the theme”. As pointed out in 2.3, Halliday’s separating approach allows to examine the thematic structure of the spoken language and the interplay between marked Theme and intonation in structuring the map task interaction. The following sections present the interpretation of given and new/Given and New concepts of Halliday, FSP represented by Firbas, Chafe, Prince and Clark *et al.*

3.3 Halliday: Given- New

As mentioned previously Halliday’s (Halliday, 1967b; Halliday and Matthiessen, 2014) Given and New are the functions that made up the Information structure. To account for how Halliday distinguished information into Given and New, some details are provided first on the structure of the information unit that underlies the Given and New functions.

Information structure is created by segmenting of linguistic material into chunks known as tone groups. Halliday (Halliday, 1967a: 33) argued that each tone group represents a unit of information which he called ‘information unit’. Tone group acts to mark out an information unit; it represents “what the speaker chooses to present as one portion of message” (Halliday, 1985: 54). The segmentation of linguistic material into tone groups is known as tonality (Tench, 1996). There are two cases of tonality: 1) the unmarked case, a tone group coincides with a clause as in Example 3.1 below and 2) the marked tonality, a single clause may be mapped into two or more tone groups as in Examples 3.2 and 3.3 respectively. The three examples are taken from the dialogue of group four of the map task collected in the current study; the full data script of the dialogue of group four is presented in Appendix K. The three examples are written in the intonation coding. Intonation coding symbols used in the examples are presented on p. xi:

Example 3.1

||i DON’T have HILLS or \FARM||

Example 3.2

|| so on MY \MAP|| there is like the OLD \MINE ||

Example 3.3

||they are \UM || \DIStributed || PREtty much \EVENly ||

The chunking of the information into units depends on the speakers' decision of what to present as a piece of information. In relation to the present context, marked Theme pattern, the occurrence of a Circumstantial Adjunct or a Complement initially, that is examined in this context is a case of marked tonality as marked Theme tends to occur in independent tone group (Tench, 1996) as in Example 3.2 above. In relation to the aims of the current study, O'Grady (2017a: 6) shows that the occurrence of Theme in independent tone group adds weight to Theme. So, uttering marked Themes in separate tone groups in the map task dialogue is examined to see how it contributes to structuring it.

As for the structure of the tone group, each tone group represents a pitch counter; it is formed by the pitch movement and the change in the direction of the pitch. The change in the direction of pitch is realised by intonation function 'tone'. There are five main primary tones presented on p. xi, with their coding symbols: level, rise, fall, fall- rise and the rise- fall ¹⁰. The examples above show that falling tone is used in the tone groups. Pitch movement extends over the whole tone group. However, the main pitch movement where the change in the direction occurs is the most prominent within the tone group and referred to as "tonic prominence" (Halliday and Matthiessen, 2014: 89). Each tone group consists of an obligatory syllable, the tonic syllable with optional prominent or non-prominent syllables. Tonic prominence represents information focus in the tone group and it is carried by the tonic syllable.

Halliday (Halliday, 1967a; Halliday and Matthiessen, 2014) used tonic prominence to mark off the distinction of information into Given and New. Halliday (Halliday and Matthiessen, 2014) distinguished Given and New in terms of the recoverability feature: Given is information that is recoverable whereas New is information that is not recoverable; New to the hearer. Recoverable information refers to the information already presented in the context through either being previously mentioned in the discourse, available in the physical context, or it is of relevance to the context of the discourse. Halliday (ibid) showed that information is distinguished by intonation in that tonic prominence is the focus and it culminates the New but it is not the whole extent of it because likely there is pre- tonic elements, elements prior to the tonic elements that are made prominent which are also New but yet not all of them New. In other words, New does not equate with tonic as there might be more than one New element. Given

¹⁰ Halliday has different classification of tones for details see Halliday and Greaves (2008: 181)

information is not made tonic. Yet, Halliday's approach to Given and New is not straightforward in terms of depending on the recoverability feature.

Halliday's approach allows for the presentation of information as if it were given or new regardless of whether it is mentioned previously in the discourse or available in the physical context. In other words, for Halliday (Halliday and Matthiessen, 2014) given information is information which is *presented* as given and new information is information which is *presented* as new by the tonic prominence. If an element is made tonic, it means it is presented as New regardless of whether or not it is available in the (physical) context. The reason for making it tonic is the speaker's desire to make it the information focus. Therefore, Halliday (1985: 277) described New information as "attend to this; this is news" whereas Given information as "this is not news". In other words, it is the case of discourse given speaker new hence hearer new information.

Halliday (ibid) gave examples of deictic reference expressions (e.g. *I, you*) which are "inherently given" (ibid: 91) because they are usually recoverable so typically they are not made tonic. But they are made tonic if the speaker presents them as if they were New to express contrastive meaning as in 'he was talking about *ME* not *YOU*' (ibid). '*Me*' and '*you*' are made tonic because the speaker wants to draw the hearer's attention that the speaker '*He*' meant '*me*' but not '*you*'. Information focus conveys the contrast meaning to the hearer as the tonic prominence makes it salient. Some syntactic structures such as predicated Theme (i.e. Cleft sentence, a complex sentence that is divided into two clauses to show which information is new) are used as markers of information as they signal newness (Halliday and Matthiessen, 2014: 122-124) and they are considered by Clark *et al.* 3.7 below.

Thus, Halliday's Given- New distinction is subjective. Halliday ascribed his subjective view on presenting information to rhetorical purposes and speaker's intentions; "what is new is in the last resort what the speaker chooses to present as new" (Halliday, 1967a: 211). In SFL, New and Given do not have their ordinary meanings as information status reflects speaker's assessment rather than the discourse status of information (O'Grady, 2017a). This means that Halliday's Given and New do not describe the status of information in the discourse rather it is the way the speaker chooses to present information. It could be argued that Halliday's way of approaching information is attributed to information structure role in structuring the text especially that Halliday

considered information structure as a text forming resource and combined it with Theme in the Textual Metafunction (Halliday and Matthiessen, 2014). In other words, in Hallidayan sense, speakers present information (distribute it into Given or New) in such a way that contributes to structure their interaction. So, with relation to Halliday's subjective view of presenting information, the way map task interlocutors present information within marked Theme is examined to see how it contributes to structuring the map task interaction; Halliday's binary distinction of information in terms of the recoverability/ irrecoverability and his views on the subjective way of presenting information are useful to describe the way of presenting information in the map task interaction through examining what occurs in the interaction to know why an item is presented as if it were Given or New. Halliday's binary distinction of information into either Given or New allows an easier discussion of the way information is presented in comparison for example with FSP's graded and non- binary distinction of information to be reviewed in 3.4 below.

With relation to the way of presenting information, Berry (2013a) addresses how the informational content of the Themes in texts that are written to read are realised prosodically to help the listener understand the utterance. Berry (ibid) argues that the majority of Subject Themes are contentful in formal written texts because they introduce new material that advances the subject matter of their texts whereas contentlight in informal spoken texts because they do not introduce new material but give indications of a new attention to old material as they refer to the interlocutors, '*I*', '*you*' or refer to '*there*'. The former need more processing than the latter as they are already in the hearer's mind as they have just been mentioned in the text. In relation to intonation, a clash happens between the two types of Themes in case of language that is written to be spoken such as radio news. Berry (ibid) argues that Themes of the informal spoken English are not made prominent because they present information which is actually given or, for some other reason, is easy for the hearer to process or does not really matter at all. To be noted that Berry refers to Dik's (1997) GivTops and NewTops: Theme content is being actually given, it is already mentioned in the discourse or new, not previously mentioned in the discourse. However, drawing on Halliday's views (Halliday and Matthiessen, 2014) on the way of presenting information, Berry suggests that if the contentful Themes of the language that are written to be spoken are not made prominent, "then the intonation is presenting as given something which is not actually given" (Berry, 2013a: 262). The

incongruent use of intonation by the newsreaders does not help the listeners understand what the former are reading; the information that is important to understand the news is included within the Theme however it is not projected. In other words, the newsreaders present the contentful Themes as something that the listeners already know. So, Berry (2013a: 265) argues that “listeners need the information to be presented in such a way that they can hear it and understand it”. She also suggests making Themes in the language written to be spoken in separate tone group as separate tone group makes Theme “perfectly audible” (ibid: 262).

Location of the information focus usually falls towards the end of the tone group, the unmarked tonicity case. Therefore, Given information typically precedes New. The usual order of presenting information makes thematic and information systems coincide Theme = Given and Rheme = New: “other things being equal, one information unit is co- extensive with one (ranking) clause (unmarked tonality); and, in that case, the ordering of Given^ New (unmarked tonicity) means that the Theme falls within the Given, while the New falls within the rheme” (Halliday and Matthiessen, 2014: 93). Speakers tend to present given information before new because it helps establish the ground for them to meet and add the new information. According to Mathesius, given information has a textual function; they help with connecting the utterance with the context (cited in Daneš, 1987). Similarly, Halliday (1970: 354) showed that Given element carries out “a specific function in the textual organisation: it links the information unit to the rest of the discourse”.

However, divergence of the usual occurrence of the given preceding new is possible. Speakers try to structure their utterances in a way that best aids them in communicating their meanings, so they might tend to diverge from what is usual using unusual structuring of information, i.e. presenting new before given information. Hence, information focus falls at the beginning of the tone group rather than towards the end, the “marked tonicity case” (Halliday and Matthiessen, 2014: 91). With the marked tonicity case, Theme and Given do not coincide. Marked Themes, the occurrence of a Circumstantial Adjunct or a Complement initially, that are examined in the present study provide instances where the two systems do not coincide as in Example 3.2 above. Marked Themes by being realised in their own tone groups are information units with information foci (Tench, 1996). As such the focus of information will fall on the Theme as well as on the Rheme. In marked Theme case, Theme does not correspond with Given as the focus of information will fall

on the Theme as well as the Rheme as the intonation coding in Example 3.2 above shows in which the ‘*map*’ and ‘*mine*’ are made tonic, carrying the main pitch movement. So, marked Theme enables the investigation of the non-correspondence of the two systems. Marked Themes used in the map task are examined to reveal what role this divergence (i.e. the initial occurrence of information focus) and making marked Theme in independent tone group have in contributing to structuring the map task and in successfully completing it.

Halliday’s approach to Given and New is also relevant to the context of the map task due to the unresolved issue of recoverability span¹¹: for how long a span in the flow of communication information can remain recoverable (given) without being mentioned again. O’Grady (2013a, 2016) who presents a thorough review of the arguments on the recoverability issue states that “there is a dispute in the literature as to the length of time in which a lexical item remains recoverable from the context” (O’Grady, 2013a: 29). Studies have pointed this issue out to show it is difficult to mark up an extended text into given and new without a means of operationalising what recoverable means.

Halliday (1967a) argued that an item might remain recoverable once introduced in the discourse. Halliday (ibid: 209) reported an example of a lexical item that maintains its recoverability beyond 83 information units. However, as described already in Halliday’s case, speakers’ tonic accent presents lexical elements as if they were not recoverable irrespective of referential distance. With relation to the map task, this view of Halliday will help to account on the way information is presented. Halliday’s view will help to discuss the significance of map task interlocutors’ tonic selection against the context in which they were uttered in aiding their negotiation about the route. Prince (1992: 309) similarly suggests that once a lexical entity has been introduced into a discourse it remains recoverable until the completion of a discourse. However, Prince is not clear in terms of how she defines the beginning or end of a discourse.

In contrast to Halliday and Prince, other works quantify a limit beyond which a previously mentioned element is no longer recoverable from the context. Analysing an Old English homily text, Svoboda (1981: 88-9) observed that an element remains retrievable for a stretch of seven clauses. Firbas (1995: 40) analysed modern English literary texts and like

¹¹ The views on the recoverability are presented in Halliday section rather than in each author relevant section to better link it with Halliday’s view and show how Halliday’s Given and New is more relevant to the aims of the present research more than the other approaches.

Svoboda found that referents typically remain retrievable for seven sentences taking into account the continuum nature of retrievability within the FSP framework, 3.4 below. Givón also (1983a: 352- 4) argued for a limit for an item to remain recoverable without being mentioned again. Givón (1983b: 13) went further as he proposed that an item remains recoverable for a span of 20 clauses as the referential distance beyond which a referent is no longer recoverable from the context.

However, Geluykens (1989: 135-6) shows that clauses are not the ideal measure of recoverability because in speech there are factors such as dysfluency (pauses, false start, hesitations), referential distance, turn taking (change of speaker) and speakers' numbers, change of topic and the intervening material that have effect on whether interlocutors treat a lexical item as recoverable or non- recoverable. O'Grady (2013a: 30) similarly argues that "Intuitively, it appears that a correlation should exist between the number of conversation turns, topic shifts, speakers and the recoverability of a lexical item. Similarly, if the intervening material is related to the previously mentioned lexical element, it should remain potentially recoverable".

As for Chafe (1994, 1987), whose views are different from the above as he approaches recoverability in terms of working memory and not discourse, an item can no longer be considered recoverable once it has left short-term memory as recoverability for him is a matter of whether or not an 'item' is present in the listener's short- term memory (i.e. accessible; active) as described in 3.5 below. Based on the psychological views on the workability of the memory, Chafe suggests that seven items can be held in the short term memory and after that the item would not be recoverable. For Chafe, the seven items could be intonation units. The following positions Chafe's (1994: 79) argument: "no simple answer is possible, because it is up to the participants in a conversation to decide whether they will keep a referent active by repeatedly refreshing it throughout a sequence of intonation units, or whether, at the other extreme, they will let it recede from the active state after a single, glancing mention [...] one thing that is clear, however, [...] any referent unless it is refreshed, will quickly leave the active state".

But, Chafe (ibid: 29) reports an example in which a second mention of an item renders it recoverable even after 29 intonation units distance of the first mention. Also, his view (ibid: 67) that participants in events or states remain potentially recoverable even after they have left the listener's short- term memory. Therefore, in case of Chafe's argument,

it is not clear how long a referent remains recoverable. Apart from the dispute on the number of clauses, sentences or intonation units in between the first and the second mention of an item, the view that recoverability of item could be quantified leads to the argument that “recoverability in a text would tend to conflate with accessibility” (O’Grady, 2016: 13).

Therefore, there is no clear answer for the recoverability issue. As mentioned already, studies have pointed this issue out to show that it is difficult to mark up an extended text into given and new without a means of operationalising what recoverable means. Yet, in case of the map task interaction, as described already, Halliday’s view that speakers’ tonic accent presents lexical elements as if they were not recoverable irrespective of referential distance allows to account on the way information is presented. In other words, Halliday’s view will help to discuss the significance of map task interlocutors’ way of presenting the information and their tonic selection against the context in which they were uttered in aiding their negotiation about the route.

3.4 FSP and given and new information

Firbas (1992) and the other Czech scholars approach(ed) given and new in terms of FSP theory, a theory of Grammar that looks at how the constituents of the sentence work to develop communication. As mentioned previously in 2.2 above, sentence elements ability to develop the communication forward is measured according to CD phenomenon introduced by Firbas (ibid). Sentence constituents vary in terms of the degree of CD; only the constituent with the highest CD can develop the communication. CD is determined by the interplay of factors, contextual, semantic and linearity factors on the written level accompanied by intonation on the spoken level.

Given and new information is part of how CD is allocated and it belongs to the contextual factor (ibid). Firbas (ibid) distinguished information into ‘context- dependent’ and ‘context- independent’ which correspond to the given and new in terms of the concept of the “retrievability/ irretrievability from the immediately relevant context” which Firbas introduced into FSP. Firbas (ibid: 22) stated the reason for introducing the immediate relevant context concept into the FSP framework: “in regards to FSP, the concept of known information must be considerably narrowed. This necessitates the introduction of the concept of the immediately relevant verbal and situational context”. Daneš (1974) and

Firbas (1992) stated that resorting to context to determine the status of information is not of much help as it is a complex phenomenon. Daneš (1974: 109-110) pointed out that the notions of given (known, old) and new (unknown) information have relative and very broad (if not vague) character (cited in Firbas, 1992: 21). Also, the Czech linguists and Prague school encounter the unresolved issue of the retrievability span: the uncertainty for how long a given item will remain given without the need to be mentioned again. Mathesius (1939) who distinguished information into contextually given in terms of its availability in the text and Daneš (1974: 110) who defined given as “information that is “derivable” from the context, situation or the common knowledge of the speaker and the listener” did not address this issue. Therefore, within the FSP’s framework, Firbas (1992) argued that immediate relevant context is an important step towards narrowing the broad notion of the given/ new information.

So for Firbas (ibid: 37), “in regard to the immediate communicative step, information is given (old, known) if it is present in, and hence retrievable from, the immediately relevant preceding context and/ or if the referent suggesting it is present in, and hence retrievable from, the immediately relevant situational context”. Firbas (ibid: 22) further accounted for the distinction of the information as follows:

- a) Information that, though conveying knowledge shared by the interlocutors, must be considered unknown in regard to the immediately relevant communicative step to be taken and in this sense irretrievable from the context.
- b) Information that not only conveys common knowledge shared by the interlocutors but is fully retrievable from the context even in regard to the immediately relevant communicative step.

Then the newness (irretrievability) and givenness (retrievability) of an item in Firbas’ framework is identified in terms of its status at the immediately relevant context rather than and regardless of its status in the wider context as Firbas (ibid: 31) showed: “a piece of information may be retrievable or irretrievable from the part of context outside the immediately relevant contextual sphere, and hence dependent on or independent of this part of context. However, in regard to the immediately relevant communicative step, in other words in regard to the immediately relevant communicative orientation of the sentence, it is not the wider but the immediately relevant, context that plays the decisive and determinative role”.

In comparison with Halliday's views that are applied in the present context, it could be argued that there is a common point between Halliday and Firbas in that Halliday's approach allows the presenting of information as Given or New *regardless* of being actually given or new respectively in the wider context. Yet, Halliday is different from Firbas; Halliday determined retrievability/ irretrievability in terms of the wider (physical) context whereas Firbas in terms of the immediate context. And this issue is left unresolved in Halliday's argument on given/ new. So, it could be argued that Firbas' immediate communicative context provides a solution within the FSP framework to the issue of the recoverability and how to distinguish given and new (i.e. it can be used as an analytical tool). But, Firbas givenness and newness are graded not binary as Halliday which is another difference between Halliday and Firbas because of the CD phenomenon: if several sentence elements are given or new, the gradability of their givenness or newness is determined in terms of their contribution of pushing the communication forward. So, in comparison with Halliday as an analytical tool, FSP does not allow for an easy discussion of binary Given/New as Given/ New in terms of FSP does not make a lot of sense. Yet, compared to spoken data, Firbas' approach is easier to apply on the written data as there is the complexity that the intonation centre (information focus, tonic syllable in Halliday's terms) is not carried by the highest CD element that is determined by the contextual, linearity semantic factors (i.e. the case of the non- correspondence between intonation and other factors in determining the highest CD element) as explained in 2.2, p. 15. In case of the non-correspondence, the prosodic factor is the determining factor and the element that is made intonation centre will carry the communication forward. Yet, Firbas' FSP is worth considering to examine spoken data especially that it is not yet being used except on written text by Firbas (1992) and some of his students. Adopting Firbas' FSP to examine the map task dialogue is addressed as an extension of the current study in Chapter Eight.

3.5 Chafe: given and new

Chafe discusses given and new in a series of work (1970, 1974,1976, 1987). However, the focus will be on his later work (1994) as he has added new views to his argument to given and new.

To start with, Chafe agrees that some information expressed in a clause is new, while other is old; and the new is accented whereas old is not accented. In his (1970) work, Chafe uses the term ‘old’ to refer to given and he defines old as shared information whereas new as “[information which the speaker] is introducing into the hearer’s mind for the first time”. In his (1974) and based on the recoverability feature from the discourse or the physical context, Chafe discards the term ‘shared knowledge’ and the term ‘old’ and uses the term given instead. Chafe (1994) states also that the term ‘old’ has a misleading connotation and is better to use given instead. Chafe shows that approaching given- new in terms of shared information requires accessing hearers’ mind and this is impossible to achieve. Also, drawing on Halliday’s recoverability feature, the term recoverable information is different from Chafe’s shared information in that recoverable information refers to the information introduced in the discourse or the physical context whereas shared information is related to the information which the speaker assumes to be in the hearer’s consciousness.

Although, Chafe (ibid) agrees that some information in the clause is given while other is new, he is not convinced by the argument that information is given if it is introduced previously in the discourse while new not previously introduced in the discourse. Chafe (ibid:71) argues that in examples like ‘*I talked to a lawyer last night*’ ||i TALKed to a \LAWyer last night ||, the referent ‘*I*’ might be thought to be already given on the grounds that the speaker ‘*I*’ is present in the conversation whereas ‘*lawyer*’ might be thought to be new therefore is said with primary accent as the intonation coding shows. Chafe (ibid) argues that such examples suggest that language gives more prominence to new ideas than to given ones.

Chafe (ibid: 71) states that “this more local view [i.e. information previously or non-previously introduced] of givenness and newness is appealing because it helps to explain why [information is said] with primary accent, whereas [other information] is said with weak accent ¹²[...]. This way of viewing things, however, still does not answer the question of just what is meant by new and given. In what sense was the idea of the ‘*lawyer*’ new and that of the speaker given”. Chafe (ibid: 72) supports his argument by citing conflicting examples like, ‘*I talked to Larry last night*’, ||i TALKed to \LARRY last

¹² Chafe’s primary and secondary accents refer to Halliday tonic accent and prominence non- tonic accent respectively whereas weak accent refers to Halliday’s absence of any degree of prominence.

night||. ‘Larry’ is said with a primary accent as the intonation coding shows although ‘Larry’ is as well known to the listener as to the speaker.

Unconvinced with the above interpretation of given and new, Chafe (1974, 1976, 1994: 72) argues that “it is ultimately impossible to understand the distinction between given and new information without taking consciousness into account”. More specifically, Chafe (1994) argues for approaching given and new within the framework of active and inactive information in the listener’s consciousness when uttering an intonation unit, the linguistic expression of information. During the discourse, Chafe (ibid: 53) argues that the state of information in the hearer’s consciousness changes, (i.e. “the movement of ideas into and out of the fully active state”. So, Chafe (ibid: 81) approaches the distinction between given and new in terms of “activation cost” notion, information having previously been active, semiactive, or inactive, may at a particular point in a discourse either remain active or become active that is the speaker’s assessment” Chafe (ibid: 72) states that “a more accurate characterisation of *new* is *newly activated at this point in the conversation*. Conversely, *given* can be characterised as already *active at this point in the conversation*”. So, Chafe’s view is non- binary. Chafe (ibid) argues that one idea being present in what he calls an Intonation Unit (IU) and then the IU can be decomposed into given (in the mind’s focus) and new (not in the mind’s focus). Chafe (ibid) adds third category to the distinctions of the given and new, accessible information, that is information that has been activated from a previously semiactive state. Chafe (ibid: 81) refers also to the articulation of information as “verbalizing a focus of consciousness” and resembles the three activation states of information into focal, peripheral and unconsciousness states respectively. Chafe (ibid) associates the information in the active state with short- term memory whereas the information in the inactive state with long- term memory. As for the information in the semi- active state, he (ibid) recognises it in the notion of context, as when items in short- term memory are thought to be influenced by their surroundings.

As for how long a referent remains given, Chafe (ibid: 79) argues that “no simple answer is possible, because it is up to the participants in a conversation to decide whether they will keep a referent active by repeatedly refreshing it throughout a sequence of intonation units, or whether, at the other extreme, they will let it recede from the active state after a single, glancing mention [...] one thing that is clear, however, [...] any referent unless it is refreshed, will quickly leave the active state”.

So, for Chafe, the speaker assumes that information in the hearer's mind maybe in one of at least three activation states: given (already active), accessible (assumed/previously activated; semiactive) and new information (inactive) instead of the simple binary distinction of given versus new. Unlike Halliday, Chafe's distinction seems to allow for a ternary split of information whereas Halliday's distinction is binary, information is either given or new. Chafe (1994) also discusses elements which are in focus (held within short-term memory, sort of equivalent to given/recoverable) and elements that are out of focus (which includes new but also retrievable elements which for Halliday would be Given). Chafe's use of the term focus is different from Halliday (Halliday and Matthiessen, 2014) in that Halliday used focus to refer to information foci (i.e. the syllable that is made tonic, carries the main pitch movement). Chafe's interpretation of given and new refers to the status of information as he labels tone units as idea units and talks about one idea being encoded within a tone unit. So clearly his views on information are in terms of propositions. Unlike Halliday's Given and New which refer to the way of presenting information rather than information status. Yet, Chafe's distinction resembles Halliday's on the use of intonation as explained below.

Chafe (1994) shows that activation cost is determined primarily by the speaker's assessment of changing activation states in the mind of the listener. Speaker uses intonation to express these three activation states based on his/her assessment of information's states in the listener's consciousness. Both new and accessible information is verbalised with a primary (strong) accent whereas given information with weak accent. Yet, Chafe (ibid: 76-78) shows that there is exception in which the given information is said with primary accent to express contrastive meaning which is similar to example 'he was talking about *ME* not *YOU*' in 3.3 above proposed by Halliday (1985:91). Chafe (1994) argues that the effect of such changes on the state of information in the listener's consciousness on language and what language can tell us about the nature of these changes can help to explain why '*lawyer*' and '*Larry*' in the above two examples are accented although they are not the same in that '*lawyer*' is new to the hearer whereas '*Larry*' is known to the listener as described above. So, for Chafe, '*lawyer*' is new idea in that the speaker assumes that it was previously unknown to the hearer before his (speaker's) utterance and its newness could then be identified as being inactive (i.e. new) in the listener's consciousness hence made with primary accent whereas '*Larry*' "was in no sense an idea that was being newly introduced into the listener's mind by this

intonation unit. So it did not qualify as new information in the sense of the referent 'lawyer'. It would then have been the speaker's anticipation of the activation process in the listener's mind that determined the new status of 'Larry'". (Chafe, 1994: 72). Based on the distinction of active and inactive information view in the listener's mind, it is easy to see that what is significant about the referent 'Larry' is not that the listener had no previous knowledge of this person, but that the idea of him was previously inactive (new) and was activated at this point in the conversation by the speaker's intonation unit.

While Chafe's distinction of information in terms of the activation cost explains why given information is accented in the same way as the new information based on the speaker's assessment of the listener's consciousness, Chafe (ibid: 75) shows that "typically a speaker may assume that the process in the listener's mind is in harmony with those in the speaker's own mind". So, the speaker verbalises information accordingly, accented or unaccented. Chafe's argument does not say on what grounds the speaker's thoughts are in harmony with those of the listener. It might be that the speaker depends on the shared information between him/her and the listener (what they mutually know) to assess the state of information in the latter's mind. If this is true, Chafe's argument still has the issue of the mutual knowledge and how the interlocutors achieve it as explained in 3.7 below. Also, approaching given- new in terms of shared information requires accessing listener's mind and this is impossible to achieve as Chafe (1974) himself acknowledges as pointed out.

Also, communication may not function satisfactorily in case of speaker's relying on state of information in his/her own consciousness rather than on his/her assessment of the states of information on listener's consciousness in expressing the information; Chafe (1994:75) acknowledges that "it must be the speaker's assessment of the listener's mental processing that takes priority if language is to perform its communicative function satisfactorily. We may all be familiar with cases in which someone said *he* or *she* under circumstances where we, as listeners, had no idea who the referent was, the speaker relying too much on his or her own mental processes and not enough on ours. Language works best when the expression of activation cost is listener- oriented".

With relation to aim of the current study of looking at what information is made tonic, the issue of whether or not there is shared information is irrelevant.

3.6 Prince's given and new

Prince (1981) believes that the distribution of information is determined by what the speakers are attempting to convey and by their hypotheses, assumptions and beliefs about the hearers' familiarity with the information to be communicated. So, Prince (ibid) proposes taxonomy to identify the way of presenting information and builds it around the speakers' assumptions about the hearers' familiarity with the information. Prince bases her taxonomy on "assumed familiarity" (ibid: 233) which shows that writers/ speakers have certain set of assumptions about what the readers/ listeners know. Prince (ibid) discards the terms 'shared knowledge' and 'givenness' in favour of assumed familiarity. Prince finds these terms confusing; she argues (ibid: 233) that "all a speaker has to go on when treating something as given or shared is what s/he assumes the hearer assumes". Prince identifies information in terms of the hearer's familiarity into 3 categories as the below diagram cited from Prince (ibid: 237) shows.

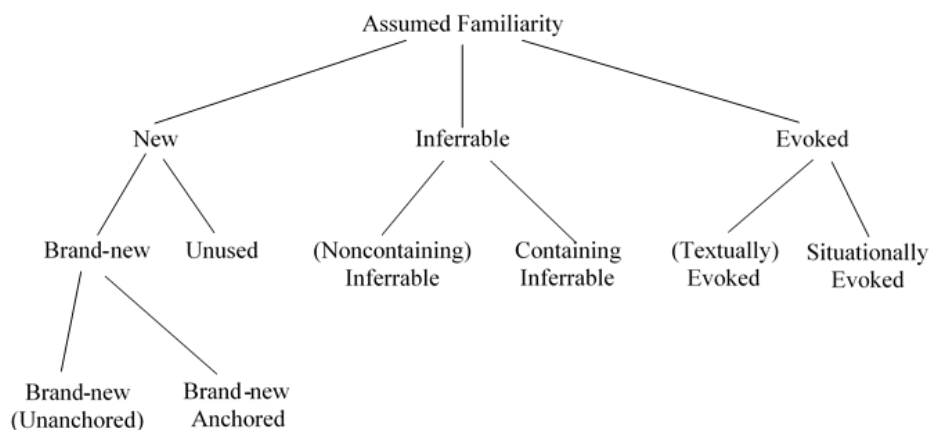


Diagram 3.1 Prince's (1981:237) Taxonomy of information

First, the New entity: speaker introduces an entity into the discourse; created a new entity. New discourse entities are of two types: i) Brand- new in which the hearer may have to create a new entity, ii) the Unused in which an entity is assumed to be in the hearers' model. Brand- new entities are of two types: Anchored and unanchored. Anchored entity in which the Noun Phrase (NP) representing it is linked, by means of another NP or "Anchor", properly contained in it, to some other discourse entity whereas the unanchored is the brand new, the discourse entity the hearer creates for the referent. Second, evoked entity: it is the entity that is already in the discourse- model. The evoked entity is of two types: i) (textually) evoked in which the hearer evoked it earlier, on textual grounds, by following instructions from the speaker; ii) situationally evoked in which the hearer had

evoked it earlier. These represent discourse participant and the text itself. Third, Inferable entity in which the speaker assumes the hearer can infer it, via logical- or, more commonly, plausible- reasoning, from discourse entities already Evoked or from other inferrables.

Prince's taxonomy does not discuss whether assumed familiarity is binary, ternary or something else. Prince's taxonomy does not examine also the role of intonation in the projection of information; she focuses on the hearer's familiarity with the information. Therefore, because of the absence of intonation role in Prince's model, the model is not relevant to context of the present study as the study aims at revealing intonation role in distributing the information expressed by the marked Themes and its role in structuring map task dialogue. Also, the absence of clear distinction of information from Prince's model does not allow any easy discussion of how the map task interlocutors present the information expressed in the marked Themes used in the map task dialogues.

3.7 Clark *et al.*'s given and new

Clark's interpretation of given and new terms has appeared in a set of papers. Clark's papers are joint work with other scholars: Haviland and Clark (1974), Clark and Clark (1977) and Clark and Haviland (1977). In this section, Clark *et al.*'s interpretation of the given and new terms and the extension and modification they have made to this interpretation across these papers are presented. The information is distinguished into given and new depending on: 1) speaker's beliefs on what the hearer knows (Clark and Haviland, 1977), 2) intonation (Clark and Clark, 1977), 3) propositional not lexical interpretation (Clark and Haviland, 1977) and 4) syntactic structures (e.g. Haviland and Clark, 1974). Clark and Haviland (1977) define given and new in terms of the speaker's *belief* about the hearer's knowledge of the information. For Clark and Haviland (1977: 3) given is information the speaker "believes the listener already knows and accepts as true [whereas new] is information [the speaker] believes the listener does not yet know". In other words, for an element to be given, the speaker must believe that the information it presents is already known to the hearer. So, Clark and Haviland (*ibid*) have propositional views on given and new as they do not approach information in terms of the information status of the lexical items.

With relation to distinguishing given and new in terms of the syntactic structures, for example Clark and Clark (1977) propose that English language has syntactic devices that are used to mark off the distinction between given and new and signal newness with the information focus device. These include restrictive relative clauses, cleft sentence, the adverbial ‘*too*’, the definite article ‘*the*’ and the pseudocleft construction. These syntactic devices are presented with illustrative examples in Haviland and Clark (1974: 513) and Clark and Haviland (1977: 14). Example 3.4 from Haviland and Clark (1974: 513) illustrates the use of the cleft sentence to distinguish information into given and new. Cleft sentence has the function of placing focal stress on Olivia:

Example 3.4

It was Olivia who kissed Oscar

Given: someone kissed Oscar

New: that someone was Olivia

Example 3.4 illustrates that the distinction into given and new is inherent in the syntax (i.e. the way they are structured provides a distinction between given and new information). Given information is ‘*that someone kissed Oscar*’ whereas the new information is conveyed by the constituent is ‘*that someone was Olivia*’. So, information is propositional and not lexical for Clark *et al.*

As for drawing the distinction between given and new in terms of intonation, Clark and Clark (1977), for example, state that new information is accented. Yet, the view that new information is accented is not always efficient because given information might also be accented if the speaker has chosen to present it as if it were new according to Halliday’s views described in 3.3 above. So, Clark and Clark’s (ibid) view on given and new is different from Halliday in that it is not designed to account for the presentation of information as if it were Given or New (i.e. discourse given speaker new therefore hearer new information). In other words, Clark and Clark’s (ibid) approach does not allow for accounting for information as method of presentation as they are different from Halliday because of their view of the speaker’s beliefs; given and new for them is a feature of information and not method of presentation.

3.8 Summary of given and new/ Given and New

The above sections outlined the major work associated with the given and new/Given and New of Halliday, Firbas, Chafe, Prince and Clark *et al.* The sections show that there are similarities and differences among these works in their approaches to given and new/ Given and New. It becomes evident that no two of them mean quite the same thing, and that, in some cases, the differences are quite large. For the functions of the given and new/ Given and New, Halliday, Clark *et al.*, Chafe, Prince and Firbas propose(d) different functions of the two concepts as they conceptualise(d) the function of the given and new/ Given and New differently. Table 3.1 summarises the interpretations:

Table 3.1 Summary of the interpretations of given and new/ Given and New

Author	Interpretation
Halliday	information is recoverable or non- recoverable from the discourse; subjective way of presenting information: presented as New or Given; binary division.
FSP	given and new information is part of how CD is allocated and it belongs to the contextual factor; non- binary division: information is in a scale of givenness to newness.
Chafe	working memory not discourse; new is newly activated at this point in the conversation; given is active at this point in the conversation; accessible information, that is information that has been activated from a previously semiactive state; triple division.
Prince	information is presented around the speakers' assumptions about the hearers' familiarity with it; non- binary division.
Clark <i>et al.</i>	given: the speaker believes the listener already knows and accepts as true; new: the speaker believes the listener does not yet know.

3.9 Key System

In addition to tonality and tonicity realisations of the marked Theme, key, the pitch height of the onset, which is the first prominent syllable (Brazil, 1997; O'Grady, 2010) within the tone unit¹³, is the other prosodic aspect to be examined in the current study to reveal how it contributes to structuring the map task. The intention behind considering key of the marked Theme is: 1) O'Grady's (2017a) argument that in the spoken text, the function of Theme as an unfolding device which grounds a message in its local context and orients

¹³ Brazil (1997) used the term 'tone unit' instead of tone group. In the current study, the term 'tone group' is used.

it towards the rest of the discourse (Halliday and Matthiessen, 2014) can be revealed by examining the prosodic realisations of Theme including key; 2) O'Grady's (2017a) argument that key functions like Theme in that it orients the clause to the rest of the discourse through its role in signalling expectations. With relation to the map task dialogues, the aim is to uncover how key choice of the marked Theme contributes to grounding the message in its local context and orients it to the rest of the map task interaction and contributes to structuring it and whether there is an interplay between marked Theme and its key choice. The current section presents theoretical background on key to clarify what key is, reveals its communicative significance in English discourse and further clarifies the importance of examining it in the present study. The section focuses on Brazil's key system as it is followed in the present study. It also presents other works on key to situate Brazil's views and the current study in the wider literature and to clarify the reason behind following Brazil's views in the study. The presentation of other work on key will also show how Brazil's argument on key is extended and reveal the differences found between Brazil and other scholars in the way of approaching key with relation to the way of identifying key and the number of key choices and their communicative value.

Brazil's key system (Brazil, 1997; O'Grady, 2010) is an aspect of his Discourse Intonation theory which examines the communicative significance of the intonation choices made by speakers in naturally occurring speech from a contextual perspective (i.e. language in use). Brazil argued that intonation choices that the speakers make depend on the speakers' contextually referenced perceptions (Hewings and Caudwell, Foreword to Brazil, 1997: iv). Brazil (ibid: 71) argued that speech is interactive; speakers shape their messages on the basis of their assumption of the state of 'speaker- hearer convergence' depending on the state of convergence which they assume exists between them and the audience. In case of the intonational selection, it signals speakers' projected assumptions of the state of the speaker/ hearer convergence. Each of the intonational selection has a general meaning which takes on a local meaning within a particular context (ibid: xi). Brazil's local meaning of intonation is similar to Halliday's subjective view of presentation of information (accenting or deaccenting it) regardless of whether or not the information has already been mentioned in the context of interaction.

Brazil took the term 'key' from Sweet (1890) who was the first to suggest it. However, Sweet used key to refer to the general pitch of the sentence or sentence group: "each

sentence or sentence group has a general key or pitch of its own which can be classed as high, mid or low” (cited in Henderson, 1971: 178) whereas for Brazil (1997), key is grounded in the tone group.

Like Sweet, Brazil (ibid) distinguished three key choices: high, mid and low. The pitch height of a tone group is determined in terms of the onset, the first prominent syllable within the prior tone unit. So, the onset of a given tone group may be pitched higher, lower or around the same pitch level as the onset syllable of the previous tone group. Example 3.5 below illustrates how key is identified in terms of the key of the prior tone group. The numbers denote the hertz value of the pitch height and M refers to the mid key selection; the example is taken from the dialogue of group one of the map task and the full data script of the dialogue is presented in Appendix K. Example 3.5 and other examples in this section are written in intonation coding. The intonation coding symbols are illustrated on p. xi.

Example 3.5

|| M 179 \OK|| is there M 209 ANYthing between the old mine and the \MOUNtains||

In the example, the hertz value difference between the onset syllable of the first tone group ‘ok’ and that of the second tone group ‘*is there anything between the old mine and the mountains*’ realised on ‘any’ in ‘*anything*’ is not large as the numbers show. So the two onset syllables are in the same pitch height range. Therefore, key choice on ‘any’ is mid as the onset in the prior tone group, ‘ok’. The way key is identified is further described in 6.2, p. 119. In the example also, the second tone group ‘*is there anything between the old mine and the mountains*’ has more than one prominent syllable and Brazil (ibid) called it ‘extended tone unit’ because the onset syllable and the tonic syllable are not conflated, the syllable ‘any’ in ‘*anything*’ is the onset syllable whereas the syllable ‘moun’ in ‘*mountains*’ is the tonic syllable, that carries the tone which is the main pitch movement in the tone group. Brazil (ibid) referred to the pitch level on the tonic syllable as termination and he recognised three levels of termination high, mid and low. Key refers to the change in pitch height on the onset. In the first tone group of Example 3.5, the onset syllable and the tonic syllables are conflated because tone unit contains only one prominent syllable ‘ok’. Brazil (ibid) called such tone unit a ‘minimal tone unit’ and the pitch level of the minimal tone unit is identified depending on the pitch level on the

conflated onset/tonic syllable. So, Brazil did not conflate key, the pitch height on the onset with termination, the pitch height on the tonic syllable.

Brazil's (1997: 245) interest in the changes in pitch level lies in his intention to "take note of the way they affect the communicative value" as the three key choices denote different meaning. Brazil (ibid) showed that the selection of key projects the speaker's assumption about the hearer's expectations as the talk unfolds. O'Grady (2017a) mentions that key can say something about the status of the starting points of the tone group because it projects speaker's expectations about the hearer's responses (i.e. anticipating what the hearer's answer will be). High key signals that the information contained within the following tone group is contrary to expectations (i.e. has a denial of expectation relation to what has preceded). The 'contrasting' here refers to a selection which "projects a binary opposition upon the existential paradigm and explicitly denies an alternative" (Brazil, 1997: 45). Mid key indicates that the tone group adds to the expectations created by the previous discourse; it neither signals contrast nor equivalence to the expectations created by the previous discourse. Mid key projects that the proposition contained within the tone group is projected by the speaker as not being contrary to the hearer's expectations and the discourse is developed in an expected and unsurprising manner. Low key signals that the content within the following tone group is equivalent to the expectations created by the previous discourse (ibid: 75- 84). In the map task interaction, key choice of the marked Theme is examined to find out how it helps manage the interlocutors' expectations and aids them in the interaction about the route and contributes to structuring the map task.

The below table summarises the meanings of the three key choices:

Table 3.2 the communicative value of key from Brazil (1997) summarized by O'Grady (2010: 28)

Key	Meaning
High	Tone unit is contrastive with expectations created by previous discourse
Mid	Tone unit adds to the expectations created by previous discourse: it is neither contrastive with nor equivalent to the expectations created by the previous discourse
Low	Tone unit is equivalent to the expectations created b previous discourse

Brazil (ibid) proposed that mid key is the unmarked choice whereas high key is a marked choice as it projects additional meaning of contrast. Chun (2002: 34) describes mid key

choice “as generally unmarked”. She argues that the selection of the high or low key involves raising or lowering the pitch of the whole tone unit relative to a pitch that can be established as the norm for the speaker concerned. In other words, the use of the high or low key is a divergence from what is usual. Similarly, O’Grady (2010: 29) also shows that high and low selections add more to the meaning as “they represent a more delicate selection”. In the context of the map task, it will be interesting to see how the divergence from the mid key will aid the map task interlocutors in their description of the route in terms of the information that is added by the divergence from the mid key. More light will be shed on the markedness of the key selection when discussing the frequency of occurrence of the key choices in the map task dialogue.

Example 3.6

||ok so for **H 270** ME || that’s **M 229** KIND of by the stone giant||

Example 3.7

|| **M 118** SO || we’re at the **M 89** START || **M 83** UM|| and **M 95** beLOW the start is the old mine||

Example 3.8

||so now you **M 115** SHOULD be in the bottom left corner|| **L 62**YEAH ||

The high and low key choices in Examples 3.6 and 3.8 respectively add more to the meaning as “they represent a more delicate selection” (O’Grady, *ibid*: 29). With the high key realized on the onset of the first tone group of Example 3.6, labels ‘*for me*’ and ‘*stone giant*’ which is the alternative landmark found on the current speaker’s map, as being contrary to the previously generated expectations; the current speaker signals that the current location of the route on her map will be by a landmark that is different from what is found on the previous speaker’s map. While the low key in the second tone group of Example 3.8 labels the information as being equivalent to the previously generated expectations; the speaker is expecting that the current route location on the hearer’s map is the same as on his map and low key on his second tone group projects this. As for Example 3.7, mid key in the second tone group adds to the expectations created by

previous discourse; it is neither contrastive with nor equivalent to the expectations created by the previous discourse.

The communicative value of Brazil's key choices and their frequency of use have been examined by Cheng, Greaves and Warren (2008) in their study 'Hong Kong Corpus of spoken English (HKCES) (prosodic)' that includes almost one million words collected from four spoken communication domains: academic, business, social (conversation) and public with participants from two different cultural groups: the Hong Kong Chinese (HKC) and native English Speakers (NES) come from Britain, United States of America and Australia. The frequency analysis of the key choice used by the NES across the sub-corpora and participant groups shows that mid key is by far the most frequent selection, followed by high and low key. As for the contribution that key makes to the communicative value of an utterance, Cheng *et al.*'s (ibid) findings on the mid and low key choices were found to be in line with Brazil's views; low key signals equative value to what is said in the sense of as expected in that what is said is self-evident and so a foregone conclusion (Brazil, 1997: 49-53). As for high key meaning, Cheng *et al.* (2008) find that high key is used to denote: contrast (what is being said is perceived to be in some way unexpected) and particularising (it is not used to contrast propositions but rather to "reject all the existentially possible alternatives") (Brazil, 1997: 45). High key was found indicating disagreement in that "what the current speaker is saying contrasts with what the previous speaker has said, or that it goes against expectations given what the previous speaker has said" (Cheng *et al.* 2008: 170); the speakers were found having different views. Similar results on the use of high key as a strategy to denote disagreement in the spoken discourse were arrived at also by Cheng and Warren (2005), who used the business sub-corpus of the (HKCSE). In the map task context, that is a form of spoken discourse, it is likely that high key will be used to signal contrast or counter expectations with relation to the location of the unshared landmarks, the locations of the landmarks are unpredicted.

3.10 Other works on key/ pitch level and their role in organising the discourse

Some scholars have adapted Brazil's views and proposed different ways of identifying it, e.g. Esser (1988) uses the term key but he does not really discuss it as he examines the pitch level of the tonic syllable not onset syllable. Whereas others talked about related

issues to key that is termination, the pitch level on the tonic syllable but did not distinguish the communicative value of the pitch level from that of tone; an example is Halliday (Halliday, 1967a) though some of his work on secondary tone is relevant to key. Halliday's (ibid) way of conceptualizing pitch level is wider but complimentary to that of Brazil's (O'Grady, 2017b) because his argument on pitch level addresses the interpersonal meaning (attitude of the speaker towards both the listener and the content of their message) that is expressed in the tone group. Halliday (1967a) did not distinguish the communicative value of the pitch level from that of tones. He recognised pitch level as tone variants in terms of how high, mid or low the tones are for instance, high fall, mid fall and low fall. Halliday (ibid) referred to them as secondary tones and argued that they serve communicative purposes in discourse, for instance, in case of the falling tone, high fall signals a forceful attitude or the unexpectedness of information; mid fall is neutral as it is an unmarked choice; low fall signals a mild attitude or that the information is expected.

Other works on pitch level consider the role of pitch level in organising tone groups into phonological paragraphs known as paratones, (e.g. Brown, Currie and Kenworthy, 1980; Brown and Yule, 1983; Rost, 2002; O'Grady, 2013b). Tench (1996) and Wichmann (2000) examine the role of pitch decline across paratones in organising English discourse. Thompson (2003) recognises low termination followed by a high onset as the criterial features for identifying phonological paragraphs. Brown, Currie and Kenworthy (1980) identify only two pitch levels: high and low and argue that pitch level indicates the initiation of new topics or subtopics by speakers raising initial stressed peaks and the continuation of an existing topic by using of an initial pitch which is low in their pitch range. Nakajima and Allen (1993) illustrate that, where wording is kept constant, but sentence order changed, hearers interpret high onset choices as signalling a contrastive or fresh start while mid key is interpreted as the addition of information within a pre-established frame with low key interpreted as an elaboration on what has gone. In a recent article, O'Grady (2017c) examines the prosodical realisation of '*I think*' in UK political spoken discourse. O'Grady (ibid) reveals that speakers signal the start of a new discourse topic through the presence of a high onset realised on '*I think*' immediately following a drop to low pitch in the previous tone group.

With relation to organising the text, O'Grady (2010) who adopts Brazil's key, considers the role of key in organising the text through key's function of signalling expectations in

organising text. O'Grady (2010, 2017a) argues that key creates expectations which may not be satisfied by the articulation of a single tone group and they need to be realised over a sequence of tone groups. O'Grady's (2017a) argument on key role in signalling expectation in unit larger than the tone group has been the start of his recent arguments of considering key's role as an unfolding device that grounds a message in its local context and orients it towards the rest of the discourse (O'Grady, 2017b)

As pointed out in 2.3, p. 212 orienting the clause to the local context is basically the function of Theme (Halliday and Matthiessen, 2014) in that speakers' Theme choices are sensitive to context as they are motivated and influenced by the earlier co-text (O'Grady, 2017a); they are made in a way that enables the growth of the ideational meaning within the text (Matthiessen, 1995) to develop it into a coherent text (Fries, 1995). In the same way, as pointed out in 3.9, p. 59 key selections are made in terms of the kind of expectations that the speaker wants to signal, the upcoming information will be counter, additive or equivalent to the prior information on using high, mid or low key respectively (Brazil, 1997; O'Grady, 2010). So, key selections are context related (Hewings and Caudwell, Foreword to Brazil, 1997).

In case of marked Theme pattern, in which its textual role in structuring the map task is examined, marked Theme signals either that the perspective being developed in the clause is approached from an unusual angle or signals transition within narrative (O'Grady, 2017a). The high key choice or high pitch level choice signals also discourse transition by the disruption to the flow of the discourse in that it projects either the introduction of a fresh topic or that the discourse is extended in a manner contrary to previously created expectations (Tench, 1996). O'Grady (2017a) emphasizes that revealing Theme's function as an unfolding device in spoken discourse can only be achieved through examining Theme's prosodic realisations including key as pointed out in 1.1, p. 3. More specifically, O'Grady (ibid) argues that key functions like Theme as an orienting device which helps hearers interpret the upcoming utterance within its local context through its role of signalling expectations. So, his study has uniquely examined how Theme and key work together to orient the clause to the rest of the discourse and contribute to structuring it. The spoken discourse which O'Grady has examined is political discourse.

O'Grady's (ibid) study has revealed unsurprisingly that marked Theme has tendency to occur with high key as they both signal unexpected discourse transitions. Mid key was

used more than high and low key in the overall discourse. As for key choice on marked Theme, again mid key was found used more than high and low key with 52%, 43% and 5% respectively. Yet, despite the higher occurrence of the mid key with marked Theme in comparison with the high key, consideration of all key and Thematic selections (marked and unmarked) shows that marked Theme is found more frequently in tone groups with high keys. The overall selection both of high key and marked Theme are 23.7% and 10.5% respectively. However, 43% of marked Themes are uttered on high key whereas only 31% of the unmarked Themes with high key. This suggests that “speakers are free to associate any key choice with an unmarked or marked Theme” (O’Grady, 2017a: 284) and high key is not only associated with the marked Theme. However, the overall key and marked Theme selections show that marked Theme has tendency to occur with the high key more than with the mid key. O’Grady (ibid) argues that this tendency of the co-occurrence of the marked Theme with the high key suggests that high key is more frequent means of signalling forthcoming departures from previously created expectations in the political discourse. O’Grady (ibid) proposes 8 meanings created by the interplay between high key and Theme in relation to the context of occurrence listed in Table 3.3 below. The most common meaning of high key is ‘projecting that the upcoming discourse is being developed from an unexpected angle or in an unexpected manner’. As for high marked Theme meanings, O’Grady (ibid) shows that meaning denoted by the high marked Theme are meanings 1, 2, 3, 6, 7, 8. However, these meanings were not exclusively marked Themes as O’Grady (ibid) states that they are expressed also by the high unmarked Themes. Yet, the only two meanings that were not expressed by the high marked Theme are meaning (4) ‘to project contrast or specify an individual or actions and meaning (5) ‘direct attention towards the consequence of a future action’. Meaning 2, ‘a new paratone’ and meaning 3, ‘unexpected direction with Theme given in the context’ are the most common high marked Theme meanings. So, both key and Theme signal unexpected discourse transitions. Meaning 6 is a delicate selection of meaning 7 which is itself a more delicate selection within meaning 4. So, the meanings are not independent and there is a relationship between them. O’Grady’s (ibid) study shows that examining the key of the Theme has added to knowledge about the meanings of the Theme and how it works in interaction with the key.

Table 3.3 O’Grady’s (2017a: 286) High Key Theme Meanings

No.	Meaning category	Gloss
1	Opening of turn	the speaker projects that they are about to produce a contribution to the discourse
2	A new paratone	the speaker projects that they are about to change topic within an extended turn: signalled by high Key immediately preceded by a low pitch
3	Unexpected direction with Theme given in the context	the speaker projects a shift in the topic of discourse in an unexpected direction
4	‘to project contrast or specify an individual or action	the speaker projects that their upcoming discourse will contrast their own actions with someone else’s or specifies that a named individual’s actions were contrary to what would have been expected’
5	direct attention towards the consequence of a future action	the speaker projects that the consequences of an action will be contrary to expectations’.
6	Focus on consequence of earlier action	the speaker projects that a previous action had unexpected and perhaps hidden consequences
7	Reference to a previous remark	the speaker signals that a previous remark is contrary to what would be expected
8	Assessment of desirability	the speaker signals that their assessment of the likelihood or desirability of a situation is not predictable

3.11 Summary of the key

Sections 3.9 and 3.10 presented key system and how it functions in local contexts to add communicative value to what is said. It also presented the related work of other scholars who adopted Brazil’s key system and elaborated on it with the main focus on the studies that have examined key choices with relation to organising the text. Brazil’s key system, as part of his Discourse Intonation Theory, fits the purpose of examining key role in map task dialogue for two reasons: 1) interpreting key role in terms of context. It was pointed out in 3.9 that Brazil’s theory examines the communicative value of the intonational systems, tone, prominence, termination and key in terms of context. The current study is an attempt to examine the contextual factors that lead the instruction givers and the instruction receivers utter marked Themes on certain pitch level and how marked Theme’s key selection will contribute to structuring the map task dialogue. 2) Brazil’s way of identifying key and its communicative value. Brazil distinguished key from termination system and tone system as stated above and this helps examine the

communicative value of the initial pitch level (i.e. on the onset) of the tone group in communication (i.e. the upcoming information what the content will be, in contrast with, in line with, or neutral). Unlike Brazil, many scholars have not distinguished the communicative value of the pitch level from that of tone (e.g. Halliday, 1967a) while others conflate key (pitch level on the onset syllable) and termination (pitch level on the tonic syllable) but they distinguish them from tone (e.g. Esser, 1988). So, Brazil's argument on key is relevant to the aims of the present study.

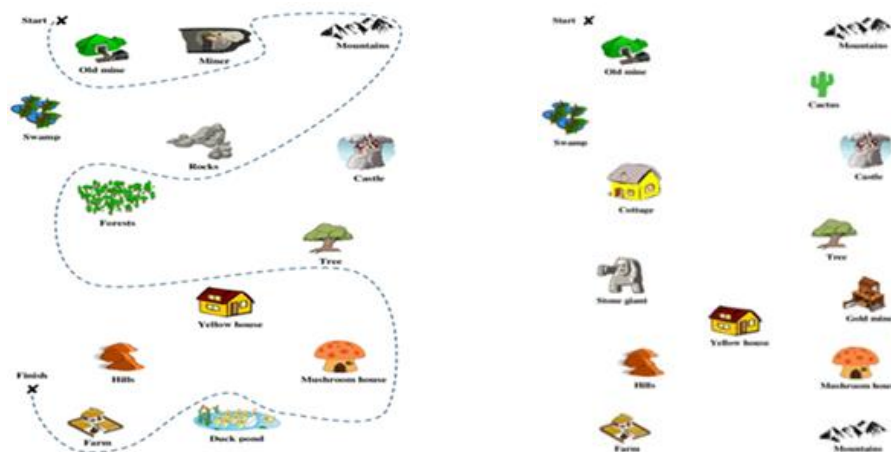
CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 The map task method: definition, foundation and design

The map task is the data collection tool adopted in the current study. It is used to elicit spontaneous natural sounding speech in the laboratory. The task is designed by Researchers at the Human Communication Research Centre (HCRC) (Edinburgh and Glasgow Universities) who released the set of the HCRC Map Task Corpus (Anderson *et al.*, 1991). The HCRC Map Task Corpus consists of 128 two- person dialogues which have been recorded and transcribed orthographically in Edinburgh and Glasgow. The aim behind collecting HCRC Map Task Corpus is to provide a source for studies of natural unscripted dialogue from phonemic, syntactico-semantic and pragmatic perspectives.

The map task is a collaborative task where two interlocutors interact only verbally to reproduce a route on a map that does not have a route. As the below images of the map used in the current research show¹⁴, one of the interlocutors, instruction giver (IG) has a map with a route and a second interlocutor, the instruction receiver (IR) has a map of the same location but without a route. The two versions of the map have landmarks. But there are discrepancies between the landmarks on the two versions as some landmarks do not exist or are at different locations or have names on the two versions. Instruction giver gives instructions to instruction receiver to produce the route on his/her map. The instruction giver provides information on how the route goes with the aid of the locations of the landmarks that the route passes by. The described process happens through only a verbal interaction as the interlocutors are not allowed to see each other or share maps. The instruction receiver tries to reproduce the route on his/her map following the verbal description and instructions of the instruction giver (Anderson *et al.*, *ibid*; Brown, 1995; Brown, Anderson, Yule and Shillcock, 1983).

¹⁴ As mentioned in the introduction chapter, the data was collected in two stages in the current study as to be explained in 4.4. The shown images are the versions of the map that were used in stage two of data collection; they are also attached in Appendix D for the clarity of the images. The versions of the map used in stage one of the data collection are attached in Appendix A of the current work.



Images 4.1: The instruction giver (to the right) and instruction receiver (to the left) versions of map used in stage two of data collection

The design of the HCRC Map Task is derived from Brown, Anderson, Yule and Shillcock’s Map Task (1983). The design of the Map Task depends on the ‘Sharedness’ feature related to the landmarks on the map. Sharedness is defined as “the extent to which features contrast or are shared between pairs of maps”¹⁵. A landmark (e.g. *church, house, mountain, etc...*) is shared if it is identical in name and location on both the instruction giver’s and instruction receiver’s maps. However, a landmark is not shared if it:

- i) is absent/ present on one map but not the other;
- ii) is similar in form and location but labelled differently on the two maps;
- iii) appears twice on the giver’s map, once in a position close to the route and once more distant, while the receiver had only the distant irrelevant one”¹⁶.

The discrepancies found in the landmarks of the two maps represent a fundamental variable for creating spontaneous speech. Kowtko, Isard and Doherty (1993: 2) show that “since the maps differ in terms of location and presence of some landmarks, the conversants sometimes encounter communication obstacles and must discuss the problem to solve it. In fostering misunderstanding, this task produces interaction similar to that in real life conversation”. Louwse *et al.* (2008: 2) state that “the goal of these differences between maps [is] to elicit dialogue between the participants in a controlled environment”. In other words, the discrepancies are aspect of natural dialogue; an

¹⁵ HCRC Map Task Corpus, <http://groups.inf.ed.ac.uk/maptask/> [Accessed in February, 2016]

¹⁶ See footnote 14.

interaction on how to reproduce the route is provoked between the instruction giver and instruction receiver because of these discrepancies as they try to collaborate to resolve them and to finally agree on how the route is to be drawn. So, because of these discrepancies the interlocutors collaborate to reach an agreement on the path of the route.

The map task has become a common data collection tool since the release of the Edinburgh HCRC Map Task Corpus. Evidence of this can be seen throughout the wide range of studies in different languages that use map task corpus for different research purposes. Thus, map task corpora in other languages such as French (Gorisch, Astésano, Bard, Bigi & Prévot (2014), Italy (e.g. Grice and Savino, 1995a), Japanese Map Task Corpus (Ichikawa, Horiuchi & Tutiya, 2000), Dutch (the Dutch Map Task Corpus, 2003) are created and modelled after Edinburgh HCRC Map Task Corpus. On the role of intonation in discourse, several studies are carried out using map task corpus to examine the role of intonation in structuring the discourse. These studies show that there is a relation between conversational structure and intonation. Kowtko, Isard and Doherty (1991/1993), who view conversations as conversational games that consist of moves (turns) and characterise exchanges in map task and other goal- directed exchanges in terms of goals and intentions, discuss the role of intonation in terms of what they refer to as a theory of intonational pragmatic “in which the role of an intonational tune is to signal the sort of move being made in a conversational game” (ibid: 1).

Similarly, Anderson *et al.* (1991) who follow Houghton and Isard (1987) and Houghton and Pearson’s (1988) hypothesis that the conversational role of an utterance is reflected in its intonation tune, state that intonation can be used as an indication of the speaker’s intention and goals when producing an utterance in which the role of intonational tune is to signal purpose in the form of the move being made in a conversational game. Anderson *et al.* (1991) use map task to investigate contrastive stress and phonological characteristic of landmarks’ names as communicative strategies to achieve success in map task interaction. The HCRC Map Task Corpus shows a relationship between the intelligibility of entities (duration excerpted intelligibility) and their availability in discourse. Intelligibility loss is found of a second mention of entities: words that refer to entities are less intelligible when they refer to entities available in discourse (Thompson, Anderson, Bard, Doherty, Newlands and Sotillo, 1993). Thompson *et al.* (ibid: 29) mention that “the tendency to produce degraded entities in discourse where they are redundant (available in discourse) reflects the cooperative nature in discourse in the Gricean sense of the term

in that the less intelligible repeated tokens are in fact helpful to listeners, for they make better prompts to earlier discourse material, [...] because they signal listeners to associate the word's meaning with some entity already established in a discourse model (Fowler and Housum, 1987)". Yet, the HCRC Map Task Corpus shows evidence also of speakers reducing articulatory effort on a purely egocentric basis, without regard to the listeners' ability to share the contextual conditioning (Thompson *et al.*: 1993). This implies that "degraded tokens are not restricted to contexts in which the listener can recover the conditioning information" (ibid: 29). Map task corpus is used to investigate how far speakers' adjustment of intelligibility is egocentrically rather than cooperatively based, that is, how far the speaker's own relevant knowledge provides his/her model for what the listener knows. This is similar to Halliday's view on presenting information as if it were Given or New regardless of their status in the discourse. Louwerse, Jeuniaux, Zhang, Wu, & Hoque (2008) investigate the relation between theme- rheme and the way they are realised prosodically using map task corpus. They conclude that rheme is said on a higher pitch than the theme.

4.2 Advantages and motivations for adopting map task method

Justification for using the map task data in the current study was mentioned in 1.1, p. 4 by referring firstly to the relation between the map task and real life situations and teaching and secondly to the relation between the design of the map task and SFL views on the function of the marked Theme and the way of presenting information. The current section presents detailed explanation of the selection of the map task to generate data in the current study with reference to issues with working on natural data, quantitative and qualitative drawbacks that lead to devise Map Task Corpus (Anderson *et al.*: 1991). These quantitative and qualitative issues are discussed with relation to generating marked Theme, marked Theme's function in discourse and the views in the literature on using the map task as a data collection tool. Reference is also made in the current section to the limitation of the map task method.

4.2.1 Generating marked Theme through map task: a quantitative motive

In relation to the quantitative aspect, it is believed that natural data might not provide sufficient instances of the phenomena under study. Anderson *et al.* (1991: 315) show that “there is no guarantee that the phenomena of theoretical interest will appear with any frequency in naturally occurring speech. Even a huge corpus may fail to provide sufficient instances to support any strong claims about the phenomena under study”. On obtaining marked Theme instances, marked Theme is an unusual and infrequent pattern because of its structure (the occurrence of a Circumstantial Adjunct or a Complement initially) (Halliday and Matthiessen, 2014) and function (“signalling either transitions within a narrative or that the Thematic element requires extra prominence in order to show that the perspective being developed within the clause is approached from an unusual angle”) (O’Grady, 2017a: 276) as pointed out in SFL Theme reviewed in 2.3, p. 21. Therefore, drawing on Anderson *et al.*’s (1991) argument, the possibility of gaining sufficient marked Themes to explore their textual function in the spoken discourse is limited.

Warren and Hay (2012) adopt a similar stance to Anderson *et al.*’s (1991) on working on natural language. Warren and Hay (2012) state that “Not all questions can be answered using daily- life speech and, some theoretical questions should be addressed using controlled, targeted laboratory speech” (cited in Warner, 2012: 15) and on the advantage of using elicited speech, Jorschick (2009: 8) points out that “Due to the design of the map, specific phrases and utterances can be elicited”. Warren and Hay (2012) do not specify what questions should be addressed using controlled speech nor does Jorschick (2009) specify or give example of the phrases and utterances that could be elicited.

In terms of using the map task dialogue to explore the textual role of the marked Theme, the key thing in the map task interaction is to reach an agreement on how the route is drawn using the landmarks on the map to aid the instruction giver and the instruction receiver in their description. But the discrepancies related to the availability of some landmarks and their location on the map and the fact that the interlocutors are not allowed to share maps as the interaction is only verbal as pointed out above might lead to a communication breakdown. To satisfy the interactive flow, the instruction giver and the instruction receiver might describe these discrepancies in a way that helps them reach an agreement about them and their location on the two versions of the map henceforth reproduce the route on the instruction receiver’s map. Drawing on Warren and Hay’s (2012) and Jorschick’s (2009) arguments on the link between map task design and

eliciting of specific phrases and utterances and based on marked Theme's signalling that the clause message is approached from unusual angle, it is likely that the map task interlocutors use marked Theme (make their point of departure a location on the map) due to its importance in easily and effectively directing each other to the landmarks on the map as Example 4.1 below shows. Making landmarks' location the point of departure of the clause message contributes to resolving the discrepancies on the instruction giver's and the instruction receiver's maps henceforth aids the interlocutors in reaching an agreement on the shape of the route and producing it on the instruction receiver's map as in Example 4.1 below. Example 4.1 is taken from the dialogue of group six in the current study; the full data script of the dialogue of group six is presented in Appendix K. In the example, the whole marked Theme is underlined and the point of departure, the marked topical Theme is emboldened; IG6 and IR6 stand for the instruction giver and the instruction receiver of group six:

Example 4.1

- 922) IG6...Um do you have a duck pond?
923) IR6: no
924) IG6: do you a farm?
925) IR6: yes
926) IG6: ok so the height of the line on the right hand side of the page is about the middle of the farm
927) IR6: so <unclear words> it dips right down
928) IG6: yeah but not quite at the bottom in the farm but a little higher than that
929) IR6: yeah
930) IG6: but below the mushroom house um and then ... so in line with the yellow house on the bottom [of the page] there is duck pond
931) IR6: [yeah]
932) IR6: yeah
933) IG6: and so the line is sort of like heading in the direction in the farm but it has to go up a little bit around the duck pond

The hypothesis proposed in the current context on the use of the marked Theme in the map task was confirmed and map task did generate rich enough data as the above extract and other illustrative examples on the occurrences of the marked Themes to be examined in the analysis chapter, Chapter Five, show. So the design of the map task satisfies the purpose of the present research that seeks to uncover whether (if so) how marked Theme contributes to achieving coherence interaction about the route.

In addition, the map task has semi-narrative nature; the instruction giver describes to the instruction receiver how the route is drawn on his/her map and the instruction receiver describes to the instruction giver the landmarks that are found on his/her map. So, map task is also likely to be a good framework to examine how marked Theme functions as a textual device to orient the clause message to the rest of the route description and hence contribute to structuring the map task dialogue. The narrative feature in the map task allows to examine marked Theme's function of signalling transitions or shift within a narrative (O'Grady, 2016). The intonational realisations of the marked Theme will be examined to reveal how marked Theme is realised prosodically to perform these functions, signalling that the clause is approached from unusual angle and/or signalling a shift in discourse, and whether there is an interplay between marked Theme and the way it is realised prosodically to contribute to its orienting function. It is to be noted that a corpus such as the British National Corpus could be searched for marked Themes but obtaining sound files of the corpus would be difficult. So, map task enables examining the spoken discourse as the map task dialogue is recorded.

4.2.2 The controlled context of map task: a qualitative motive

As for qualitative drawback of working on natural data, Anderson *et al.* (1991: 352) mention that "Many linguistic phenomena depend heavily on the linguistic and extralinguistic contexts in which they appear, and in corpora of spontaneous speech, critical aspects of context may be either unknown or uncontrolled". Communication process is complicated as it does not only involve interlocutors uttering words or utterances; it is far more complicated because it includes linguistic and extralinguistic information (such as the identity of the interlocutors, reason of interaction, situation, physical environment or the place where the interaction is taking place, the shared knowledge between the interlocutors) that interacts together for the communication to take place. So, the mere decoding of linguistic details (i.e. the semantic meaning) of an utterance by the analyst will not be sufficient to interpret utterance meaning without the analyst knowledge of the extralinguistic details. When working with natural data it is difficult to know all these extralinguistic details as the linguistic information is not sufficient to encode them (Anderson *et al.*: *ibid.*).

With such concerns in mind on the difficulty of working on natural data, researchers use alternatives methods such as the map task which provides a constrained context that is controlled by the researchers. Louwrese, Jeuniaux, Zhang, Wu, & Hoque (2008: 1) refer to the importance of such context with reference to the map task showing that “due to the inherent complexity of multimodal [i.e. linguistic and non-linguistic] communication, controlling for genre, topic and goals during unscripted dialogue is crucial [...] a restricted-domain, route-communication task. In the map task scenario, it is possible for experimenters to determine exactly what each participant knows at any given time. In this scenario, the Instruction Giver (IG) coaches the Instruction Follower (IF) through a route on the map”. With the map task data, the researcher is aware of the context (i.e. reproducing the route) and the extralinguistic details related to the topic and reasons for the interaction as the context of the map task is controlled. So the researcher of the current study is able to provide a correct interpretation of what happens when the interlocutors are negotiating on how to reproduce the route.

Yet, the controlled context of the map task is considered a limitation in the design of the map task, for example, Brown (1995: 5) describes the context as “artificial and highly restricted in type”; “constructed task [where] the input stimuli are controlled (ibid: 41); “constrained nature of an interaction imposed by a third party” (ibid: 44); “highly constrained...a relevant part of the context is largely externally constructed and where a series of instructions is provided about how to react to the external context” (ibid: 45). But, Anderson *et al.* (1991) claim that these are to be considered as advantages as they help resolve the qualitative difficulty of working on natural data in relation to the extralinguistic context.

The arguments of Anderson *et al.* (ibid) and Louwrese *et al.* (2008) on the importance of the controlled context of the map task are in line with Warren and Hay’s (2012) argument mentioned above on using controlled, targeted laboratory speech rather than natural data to address some theoretical questions. In the current study, drawing on the arguments of Anderson *et al.*, Louwrese *et al.* and Warren and Hay, it is argued that the controlled context of the map task allows to account for why the map task’s interlocutors have chosen to use marked Theme vs unmarked Theme (i.e. approach their clause message from unusual angle) and to account for their way of realising marked Theme prosodically whether uttered in dependent or non- independent tone group, its key choice and the way of presenting the information contained in it. In relation to the way of presenting

information, the controlled context of the map task is relevant to Halliday's view on the subjective way of presenting information followed in the current context. As reviewed in 3.3, p. 44, it is the speaker's choice to present information as if it were Given or as if it were New projected by intonation regardless of its information status in the discourse (i.e. non-recoverable or recoverable respectively). The controlled context of the map task allows to account for the map task interlocutors' way of presenting information due to the researcher's familiarity with their intention that is communicating the information about the route and the landmarks effectively while interacting about the route.

In line with the problems of natural language is Labov's (1972) Observer Paradox theory that explains the difficulty of obtaining natural data as the participants are aware that their speech is recorded and will be analysed by the linguist. This might have negative consequences as speech would not be really natural. The paradox lies in the fact that the linguist must observe the participants to be able to obtain the data in spite of the fact that the data generated turned out not to be very natural. Therefore, researchers tend to use alternative methods to collect data such as the map task method that mimics and assimilates everyday communicative interactions (Brown, 1995).

4.2.3 The cooperative nature of the map task

The map task method has a cooperative nature (Anderson *et al.*, 1991) and "as far as possible, 'ecological' [because] subjects co-operate to undertake tasks" (Brown, 1995: 41); they, the interlocutors, interact to reach an agreement about how to draw the route on the map as mentioned above. For an interaction to be established in any context, it involves the interlocutors' willingness to collaborate and participate in the conversation on the topic of discussion. The design of the map task provides the opportunity to the interlocutors to collaborate leading to the creation of an interaction between them. In relation to the current study, the cooperative nature of the map task is relevant to Geluykens's (1999) notion of topical coherence or aboutness that is examined in terms of how the interlocutors of the map task will manage to reach an agreement on the topic of the map task (i.e. route) with the existence of the discrepancies on the two pairs of the map. Aboutness notion does not equate with Theme. Aboutness is related to what the interlocutors are talking about, the topic of their discussion, and in case of the map task,

the topic is the route whereas Theme is the point of departure of the clause message; it is the angle from which the speaker has decided to set off for the topic of the clause message.

Drawing on the collaborative nature in the design of the map task, several studies adopt map task as data collection tool to uncover how discourse is organized and to investigate the aspects that interlocutors use to collaborate to reach an agreement on the topic of their discussion. These studies investigate the strategies that help the interlocutors accomplish the task of reproducing the route. Among these strategies is the role of intonation features that contribute to structuring the map task discourse. Some of the studies investigate the role of intonation used in backchannels for regulating turn-taking during interaction (e.g. Cerrato and D'Imperio, 2003; Savino, 2014 for Italian; Caspers, 2000 for Dutch; Koiso, 1998 for Japanese). For example, Savino (2014: 30) investigates the role of backchannels or acknowledgement tokens that work through intonation to organize the information in the discourse that lead to successful communication in Italian collaborative dialogues. He mentions that "in fact, in such interactional contexts the successfulness of information transferring is crucial to accomplish the assigned task, where the role of verbal feedback and turn taking regulation is fundamental in making such information exchange effective". Savino (ibid: 30) comes to the conclusion that "intonation analysis shows that backchannel tokens can convey the intention of giving vs taking the floor by means of a rising vs falling terminal contour and that a crucial role in signalling those functions is played by intonation".

Though criticized as being unnatural because of its constrained nature as mentioned in 4.2.2, p. 767, the map task shows aspects of everyday life interaction. These aspects are: firstly, due to its collaborative design, it provides turn taking which is one of the phenomena of a real interaction and an important factor for an interaction to take place as Savion (ibid: 30) mentions "it provides conversational moves and turn taking".

Secondly, the shared features related to the landmarks on the two versions of the map are equal to the given information that might refer to the shared knowledge or known information and the common ground where the interlocutors meet while they interact. The discrepancies are similar to the new information in everyday interaction that the interlocutors try to inform each other about while interacting in order to resolve them. Moreover, with the instruction giver and the instruction receiver being aware of the existence of these differences on their maps, they do their best to communicate information about these differences which is equal to the new information that the

interlocutors again do their best to communicate to each other. This is very clear through the patterns or structures (mainly questions) that the map task generated in the current context when the instruction giver and the instruction receiver enquire to check whether landmarks exist on either map.

4.3 Map task types

The map task method is of two types: paper based and computer based. The paper based version is used in the present study for the following reasons: (i) it is easier for the participants to read and follow the map on paper compared to that of the computer based version due to the simplicity of the design of the paper based version; the paper based version involves having the maps drawn on a sheet; (ii) Due to the nature of the map task which is like problem solving exercise, the participants might put signs for the missing landmarks and signal the differences on their map version. The details are easier and faster to be made on a paper using a pen rather than on a computer- based version especially that the participants are not expected to be familiar with using related software to know how to add details when using the computer based version.

4.4 Data collection

The data collection was carried out by the researcher and it was collected in two stages. The total number of participants is 28; 4 in group one and 24 in group two. The 28 participants are paired into 14 groups; 2 groups in stage one and 12 groups in stage two. In stage one, the data was collected from 2 groups and in stage two from the other 12 groups. Carrying out stage one of data collection with a small number of participants was vital to uncover any possible shortcomings related to the following concerns:

- 1) To check the efficiency of the procedures and instructions given to the participants;
- 2) To avoid any possible shortcomings when conducting the main experiment which is stage two of data collection;
- 3) More importantly to check whether map task would generate marked Theme pattern;
- 4) The data collected will also help know whether the actual map used in the task is useful and able to generate informative data that meets and helps answer the

research questions of the study or whether changes need be made, for example, making the task more complicated in terms of adding more discrepancies which are important in getting more interaction between the instruction giver and the instruction receiver as described in 4.1, p. 701.

- 5) Based on the view of Anderson *et al.* (1991: 352) that “due to the conversations being by design, fairly one sided, the information giver typically speaks more than the information follower”, the collected data might not be balanced. Obtaining an unbalanced data might not be that useful or informative in showing the interactive aspect in the conversation as the instruction receiver’s contribution in the conversation might be quite limited. So, collecting data from small groups will help see the type of data to be generated and find possible solutions by means of making some modifications on the task such as complicating it which might lead to provoke more interaction and participation on the part of the instruction receiver. The next two sections describe the two stages of data collection.

4.4.1 Stage one of data collection

The following describes stage one’s recruiting of participants, map used, data collection procedures and preliminary result of the data obtained in it.

A. Recruiting participants and participants’ description

Stage one of data collection did not demand a real recruiting process of participants due to the small number of participants required in it. Only four participants were needed. The four participants volunteered to participate in this stage. They were chosen for reasons of familiarity and accessibility.

Table 4.1 the demographic details of the 4 participants of stage one of data collection

Detail	Description
Age	30-40
Gender	1 Female and 3 Males
Background	All English native speaking; British; living in the City of Cardiff
Education	1 graduate of Cardiff university; 3 PhD students at Cardiff university

B. The map of stage one

The version of the map used in stage one of data collection that is attached in Appendix A was adopted from HCRC Map Task Corpus¹⁷. In relation to the sharedness feature, the discrepancies in the landmarks in the instruction giver's and the instruction receiver's maps are in terms of absent/present feature, name change feature and appear twice on the instruction giver's map and once on the instruction receiver's map (Anderson *et al.*, 1991) described in 4.1, p. 701. On the instruction giver's map, there is the start and finish points plus 11 landmarks whereas in the instruction receiver's map there is a start point plus 11 landmarks. 6 landmarks '*caravan park*', '*abandoned cottage*', '*monument*', '*west lake*', '*east lake*' and '*farmed land*' out of the total 11 landmarks in addition to the start point are shared between the instruction giver's and the instruction receiver's maps. As for the other five landmarks, 2 are unshared: '*trig point*' and '*nuclear test site*' are found on the instruction giver's map whereas '*forest*' and '*golf course*' only exist on the instruction receiver's map. The remaining landmarks, '*old mill*' and '*fenced meadow*' are partially shared. '*Old mill*' on the instruction giver's map is called '*mill wheel*' on the instruction receiver's map yet it is found at the same location on both maps. '*Fenced meadows*' appears twice on the instruction giver's map but only once on the instruction receiver's. Yet, it is at the same location on both maps.

On the original HCRC map's versions that are attached in Appendix B, the names of the landmarks were not readable as they were manually written. Therefore, the original HCRC map had to be edited to make the names of the landmarks readable for the participants. To edit the original HCRC map's versions, their images were loaded into the graphics program 'Corel Draw'. Then the text of the landmarks' names was removed and retyped in a font that is readable. The map's versions were printed on A4 paper.

C. Procedures of data collection

The 4 participants were asked to attend to a recording studio located in the school of English, Communication and Philosophy at Cardiff University.

They were paired for the task and made into 2 separate groups. Each group was recorded at separate times. The following procedures were made for each group. The two participants of each group sat facing one another in the recording studio. A divider was

¹⁷ <http://groups.inf.ed.ac.uk/maptask/> [accessed in June 2014]

placed between them so could only interact verbally when working on the tasks as they were not allowed to see each other nor share maps when working on the map task. Using the divider helped to ensure that no data would be missed as otherwise they might communicate using body language or signs. A separate audio channel was made for each of the participants.

Then the participants were informed that they are participating in a study which is part of a larger experiment to be conducted based on insights drawn from the former's results. The instructions on the tasks attached in Appendix E were explained to the participants. The participants were informed that there are three tasks to work on: warm up task, map task and a reflective task on working on the map task. The participants were given information on the nature and purpose of the tasks, what is to be done in them and how long each task will approximately take. The participants were also informed that the three tasks will be recorded. Then each participant was given the consent form to sign it as the copy of the signed consent attached in Appendix F/3 shows. There will be more details on the ethics procedures in 4.5 below.

D. Tasks given to participants in stage one of data collection

The following describes the three tasks given to participants in stage one of data collection:

i. Warm up task

In the warm up task, the participants were asked to introduce each other and talk about general things (e.g. talking about oneself, telling each other what they have been doing recently) for approximately five minutes or so. The purpose of the task was explained to the participants that is (introducing each other) and they were instructed about the length of the task. The warm up task was recorded with the knowledge and consent of the participants.

The importance of this task lies in that it helped the participants relax and be prepared for the map task and might help them get used to the fact that their conversation is being recorded. This might also help them get used to talk to each other with the divider between them so to be familiar with the setting and environment of the study before starting the main task which is the map task. The warm up task was good also as it helped the participants to introduce each other and to know general things about whom they will be

talking to and working with. This is believed to be good to ensure the fluency in creating the conversation between the participants while doing the map task.

ii. Map task

The map task is the second and main task. The map task was explained to the participants as follows:

- 1) There are two versions of the map which are of the same location but drawn differently. One of the versions has a route and a set of landmarks, whereas the other has only the landmarks. Yet, the sets of landmarks in the two versions are not quite identical.
- 2) The task is to produce the route on the map that does not have it.
- 3) They were informed that one of them will be the instruction giver who will be given the map version with a route and the other instruction receiver who will be having a map with no route. The instruction giver is asked to instruct by giving directions to the instruction receiver to help him/her produce the route on the version of the map he has. They are told that they should cooperate to solve the task.
- 4) It is not allowed to see each other's map.
- 5) It is not allowed also to see each other while interacting as they have to interact only verbally to solve the task.
- 6) Three sources of information can be used when working on the task: 1) the instructions 2) what appears on the visible map (landmarks, labels, and in the case of the instruction giver, the location of the route and 3) what has been said during the conversation.
- 7) The participants were informed also that their conversation will be recorded.

The participants were randomly given the instruction giver's and the instruction receiver's roles. Then they were handed the versions of the map and asked to start working on the task.

iii. Reflective Task

The third and final task of stage one of data collection is a reflective task. The four participants were asked to reflect on their experience on working on the map task. Each participant was recorded separately when reflecting on his/her experience. Participants'

reflection and opinion are important to find about any shortcomings in the procedures followed in stage one of data collection and whether the procedures need be changed when conducting stage two of data collection as to be explained in the next section. The reflection of the four participants that is attached in Appendix H is discussed in the next section.

E. Data analysis procedures and preliminary result of the data of stage one

Map task data obtained from the two groups of participants and their reflection on doing the map task were transcribed orthographically with the help of Praat software (Boersma and Weenink, 2014). Praat was used as it has the feature of marking the sound file in selected extracts that can be played back and repeated many times especially in places where the voice of the participants is not clear. This feature helped to simplify the orthographic transcription of the data. To ensure maximum accuracy of the orthographic coding of the interaction, a native speaker assisted by the researcher checked the scripts of the data against the sound files in which each sound file was played and listened carefully to.

With relation to the reflection of the four participants on doing the task, that is attached in Appendix H, the four participants agreed that the map task was workable and working on the task went quite well. For example, the instruction receiver in group two states that “um I think that we worked together well in um getting to the finish point” and the instruction giver in group one states that “it worked really well. Uh I felt the challenge went quite well” and the instruction receiver in group two mentions that “Uumm yeah it was interesting”. This suggests the map layout was good and the way the task was explained to the participants was clear as they know what were meant to do when working on the task.

The clarity of the task to the participants and what they are required to do when solving it is reflected also through the participants considering other ways of doing the task. The participants suggest describing the details on the maps in ways that make the task easier. For example, the instruction giver in group one stated that “So, I guess when we started we probably should have just gone through the whole map and figured out what was on my map that wasn’t on Ed’s, I didn’t have picket fence, forest or maybe golf course, I can’t remember. So, it would have been useful because then you could’ve said go through the picket fence or go around the forest or whatever. So that might have been helpful”

and “Uuuu, I think the bit we struggled on was going from mill wheel to the right of forest or where I didn’t know there was a forest there...because, it’s... we could have just gridded it out I guess but it would’ve been easier to just say it’s about twenty degrees or something, and then we could have yeah, gone straight to it”.

As for the map layout, the instruction giver of group one and the instruction receiver of group two refer to the importance of the names of the landmarks when doing the task. The instruction giver of group one states that “the wording is... is very helpful I mean i... i... if the wording hadn’t been there it might, this challenge might have been a lot harder. I mean ...uh cause it would have been a case of describing what I might of called a a field uun someone else might have called a meadow for example. So uh I think that the wording makes the challenge uh uh a little easier in that respect uh a as oppo... cause um especially when there’s different landmarks on different maps” and “Yeah having the names was quite good. Using the k in caravan park is a better reference than I don’t know the wheel on one of the caravans because there’s only on k. The same for the e in the cottage or the t in monument. So, it just makes it easier than relying on the pictures and then saying move so amount of distance away from the picture because everybody’s idea of diff... distance is different right. So just yeah using the letters gives you a slightly more accurate place to go to on each of the pictures than saying go to pen... fence post number three in the fence meadow or something like that.” So, editing the names of the landmarks on the map as described in 4.4.1. B, p. 812 was useful as the names of the landmarks on the original HCRC map were manually written so they were not clear as the map attached in Appendix B shows.

With relation to map task data obtained from groups one and two, the orthographic coding of the data of these groups attached in Appendix K shows that:

- 1) The participants worked on the map successfully; the instruction receivers in both groups reproduced the route as their maps that are attached in Appendix G show.
- 2) An interaction happened in both groups; as Table 4.2 below illustrates, the duration of interaction of group one is 09:33 minutes and group two 08:37 minutes. The data script of the two groups recorded in stage one named the dialogue of group one and the dialogue of group two are attached in Appendix K with the other data script that was collected in stage two of data collection as to be described in 4.4.2. C below. With relation to the interaction, the reflection of

the instruction receiver in group one shows that map task has conversational features of every day interaction in terms of the strategies they (he and the instruction giver) use to clarify misunderstanding: “some of the instructions weren’t so clear or at least I had different interpretations of what he was saying, so it was then just stopping and clarifying what exactly was being said. And to do that was trying to repeat back to him what I... what at least I’d interpreted umm from what he said”.

- 3) Similarly, with relation to the interactional nature of the map task, map task contains known information vs unknown information in terms of being shared vs unshared between the two participants. The known information represents the common ground in which they meet to continue with their interaction about the route as the instruction giver in group one shows: “Yeah there wasn’t a point where I was like oh no, oh no, I don’t think there was a point where which was either oh no I’m completely lost I don’t know where I’m meant to be on the map now. Because if ever that happened you’d just backtrack to the last point you *knew where you were and then carry on* [italicized for emphasis]”.
- 4) Marked Themes occurred in the interaction of the two groups. 3 marked Themes occurred in group one and 8 in group two; marked Themes are used by the instruction giver in group one and by both the instruction giver and the instruction receiver in group two. The marked Themes used in these two groups are illustrated in Appendix J.

Table 4.2 preliminary results of stage one of data collection

Group No.	Speaker’s role	Use of marked Theme	Duration of interaction
one	IG1	3	00:09:33 mins
	IR1	0	
two	IG2	6	00:08:37 mins
	IR2	2	

Because marked Themes were used in the two groups recoded in stage one, the data generated in these two groups were used in the current study with the data collected in stage two as to be described in 4.4.2 to explore the role of the marked Theme in the map task.

Drawing on the results of data of stage one and on the reflection of the four participants, the procedures and the instructions given to the participants were efficient. Therefore, warm up task and the map task and instructions used in each of them shown in Appendix E are followed in stage two of data collection. In addition, the same procedures of data collection of stage one described in 4.4.1.C above, including the procedures of data recordings, pairing the participants and the way of explaining the tasks, signing the consent form were followed in stage two. Therefore, the description of the procedures for collecting data in stage two of data collection related to these aspects are not described in 4.2.2 as no changes were made to them in stage two.

Yet, two changes were made in stage two in data collection. Firstly, the reflective task was not carried out in stage two; the reason for carrying it out in stage one was to find out whether there are any short comings in the tasks, the maps, the procedures and the instructions of stage one as stated in 4.4.1. D. iii, p. 84. Secondly, the data of stage one showed that the discrepancies between the instruction giver's and the instruction receiver's maps helped to create interaction and generate marked Themes as to be illustrated when analysing the use of the marked Theme in map task dialogue in Chapter Five. Therefore, the map of stage two attached in Appendix C was made a bit more complicated by adding more landmarks and more discrepancies as to be explained in 4.4.2. B.

4.4.2 Stage two of data collection

The description of stage two of data collection will include details on recruiting participants, the map of stage two and the preliminary results of analysis carried out on the data obtained in stage two. As stage two of data collection was carried out in the light of the data generated in stage one, the below sub- sections will not describe the procedures of data collection carried out in the recording studio as the same procedures of stage one described in 4.4.1.C above are followed in stage two. Similarly, data analysis procedures of stage one described in 4.4.1.E above including using Praat software (Boersma and Weenink, 2014) to transcribe data orthographically and checking the accuracy of the data script are followed in stage two. Therefore, these procedures are not described below.

A. Recruiting participants and participants' description

Because of the larger number of participants needed in stage two of data collection which is basically the main stage in collecting data for the research, it was difficult to gather the

24 participants. With this concern in mind, recruiting participants was made through an announcement for the study. To encourage the sector of Cardiff University students whom the announcement was directed at, each participant was eligible to be entered in a lottery with a prize of (£100).

The announcement was made through circulating emails, advertising for the study by attending reading groups and seminars that were held in School of English, Communication and Philosophy at Cardiff University and by spreading printed announcements on Campus.

Only 12 students responded and were willing to participate. To ensure that the rest of the participants needed in the study were recruited, the (£100) reward was promoted with an additional instance monetary (£5) to be given to each participant. The promotion made to the reward helped and many students were willing to participate. But only the required number was given the chance to participate. 24 English native speakers took part in stage two of data collection. Table 4.3 below presents the demographic information of the participants related to age, gender, background and education.

Table 4.3 the demographic details of the 24 participants of stage two of data collection

Detail	Description
Age	20- 35
Gender	16 Females; 8 Males
Background	All native English speaking; 2 Americans; 22 British from different cities from UK
Education	Students at Cardiff university; ranging from first, second and third year undergraduate to MA and PhD students

B. The map of stage two

The map of stage two shown in 4.1 above and shown also in Appendix C for the clarity of the image was a bit more complicated than the map used in stage one of data collection with more landmarks and more discrepancies made on it. As mentioned in 4.4.1. E. p. 858, the reason for having a more complicated map is that the data of stage one showed that the discrepancies helped to provoke interaction and to generate marked Themes. The map of stage two is similar to the map of stage one in terms of the start and finish points and the instruction's giver map has both points whereas the instruction receiver's has only

the start point. Yet, the number of landmarks and the discrepancies between the maps of stage two are more than the landmarks and the discrepancies of the map's versions of stage one. Unlike the map of stage one, the number of the landmarks of the instruction giver's and the instruction receiver's maps of stage two is not equal. As stated already in 4.4.1. B, the number of the landmarks on the map of stage one is 11 and it was equal on both maps. But, on the maps of stage two, the instruction's giver map has 13 landmarks whereas the instruction receiver's map has 14. On the maps of stage two, 4 landmarks are unshared, 'duck pond', 'forest', 'rocks' and 'miner' are found on the instruction giver's map whereas 'gold mine', 'stone giant', 'cottage', and 'cactus' only exist on the instruction receiver's map. 8 landmarks are shared: 'old mine', 'swamp', 'castle', 'tree', 'yellow house', 'mushroom house', 'hills' and 'farm'. 1 landmark, 'mountains', is partially shared as it is found on both maps but it appears twice on the instruction receiver's and once on the instruction giver's map. Yet, it is at the same location on both maps. Whereas in the maps of stage one, 6 landmarks were shared, 3 partially shared and 2 unshared.

In relation to the sharedness feature (Anderson *et al.*: 1991) described in 4.1 above, the discrepancies in the landmarks on the maps of stage two are in terms of absent/present and appears twice features whereas the discrepancies of stage one's maps are in terms of absent/present, name change and appears twice features as stated in 4.4.1. B.

The instruction giver's and instruction receiver's versions of stage two map were made by the researcher and the layout (the route line and landmarks' location) was driven from map's versions cited from HCRC Map Task Corpus¹⁸ which are attached in Appendix D. The pictures of the landmarks were downloaded from <https://openclipart.org/>. Most of the landmarks pictures in the original HCRC maps were changed because they were not available in the clipart program. So, different landmarks were used in the new designed map. The original HCRC map Task could not be used because its image and the images of many other maps in the HCRC Map Task Corpus website are of low quality resolution; the landmarks images and/or their names are blurry as the map's images in Appendix D show. Other HCRC maps are manually drawn. The manually drawn images could not be used either because the images of the landmarks do not indicate what the landmarks are. Other HCRC images could not be used as the names of the landmarks are not readable;

¹⁸ <http://groups.inf.ed.ac.uk/maptask/> [accessed in October 2015].

they are written manually as the original images of the HCRC Map used in stage one and attached in Appendix B show. With relation to the clarity of the landmarks' names, the reflection of the participants of stage one of data collection described in 4.4.1. E, p. 85, shows the importance of the names of the landmarks when working on the task. It is very important that the landmarks and their names on the map are clear as they are the core of the map task interaction. So, using maps of unclear images or unclear names of landmarks will hinder the participants' interaction. Therefore, designing a clear map was important to obtain an informative data. The clear images of the maps in the HCRC Map Task Corpus could not be used because their degree of complexity is the same as the map used in stage one of data collection.

C. Preliminary result of the data of stage two

The participants worked on the map successfully; the instruction receivers in the 12 groups of stage two reproduced the route as the sample of one of the instruction givers' map attached in Appendix I shows. The data obtained from the 24 participants paired into 12 groups was transcribed orthographically using Praat software (Boersma and Weenink, 2014) and checked for accuracy of the orthographic script by a native speaker with the assistance of the researcher. The preliminary results of the data obtained in stage two show that marked Theme is used in 10 out of the 12 groups. The data scripts of these ten groups are attached in Appendix K and numbered from three to twelve as the first two groups recoded in stage one of data collection are included in the research and numbered as group one and group two as mentioned in 4.4.1.E, p. 856, in the same Appendix, K. The marked Themes used in these ten groups are listed in Appendix J with the marked Theme that occurred in groups one and two of stage one of data collection. The marked Themes are listed in terms of group number, order of occurrence in the data script and the role of the instruction giver and instruction receiver. The dialogue of the other two groups in which marked Theme was not used in are attached in Appendix L and named as groups thirteen and fourteen. The dialogues of groups thirteen and fourteen are not included in the current study as marked Theme is not used in them as mentioned already.

The preliminary results of the analysis of the map task data collected in stage two detailed in Table 4.4 below show the use of marked Theme in terms of group and the speaker's role. The results of stage two in the Table start from group three as the results of stage one data that is groups one and two are merged with the results of stage two in the Table.

Hence, as Table 4.4 shows, the total amount of map task data that is used to explore the role of the marked Theme in the current study represents the dialogue of 24 participants paired in 12 groups, 2 groups from stage one and 10 from stage two of data collection. The total duration of interaction is 103.3167 minutes, 00:18:10 minutes in stage one and 00:85:3157 minutes in stage two. The total number of marked Themes used is 59, 11 in stage one and 48 in stage two. In the data script attached in Appendix K, the clauses containing the 59 marked Themes are emboldened and marked Themes are underlined to easily locate marked Themes and distinguish them from the rest of the clause, the Rheme part of the clause.

For the clarity of description, the analysis procedures both of the use of the marked Theme as a starting point of the clause message and marked Theme's tonality, tonicity and key are described in Chapters Five and Six respectively.

Table 4.4 the duration of interaction and the use of the marked Theme in terms of the speaker's role in the 12 groups of the map task

Data Collection Stage	Group No.	Use of marked Theme	Duration of interaction in minute
Stage one	One	3	00:09:33
	Two	8	00:08:37
Stage two	Three	4	00:08:28
	Four	5	00:12:30
	Five	9	00:10:13
	Six	3	00:10:26
	Seven	7	00:06:44
	Eight	1	00:03:46
	Nine	4	00:08:48
	Ten	4	00:05:52
	Eleven	6	00:05:56
	twelve	5	00:12:26
Total	12 groups; 24 participants; 2 in each group	59 marked Theme: 11 in stage one and 48 in stage two	103.3167 mins

4.5 Ethical Considerations

Before proceeding in data collection in the two stages, the ethics forum and the debriefing document attached in Appendix F were filled in and sent to the ENCAP Research

Committee in Cardiff University to obtain the approval for the study. The Ethics Committee granted formal permission to proceed in the research as they approved the study. On the days of collecting data, the participants were given the consent form to be signed in order to obtain their formal and written approval prior to data collection as the signed copy of the consent form attached in Appendix F shows. The debriefing document, ethics forum and the consent form were cited from Cardiff University ENCAP ethics web¹⁹.

¹⁹ <https://intranet.cardiff.ac.uk/intranet/staff/documents/research-support/srecs/english,-communication-and-philosophy/ENCAP-Ethics-Procedures-Final-Confirmed-Mar-2012.doc> [accessed in July 2014]

CHAPTER FIVE: MARKED THEME USE ANALYSIS

5.1 Introduction

As noted earlier in Chapter One above, the broad premise underlying this research is exploring how marked Theme, the initial occurrence of a Circumstantial Adjunct or a Complement (Halliday and Matthiessen, 2014) and its prosodic realisations (tonic placement, tonality and key) contribute to structuring the map task interaction. The study looks at Theme from Hallidayan SFL perspective (ibid). The analysis on the role of the marked Theme is presented in two chapters: Chapters Five and Six. The analysis of marked Theme prosodic realisations: tonic placement, tonality and key and their contribution to structuring map task interaction are described in the next chapter, Chapter Six. The current chapter, Chapter Five presents the functionality of marked Theme as a structure in contributing to structuring the map task interaction.

5.2 Marked Theme use analysis

This section focuses on the thematic choices chosen by the map task's interlocutors in order to identify the ratio of the use of the marked and the unmarked Themes. It also examines the reasons for choosing marked Theme as the point of departure of the clause message. So the first research question that is to be examined in relation to the textual role of marked Theme in the map task dialogue is: how does marked Theme function as a device for structuring the map task interaction? So, in terms of word order, what is the effect of making a Circumstantial Adjunct or a Complement thematic in the map task interaction? In other words, how does making the point of departure of the clause message from an unusual angle contribute to structuring the map task dialogue?

This research question is explored in terms of marked Theme's function of signalling that the perspective being developed in the clause or the starting point of the clause message is approached from an unusual angle (ibid) and whether this is necessary for the structuring the discourse of the map task. As noted in 2.3.1, p. 29, the starting point of the clause message is marked by the topical Theme (i.e. the first experiential element within the clause which is a Circumstantial Adjunct or a Complement in case of the marked Theme) as it is the thematic element. So, the textual and/or interpersonal Themes that occur before the marked topical Themes used in the map task interaction are not

considered in the analysis of the point of departure of the clause because these elements are not experiential. So, they do not have the potential of realising the thematic role as explained in 2.3.1, p. 29, on the thematic structure of the simple Theme, containing only the topical element, and multiple Theme, containing textual and or interpersonal Themes plus the topical element.

As explained in Chapter Four above, the orthographic data of the map task of the 14 groups in which map task dialogues were collected from was examined to identify the use of the marked Themes in these dialogues and 59 marked Themes were used in 12 groups out of the 14 groups with the speaker's role identified for each marked Theme. As Appendix J shows, the 59 marked Themes are all Adjuncts and none is realised by a Complement. Therefore, mainly with relation to the degree of markedness, nothing can be said in the current study about whether it makes a difference to the textual role of the marked Theme in the map task interaction if it is realised by a Circumstantial Adjunct or a Complement as a Complement is more marked than a Circumstantial Adjunct. In other words, a Complement is very rare to be made thematic (Halliday and Matthiessen, 2014) as noted in 2.3, p. 214. Table 5.1 shows the distribution of use of the marked Theme by the instruction givers and instruction receivers across the 12 groups.

Table 5.1 The use of the marked Theme in the 12 groups of the map task in terms of the speaker's role

Group No.	Speaker's role	Use of marked Theme	Group No.	Speaker's role	Use of marked Theme
One	IG1	3	Seven	IG7	4
	IR1	0		IR7	3
Two	IG2	6	Eight	IG8	1
	IR2	2		IR8	0
Three	IG3	2	Nine	IG9	2
	IR3	2		IR9	2
Four	IG4	3	Ten	IG10	1
	IR4	2		IR10	3
Five	IG5	2	Eleven	IG11	4
	IR5	7		IR11	2
Six	IG6	2	Twelve	IG12	2
	IR6	1		IR12	3
			12 groups	24 participants	59 marked Themes

Table 5.1 shows that the instruction givers in groups one and eight do not use marked Theme. So, the marked Themes used in the 12 groups are produced by 12 instruction givers and 10 instruction receivers. The 12 instruction givers produce 32 marked Themes whereas the 10 instruction receivers 27 out of the overall 59 marked Themes as Table 5.3 below shows. So the instruction givers and the instruction receivers do not differ in the use of marked Theme taking into account that the instruction givers are 12 whereas the instruction receivers 10.

Then the use of the marked Theme was examined to identify the ratio of its use with relation to the unmarked Theme in the 12 groups. Table 5.2 below illustrates the use of the marked and the unmarked Theme:

Table 5.2 Thematic choice across the 14 map task dialogues

Unmarked Theme	2044	97.2%
Marked Theme	59	2.8%
Total	2103	100%

The results unsurprisingly show that marked Theme is highly unusual; it accounted for 59 occurrences (2.8%) out of the 2103 overall thematic choices whereas unmarked Theme accounted for 2044 occurrences (97.2%) as it is the usual thematic choice. The low occurrence of marked Theme in the map task dialogues is in line with Halliday's (Halliday and Matthiessen, 2014) and Thompson's (2014) views that marked Theme does not occur unless there is a good reason for making an element, a Complement or an Adjunct, other than the Subject the Theme of the clause such as to organise the clause as a message (Halliday and Matthiessen, 2014) or to better organise the text (Thompson, 2014). In order to reveal the reasons of the use of the 59 marked Theme in the map task dialogues and if their use is related to the speaker's role, each marked Theme instance is examined in context of occurrence and sorted into 6 proposed marked Theme functions shown in Table 5.3 below with relation to their frequency of occurrence and the speaker's role use. The definition of each of these functions and example of their occurrence in the map task dialogue are provided below. In Appendix M, the 59 marked Themes are glossed with relation to the 6 proposed functions and the number next to the marked Theme

instance refers to the line of the occurrence of the marked Theme in the data script that is attached in Appendix K as noted above.

Table 5.3 Distributions of the 6 proposed functions of the 59 marked Themes and the function use by the 12 instruction givers and 10 instruction receivers.

Function symbol	Marked Theme 6 proposed functions	IGs use	IRs use	Total	Percentage
A	Reintroducing information to introduce new landmarks	5	10	15	25.4%
B	Reintroducing information to introduce new details about the route layout	7	2	9	15.2%
C	Reintroducing information to check the availability of landmarks	4	0	4	6.7%
D	Reintroducing information to repair meaning	4	4	8	13.5%
E	Reintroducing information to check understanding	0	3	3	5.0%
F	Reintroducing information to refocus on it	12	8	20	33.8%
Overall		32	27	59	100%

Table 5.3 shows that out of the overall 59 marked Theme instances, 15 (25.4%) instances denote Function A, ‘reintroducing information to introduce new landmarks’, 9 (15.2%) instances denote Function B, ‘reintroducing information to introduce new details about the route layout’, 4 (6.7%) instances denote Function C, ‘reintroducing information to check the availability of landmarks’, 8 (13.5%) instances were found performing Function D, ‘reintroducing information to repair meaning’, 3 (5.0%) instances denote Function E, ‘reintroducing information to check understanding’ and 20 (33.8%) instances denote Function F, ‘reintroducing information to refocus on it’.

The frequency of use of the six proposed functions of the marked Theme differs with relation to the speaker’s role as Table 5.3 shows, the instruction giver’s and the instruction receiver’s roles²⁰. Function A, ‘reintroducing information to introduce new landmarks’ is used by the instruction receivers more than instruction givers with 10 and 5 instances respectively out of the overall 15 uses. Function B, ‘reintroducing information to

²⁰ The distribution of the marked Theme functions was not assessed for accuracy by Chi square test because of the small numbers of the marked Themes.

introduce new details about the route layout' is used by the instruction givers more than the instruction receivers with 7 and 2 instances out of 9 uses respectively. Function C, 'reintroducing information to check the availability of a landmark' is only used by the instruction givers with 4 uses whereas Function E, 'reintroducing information to check understanding' is only used by the instruction receivers with 3 uses. Function D, 'reintroducing information to repair meaning' is equally used by the instruction givers and the instruction receivers with 4 instances for each out of the overall 8 occurrences. Function F, 'reintroducing information to refocus on it' is used more by the instruction givers than the instruction receivers with 12 and 8 uses respectively out of the overall 20 instances.

To illustrate how the above 6 proposed functions of the marked Theme are categorised, they are defined below with relation to the meanings denoted by the 59 marked Themes in context of occurrence and discussed with relation to the instruction giver's and the instruction receiver's roles. In text examples from the map task dialogues on the 6 proposed functions of the marked Theme are provided for each function to better enlighten the meaning of the marked Theme and show how the above 6 functions of marked Theme are arrived at. The definitions and examples will show how the functions are different, whether there are cases where the marked Theme fitted into more than one function and whether there is a relation between the function of the marked Theme and the speaker's role. In the examples cited from the map task dialogues on the 6 proposed functions of the marked Theme, the whole marked Theme is underlined and the marked topical element, the point of departure of the message within the marked Theme is emboldened to easily locate it in the extract and not to confuse it with other marked Themes as some of the extracts contain more than one marked Theme. To easily locate the extracts of the examples presented in this section in the master data script attached in Appendix K, the numbering of the turns in the extracts and of the marked Theme utterances are kept the same. In the examples, IG and IR stand for the instruction giver and the instruction receiver, followed by the group number e.g. IG1, IR1; IG2, IR2; etc. For ease of reference to the instruction giver and the instruction receiver, the short forms IG and IR are used when explaining the in text examples. The in text examples to be presented to illustrate the 6 proposed functions of the marked Theme are representative of the other marked Themes used in the map task dialogues. Yet, as noted above, the 59 marked Themes are described with relation to the 6 proposed functions in Appendix M

and they are numbered according to their occurrence in the data script to easily locate them.

Function A, Reintroducing information to introduce new landmarks

Function A, ‘reintroducing information to introduce new landmarks’ refers to describing the location of new landmarks that are not previously mentioned in the discourse and their location is not yet agreed on by the instruction giver and the instruction receiver through using shared information, that is agreed on by both the instruction giver and the instruction receiver, as a reference point to easily and effectively describe the location of the new landmarks. The shared information is reintroduced in the discourse in a marked Theme structure; it is taken as a point of departure of the clause message due to its importance to more easily guide the hearer to the location of the new landmarks. In this function, the speaker does not know whether the landmarks that s/he introduces is shared or not between the two maps. So, Function A ‘reintroducing information to introduce new landmarks’ is different from Function F, ‘reintroducing information to refocusing on it’ to be explained below in which the speaker knows that the landmark that s/he is going to describe with relation to the reintroduced information is not found in the other map. Example 5.1 below from the dialogue of group six illustrates Function A, ‘reintroducing information to introduce new landmarks’. The other marked Theme instances denoting Function A are described in Appendix M and indicated by the Function’s symbol ‘A’. The full data script of the dialogue of group six is presented in Appendix K.

Example 5.1

- 897) IG6: ok and then it curves slightly up and to the left until it’s pretty much
below like the old mine and almost near the starting point
- 898) IR6: alright ok so yeah so near the swamp
- 899) IG6: yeah
- 900) IR6: ok I’ve done that
- 901) IG6: um and then sor... sort of below that there is the forest
- 902) IR6: oh I got a cottage beneath that
- 903) IG6: maybe the cottage is in the forest
- 904) IR6: maybe <unclear words>
- 905) IG6: um (laugh) so then the line continues like around the forest and the
cottage
- 906) IR6: yeah

In Example 5.1 above, IG6 describes the route line that is near the '*starting point*' and below the '*old mine*' (line 897). IR6 is able to follow IG6 because the '*starting point*' and '*old mine*' are shared between the two maps. So IR6 confirms that she follows the instructions through drawing the line (line 900) and responding that the location is near another landmark, '*swamp*' (line 899). IG6 confirms that IR6 is right (line 899). So, IG6 and IR6 realise that '*starting point*', '*old mine*' and the '*swamp*' are shared. Therefore, IG6 continues route description and gives further directions from the last point, '*swamp*', they arrived at (line 901). IG6 takes the location of the '*swamp*' as a point of departure of her clause to introduce a new landmark '*forest*'. In other words, IG6 approaches the clause message from the location of the shared landmark '*swamp*' to easily describe to IR6 the location of the '*forest*' with relation to the location of the '*swamp*'. '*Swamp*' is reintroduced using the anaphoric expression '*that*'. In other words, being a shared landmark, '*swamp*' functions as a good reference point for IG6 to confidently give further details on the route. So, IG6 has chosen to foreground (thematise) '*swamp*' and reintroducing it in a marked Theme.

15 marked Themes out of the 59 denote Function A, 'reintroducing information to introduce new landmarks' and it is used both by the instruction givers and the instruction receivers as Table 5.3 above shows. The interaction of the map task depends mainly on the interlocutors' shared description of the locations of the landmarks and this explains the use of Function A and makes it typical in the map task interaction compared to the other functions. It comes second after Function F described below, 'reintroducing information to refocus on it' in the frequency of use, Table 5.3 above. The instruction receivers use Function A, 'reintroducing information to introduce new landmarks' more than the instruction givers do with 10 and 5 uses out of the overall 15 uses respectively. The difference in use is likely related to the fact that the instruction givers' role is to instruct the instruction receivers to draw the route as the latter have no route on their maps. The instruction receivers' role is to share with the instruction givers the details about the landmarks on their map and let the instruction givers direct them depending on these (instruction receivers') details and on the route layout and the landmarks on their maps. So, the instruction receivers' role is basically to tell the instruction givers what landmarks they have and introduce them into the discourse. Therefore, Function A is used more by the instruction receivers.

Function B, Reintroducing information to introduce new details about the route layout

Function B refers to map task speakers' reintroducing shared information, the agreed on information both by the instruction givers and the instruction receivers and taking it as a point of departure of their clause message to introduce new details about the curves of the route. So, the point of departure of the clause message is approached from unusual angle that is of location rather than the route line. This Function is similar to Function A above in terms of introducing new details. Yet the new details are not landmarks as they are related to the layout of the route. So, Function B could be considered as a sub- category of Function A. As with describing the location of the new landmarks in Function A above, the curves of the route are described from unusual location of shared information in contexts that the curves are easier to be described from the location of these shared landmarks as illustrated in Example 5.2 below from the dialogue of group eleven; the full data script of the dialogue of group eleven is presented in Appendix K. The other marked Themes instances denoting Function B are described in Appendix M and indicated by the Function's symbol 'B'.

Example 5.2

- 1511) IR11: cool and we're about underneath the cottage or...
1512) IG11: yeah it must be underneath
1513) IR11: ok
1514) IG11: um and then on my map there is a... symbol just down and left of your cottage called forests
1515) IR11: down and left I have a stone giant
1516) IG11: ok with your stone giant, I want you... need to make like a 'C' shape around it quite a big 'C' about two thumbs heights worth.
1517) IR11: ok
1518) IG11: so go over your stone giant and then quite far down and then a 'C' shape
1519) IR11: yeah
1520) IG11: and then it quite a long line across the page it goes from quite far under your stone giant to what I have as under the tree

In Example 5.2 above, the route line is underneath 'cottage' (lines 1511, 1512), a landmark on IR11's map (line 1514). IG11 continues describing the route line; it is passing by a new landmark on the IG11's map, 'forest' (line 1514). 'Forest' is not found on IR11's map; yet on IG11's map it is located to the left and down of where 'cottage' is on the IR11's map (1514). In line 1515, IR11 confirms that she does not have 'forest'

down and left of her *'cottage'* and that she has *'stone giant'* instead. *'Stone giant'* is new landmark which IR11 reintroduces by taking down and left which is shared between her and IG11 as a point of departure of her message to repair the meaning according to Function D below. To easily describe route line shape and not to confuse IR11 because of the discrepancy of having a *'stone giant'* instead of *'forest'*, IG11 chooses to describe the route line with relation to *'stone giant'*. So, she reintroduces *'stone giant'* and takes it as a point of departure of her route line description and instructs IR11 to draw a big C shape around it (line 1516). Approaching the clause message of describing the route from a shared location has aided IG11 in describing the route. IR11 confirms that she follows IG11's description (line 1517) and IG11's following instructions confirm that the instruction is clear to IR11 (lines 1518, 1520).

As already noted, IR11 used marked Theme *'down and left'* (line 1515) to repair meaning, Function D with relation to the availability of *'forest'* on her map. Yet, more importantly *'down and left'* appears in sequence with marked Themes *'and then on my map'* (line 1514) and *'ok with your stone giant'* (line 516). Their occurrence in sequence enhances IG11 and IR11's ability to construct the common ground about the location of *'stone giant'* on the latter's map and facilitate IG11's addition of the new details about the route line consequently aids IR11 in grasping the new details effortlessly as the extract above shows. Marked Themes appear in sequence in two other instances; they are presented in Examples 5.6 and 5.11 below.

As Table 5.3 above, 9 marked Themes denote Function B, 'reintroducing information to introduce new details about the route line'; 7 uses by the instruction givers and 2 by the instruction receivers. The two uses of Function B by the instruction receivers occur in groups 5 and 12 in which the instruction receivers give details about the route line they reproduced on their maps. Example 5.3 below from the interaction of group five illustrates instruction giver's using of Function B. The full data script of the dialogue of group five is presented in Appendix K.

Example 5.3

783) IG5: oh where are you?

784) IR5: about in the middle of the page

785) IG5: oh ok um well if you back track to the line you've just drawn

786) IR5: ok

787) IG5: what... what was the last horizontal line you drew?

788) IR5: horizontal like... **from the cottage to the castle it was horizontal up**

- 789) IG5: ok
- 790) IR5: like diagonally up
- 791) IG5: yeah and then
- 792) IR5: and then
- 793) IG5: ok
- 794) IR5: I went vertically down
- 795) IG5: right I guess just go further down
- 796) IR5: ok

Function C, Reintroducing information to check the availability of landmarks

Function C, ‘reintroducing information to check the availability of landmark’ refers to seeking information about the availability of landmark through asking a question. The point of departure of the question is location that is either available in the discourse for example a location of a previously mentioned landmark or information that is available in the physical context for example the map sheet. Examples 5.4 and 5.5 illustrate these two sub- categories of checking availability of landmark function in which the reintroduced information is ‘*castle*’ and ‘*map*’ respectively. The two examples are taken from the dialogue of groups three and twelve and the full data scripts of these dialogues are attached in Appendix K. The other marked Themes instances denoting Function C are described in Appendix M and are indicated by the Function’s symbol ‘C’.

Example 5.4

- 326) IG3: ok and on... on the left of the castle are some rocks
- 327) IR3: don’t have that [(laugh)]
- 328) IG3: [ok]
- 329) IR3: I got the cottage and [a swamp just above it]
- 330) IG3: [I...] I don’t have a cottage [um]
- 331) IR3: [yeah]
- 332) IG3: I think, where your cottage is must be near where my rocks are
- 333) IR3: ok
- .
- .
- 354) IG3: yeah so that’s the same place really so what we are trying to do is trying to go down diagonally left to the castle um near what is on my map is um the rocks but you don’t have that
- 355) IR3: no
- 356) IG3: um so.... so left of the castle what’s on your side map? so the castle is on the far side
- 357) IR3: yeah the castle is on the right
- 358) IG3: yeah
- 359) IR3: then on the far side like on the left is the swamp and then below that and slightly to the right is the cottage

In Example 5.4, IG3 introduces ‘rocks’ that are found on the left of the ‘castle’ on his map (line 326). IR3 confirms that she does not have ‘rocks’ on her map (line 327); she introduces the landmarks ‘cottage’ and ‘swamp’ found in the area where she has reached with the route line on her map. However, she does not add any details on the location of ‘cottage’ and the ‘swamp’ (329) nor she asks for further details (line 333) when IG3 comments that the ‘cottage’ on her map must be near where the missing landmark ‘rocks’ is on his map (line 332). After a shift of topic from the location of the ‘rocks’ to discuss route layout with relation to ‘mountains’ (lines 334-353)²¹ as shown in Appendix K where the full interaction of group three is presented, the route line ended again by the ‘rocks’ on the left of the ‘castle’. IG3 comments that ‘rocks’ are not found on the IR3’s map (line 354). At this point, IG3 is interested to know what landmark is found on the IR3’s map in the area that is left of the ‘castle’. So, he chooses to reintroduce ‘left of the castle’ and make it the point of departure of his question as it is the location where the ‘rocks’ are missing from the IR3’s map and to more easily communicate to IR3 his interest about knowing what is found on IR3’s map instead of the ‘rocks’ on his map. So, foregrounding the location through reintroducing it as a marked Theme has helped IG3 to achieve this easily. In this example, the reintroduced information is the location of ‘castle’ whereas in Example 5.5, ‘map sheet’ is the reintroduced information as it is available in the physical context:

Example 5.5

- 1567) IG12: ok Tim at the very top left hand side [of your... of your map] is there something that says old mine?
 1568) IR12: [yeah]
 1569) IR12: yeah
 1570) IG12: is like a green thing
 1571) IR12: [yeah]
 1572) IG12: [and that’s] just to the left of miner really but to the north east of swamp.
 1573) IR12: yeah yeah

The usual point of departure for a question is Wh- word or an operator plus the Subject (Halliday and Matthessien, 2014) as noted in 2.3, p. 213. But, the point of departure of the questions in Examples 5.4 and 5.5 is made from an unusual angle that is a location

²¹ Lines 334-353 of group twelve’s dialogue are not included in Example 5.4 because of their length.

and it is grammatically realised by a Circumstantial Adjunct. The instruction givers have chosen to make the point of departure of their clause message a location in these examples to guide the instruction receivers more easily to location that they want to check the availability of landmarks in. Function C, ‘reintroducing information to check the availability of landmarks’ is similar to Function A, ‘reintroducing information to introduce new landmarks’ in that they both introduce new landmarks and indicate their locations. But, the functions differ in that the instances of the reintroducing information to introduce new landmarks are presented as a statement, Example 5.1 above, whereas Function C of checking the availability of landmarks are presented as questions, Examples 5.4 and 5.5 above. In other words, Function C sort of introduces the new landmarks and indirectly states their locations but introducing them is achieved through asking whether they exist on the other map, Examples 5.4 and 5.5 above.

With relation to the use of Function C, only four marked Themes denote reintroducing information to check the availability of a landmark and all are produced by the instruction givers as Table 5.3 above shows; two of the four marked Themes are presented in Examples 5.4 and 5.5 above and the other two instances are illustrated in Appendix M and are indicated by the Function’s symbol ‘C’. So Function C, ‘reintroducing information to check availability of landmarks’ is typical of the instruction givers, unlike Function A, ‘reintroducing information to introduce new landmarks’ because the availability of the route line on the instruction givers’ map enable them to approach their clause message from locations that best aid their description of the route. In other words, route line aids instruction givers to seek information on the availability of a landmark through making a location as the point of departure of their questions so to guide instruction receivers more easily to location that they want to check the availability of landmarks at.

Function D, Reintroducing information to repair meaning

Function D, ‘reintroducing information to repair meaning’ refers to overcoming breakdowns in communication and restoring the interactive flow through reintroducing information as a marked Theme structure. Breakdown in communication occurs in map task interaction because of the discrepancies found between the instruction giver’s and instruction receiver’s maps especially as they are not allowed to share maps and have to

interact only verbally to resolves these discrepancies and reproduce the route shown on the instruction giver's map. Marked Theme's repair meaning function works through approaching the clause message from the location where breakdown in communication takes place, the location of the reintroduced information for example a spatial location on the map (*down, left, horizontally, etc.*) or location of a landmark. The previously introduced information is reintroduced as a marked Theme because its location is important to repair the breakdown in communication. Example 5.6 below from the interaction of group five illustrates the repair meaning function where the instruction giver reintroduces the shared landmark '*old mine*' to satisfy the interactive flow; the full data script of group five is in Appendix K. The other marked Themes that denote Function D, 'reintroducing information to repair meaning', are illustrated in Appendix M and are indicated by the Function's symbol 'D'.

Example 5.6

672) IG5: so I am starting at the ... well, on mine, it's on the top left hand corner there is...i... an... old mine

673) IR5: yeah

674) IG5: so you go down, and then you turn to the right, and sort of go diagonally up a bit and you should go back past a miner (long pause). Do you have a miner?

[to... to] the right of your old mine

675) IR5: [no]

676) IR5: I have an old mine and then I have mountains, on the right and then like swamp and cactus

677) IG5: ah, ok so um, I guess I need to get you to the X at the bottom rather than... than... ok, alright, so you go... **next to the old ...old mine** what have you got?

678) IR5: um, to the right of the old mine I have mountains and below I have a swamp and diagonally I have a cactus

679) IG5: oh, ok so they're complete different layout ok so um, right you go below the old mine, and then you go right, and we still on the sort of top line of the paper or picture as it were

In Example 5.6 above, IG5 starts the description of the route and gives further details (lines 672- 674). However, introducing '*miner*' (line 674) is problematic as it does not exist on the IR5's map. After IG5 introduces '*miner*', there is a long pause as indicated in the extract (line 674) as IG5 waits for the IR5's response or reaction to the new instruction. The interaction at this point is hindered because of the absence of the '*miner*'

from the IR5's map. IG5 checks whether IR5 has '*miner*' (line 674). IR5 confirms that she does not have '*miner*' and she introduces the landmarks that are found on her map in the location where the '*miner*' is found on the IG5's map (lines 674, 675). So, IG5 realises that '*miner*' is missing from the IR5's map and that IR5 is not following her with relation to the information about the '*miner*'.

IG5 suggests going back to the '*starting point*', the '*X*' so they can resume the interaction from there (line 677). However, she hesitates as the dysfluency notation '...' and the incomplete utterances indicate (line 677). IG5 last resort to resume the interaction is reintroducing '*old mine*' in a marked Theme structure to check what landmark is found next to '*old mine*' on the IR5's map (line 677). IG5 has chosen to make '*next to the old mine*' the point of departure of her message for two reasons: 1) IG5 and IR5 have agreed on the location of '*old mine*' 2) the breakdown in communication took place in the location that is '*next to the old mine*' because of the absence of the '*miner*' from this location. For these reasons, IG5 has chosen to foreground this location through reintroducing it as marked Theme so IG5 can easily guide IR5 again. This enables the resumption of the interaction and repairs the breakdown in communication (lines 678,679).

More importantly, the occurrence of the second marked Theme '*to the right of old mine*' (line 678), uttered by the IR5, in sequence with IG's marked Theme '*next to the old...old mine*' (677) has largely contributed in repairing meaning that is initiated by IG's marked Theme. Taking the location of the '*old mine*' as a point of departure has foregrounded it and emphasized its importance as a common ground that is effective for repairing meaning. This has urged IR5 to take '*old mine*' also as a point of departure; it has helped her to effortlessly clarify to IG5 the landmarks she has on her map consequently contributed largely to repair meaning that was initiated by IG's '*next to the old... old mine*' as noted already.

In Example 5.6, a complete loss of communication happened and it was accompanied with a long pause as IG5 did not realise that '*miner*' is not found on IR5's map until she checked with IG5 (line 674) especially that IR5 did not tell IG5 that she did not have '*miner*' when the latter introduced it into the discourse. But, in other marked Themes of repair meaning instances, a complete breakdown in communication as the one of Example 5.6 does not happen and there is no long pause as the hearer, whether instruction giver or

instruction receiver informs the speaker that a given landmark is not found on his/her map and clarifies what landmark is found instead. In Example 5.2 above, line 1515 from the dialogue of group eleven, the instruction receiver repairs meaning by telling instruction giver that ‘*down and left*’, she has stone giant instead of ‘*forest*’ once the instruction giver introduced the landmark ‘*forest*’. Example 5.7 below of the dialogue of group two also illustrates the instant repair meaning in the interaction by clarifying what landmark is found on the instruction receiver’s map. The full data script of the dialogue of group two is presented in Appendix K.

Example 5.7

- 195) IG2: ok so do you have the west lake?
196) IR2: I do, that’s above now
197) IG2: yeah, do you have trig point?
198) IR2: no, **next to west lake** I have farmed land, [which is to the right of west lake]
199) IG2: [err] to the west of er... oh er sort of above... [so sort of the north east direction of west lake]
200) IR2: [yeah, that’s right]
201) IG2: yeah so in a sort of north er south direction of west lake there is a place called trig point here
202) IR2: [ok]
203) IG2: [so] ... may be just put like a mark there to indicate...

Function D, ‘reintroducing information to repair meaning’ is denoted by 8 marked Themes and it is equally used by the instruction givers and the instruction receivers, Table 5.3 above. The absence of the route line from the instruction receivers’ map makes their use of reintroducing information to repair meaning appealing. In other words, sorting out breakdown in communication in the map task interaction is more typical of the instruction givers’ role than the instruction receivers’ as the former are doing the instructing role being guided by the route on their maps. The ability of the instruction receivers to repair meaning with relation to the landmarks found on their maps suggest that they are given clear instructions about the route and the locations of the landmarks on the instruction givers’ maps. Therefore, the instruction receivers have a role in making the discrepancies between the two maps stand out consequently repair meaning as in Example 5.7 above. The instruction receivers are instructed clearly in that the route line is successfully reproduced on their map and the interaction happened as shown by the data script of the map task dialogues presented in Appendix K.

Function E, Reintroducing information to checking understanding

Function E, ‘Reintroducing information to checking understanding’ refers to the instruction receivers’ reintroducing of previously introduced information through making it the point of departure of their clause message due to the importance of the location of the reintroduced information to check whether they (instruction receivers) are able to follow the instruction givers’ description and whether their route line is in the right location as Example 5.8 below from the dialogue of group three shows. The whole dialogue of group three is presented in Appendix K.

Example 5.8

- 404) IG3: kind of just on the right side of the swamp is where it goes down on my map
405) IR3: ok, that’s cool, so I’ve gone down
406) IG3: yeah
407) IR3: so you say we are kind of parallel to the tree
408) IG3: yeah in between the tree and the yellow house kind of that way
409) IR3: ok so at that point I would be kind [of middle of the page], I think
410) IG3: [ok]
411) IG3: ok so... so the idea is to be going down on the left side at the moment, so..
412) IR3: ok so for me that’s kind of [by the stone giant], I think
413) IG3: [ok]
414) IG3: and then it goes across right on this map to the middle of well to in between the yellow house and the tree right to the other...

In Example 5.8, IR3 uses two marked Themes (lines 409, 412) to check whether the route line on her map is at the right location. IR3 takes the last location on her map in which the route line that she has drawn reached at as a point of departure of her clause message to more easily check with IG3 whether she is at the right location. In other words, foregrounding the current location of the route on her map helps to easily describe where the route line is on her map. IG3 confirms that IR3’s route line is at the right location (lines, 410, 413) henceforth he gives new instructions (line 414) showing that IR3 is doing well in terms of following his (IG3’s) instructions. The interaction will hinder if the IR fails to be at the location that the IG tries to direct them to.

3 marked Themes denote Function E, ‘reintroducing information to checking understanding’; two of them are presented in Example 5.8 and the third is shown in

Appendix M and is indicated by the Function's symbol 'E'. The 3 instances are unsurprisingly uttered by the instruction receivers, Table 5.3 above, in that they do not have the route on their maps so they check with the instruction givers whether they accurately perceive the latter instructions on the route to produce route line that is identical to the instruction givers'.

Function F, reintroducing information to refocus on it

Function F, 'reintroducing information to refocus on it' refers to drawing the attention of the hearer to previously introduced information mainly a landmark and foregrounding it through making it the point of departure of the clause message due to the importance of its location to describe the location of another landmark that is also mentioned in the discourse but its location is not yet described or agreed on between the instruction giver and the instruction receiver as in Example 5.9 below. So, Function F differs from Function A, 'reintroducing information to introduce new landmarks' in that in Function A, the speaker does not know whether the landmarks that s/he introduces is shared or not between the two maps as they are new landmarks, not previously mentioned in the discourse. Function F, 'the reintroducing information to refocus on it' also enables continuing route interaction and locating route line as in marked Theme instances 347 and 54 respectively as shown in Appendix M. In Example 5.9 that is taken from the dialogue of group one, the refocusing on '*west lake*' helps the instruction giver to easily guide the instruction receiver to the location of '*trig point*' in the former's map. The full data script of the dialogue of group one is presented in Appendix K. The other marked Themes that denote Function F, 'reintroducing information to refocus on it' are illustrated in Appendix M and are indicated by the Function symbol 'F'.

Example 5.9

93) IG1: ok now do you have a west lake?

94) IR1: in the top left

95) IG1: top left yeah, ok so you see how... there is like a pointy bit on the left corner

96) IR1: top left corner

97) IG1: bottom left corner

98) IR1: yeah

99) IG1: and then it sort of comes circularly and does a little jutting bit in

.

- 121) IG1: do you have a thing called trig point?
 122) IR1: no
 123) IG1: ok so to the right of west lake probably one centimetre may be one and half there is a trig point
 124) IR1: ok [is it diagonally right]
 125) IG1: [it's] sorry
 126) IR1: is it diagonally right?
 127) IG1: no, it's... it's in line with the bottom of...
 128) IR1: ok

In Example 5.9, IG1 checks whether ‘*west lake*’ is found on IR1’s map and IR1 confirms that he has it (93- 98). Then IG1 starts describing to IR1 the route line with relation to ‘*west lake*’s shape (lines 99-120)²². After successfully drawing the route line near ‘*west lake*’, IG1 checks whether IR1 has ‘*trig point*’ (line 121). ‘*Trig point*’ is a new landmark and it is next to ‘*west lake*’ on the IG1’s map (line 123) as map image of the instruction giver attached in Appendix A shows. The absence of ‘*trig point*’ from IR1’s map (line 122) makes IG1 shift the topic of interaction (i.e. that is on ‘*trig point*’) to ‘*west lake*’ (line 123) through reintroducing it into the discourse again and making it the point of departure of his clause message to easily describe to IR1 the location of ‘*trig point*’. In so doing, IG1 refocuses on ‘*west lake*’ and he uses it as a reference point to describe the location of ‘*trig point*’ to IR1. IG1 uses ‘*west lake*’ because it is shared between the two maps and it is close to ‘*trig point*’ on his map. So its location on his map is effective in guiding IR1 to the location of the missing ‘*trig point*’. Therefore, IG1 has chosen to foreground ‘*west lake*’ via reintroducing it through using a marked Theme pattern.

Function F, the refocusing function is similar to function D, the repair meaning function described above in that the interlocutors try to resolve the discrepancies found when they realise that a landmark is not found on the other map. Yet, the two functions differ in that with the refocusing function, the speakers, whether instruction givers or instruction receivers become aware during the course of interaction that a landmark is not found on the other map therefore they try to resolve the discrepancies by refocusing on a shared landmark through making it the point of departure of the clause message before breakdown in communication happens. In other words, they try to avoid breakdown in

²² Lines (99 – 120) from the interaction of group one are not included in Example 5.9 due to their length.

communication and maintain the interactive flow. So, refocusing function is likely a variant of function D, the repair meaning.

Function F, 'reintroducing information to refocus on it' is denoted by 20 marked Themes; it is used by both instruction givers and the instruction receivers but used more by the former with 12 and 8 instances respectively, Table 5.3 above. This finding suggests that the refocusing function is typical of the instruction givers' role. The instruction givers take the lead in the interaction because of the availability of the route on their maps so they give the instructions about the route and enquire about the availability of the landmarks on the other map so as to be able to describe the route to the instruction receivers with relation to the landmarks and the route line on their maps. So, they discover the discrepancies of landmarks but of course with the aid of the instruction receivers and they try to resolve them using the route line and through refocusing on the shared landmarks. In other words, with relation to the way the route line goes on their maps, the instruction givers refocus on locations through making them the point of departure of their clause message to resolve the discrepancies and aid their description of the route. Therefore, they are found using refocusing function more than the instruction receivers. Function F, 'reintroducing information to refocusing on it' by taking its location the point of departure of the clause message is similar to Function C, approaching the clause message from previously introduced information to check the availability of landmarks in that both functions are typical of the instruction givers' role.

As for the instruction receivers' use of the refocusing function, it is related to the amount of details they come to know on the discrepancies between the two maps in the course of the interaction. In other words, knowing what landmarks are missing from the instruction givers' map allow the instruction receivers to refocus on the shared landmarks and make them the point of departure of the clause message to describe the location of the missing landmarks from the instruction givers' maps. So, with relation to the instruction receivers' use of Function F, Function F is similar to Function D of 'reintroducing information to repair meaning' in that their use of the function compared to the instruction givers' use is limited to what they come to know on the discrepancies between the two maps in the course of interaction. Example 5.10 from the dialogue of group four shows the use of Function F by an instruction receiver. The full data script of the dialogue of group four is presented in Appendix K. The marked Theme in Example 5.10 shows that Function F, 'reintroducing information to refocus on it to describe the location of another landmark'

works even if the landmark that the speaker wants to describe its location in terms of the landmark to be refocused on is not introduced in the discourse since the speaker knows that it is not found on the other map:

Example 5.10

- 523) IR4: ...I am just wondering whether the... we got... we got some shared locations
524) IG4: yeah maybe we should figure out all the things that we share
.
.
559) IR4: and then mushroom house is on the same line um, I can't never remember which one is longitude and which one is latitude like you know what I mean
.
.
601) IG4: ...What... what do you have that I don't have?
602) IR4: um so underneath between ... um halfway between the mountains and the castle
603) IG4: mmhmm
604) IR4: but offset to the left a little is a cactus
605) IG4: a cactus, oh! Wow! that's strange
606) IR4: **directly above the mushroom house** there is a gold mine
607) IG4: above
608) IR4: yeah

In Example 5.10, IR4 knows that 'gold mine' is not found on IG4's map (line 601) as IG4 and IR4 decided to go through the two maps and figure out what are the shared and unshared landmarks on the two maps before IG4 starts giving instructions about the route as the extract (line 524) and the full dialogue of group four attached in Appendix K show. IG4 asks what landmarks IR1 has on his map which that she (IG4) does not have (line 601). IR4 chooses to refocus on 'mushroom house' by making it the point of departure of his clause message to describe the location of 'gold mine'. So, Function F, 'reintroducing information to refocus on it to describe the location of another landmark also works even if the landmark that the speakers want to describe its location which is 'gold mine' in this example is not introduced in the discourse since they know that the landmark they want to describe its location with relation to the reintroduced information is not found on the other map. So, Example 5.10 is different from Example 5.9 above in that 'trig point' is previously introduced in the discourse. Yet, the refocusing function in Examples 5.9 and 5.10 is the same because previously introduced landmarks, 'west lake' and 'mushroom house' respectively in these two examples are refocused on to describe the location of

'*trig point*' and '*gold mine*'. Similar instance to Example 5.10 is marked Theme instance numbered '284' listed in Appendix M that occurred in the dialogue of group two.

5.3 Marked Themes fitted into more than one marked Theme function and the occurrence of the marked Themes in clusters

There are few occasions where marked Theme instances fit into more than one function category of the 6 proposed marked Theme functions described above. Fitting into more than one function happens in case of Function D, 'the repair meaning' and Function F, 'the refocusing' because these two functions are sort of variants as described in 5.2, p. 112 especially on occasions of the instant repair meaning in which no real breakdown in communication happens as in Example 5.7 above. 3 instances of marked Theme fit into Functions D and F. The three instances occur in the dialogue of group five and are presented in Example 5.11 below. In the example, the reintroduced information '*old mine*' is elided in the second and third marked Themes because the three marked Themes occur in sequence. The full data script of group five is presented in Appendix K.

Example 5.11

672) IG5: so you go down, and then you turn to the right, and sort of go diagonally up a bit and you should go back past a miner (long pause). Do you have a miner?

[to... to] the right of your old mine

673) IR5: [no]

674) IR5: I have an old mine and then I have mountains, on the right and then like swamp and cactus

675) IG5: ah, ok so um, I guess I need to get you to the X at the bottom rather than... than... ok, alright, so you go... next to the old ...old mine what have you got?

676) IR5: um, **to the right of the old mine** I have mountains **and below** I have a swamp **and diagonally** I have a cactus

677) IG5: oh, ok so they're complete different layout ok so um, right you go below the old mine, and then you go right, and we still on the sort of top line of the paper or picture as it were

The function of the three instances is considered as refocusing function to describe the location of landmarks and to repair meaning. Yet, they are technically described as instances of refocusing function as the landmarks, '*mountains*', '*swamp*' and '*cactus*' in which their locations to be described with relation to the reintroducing information '*old mine*' are introduced in the discourse and their locations are not yet agreed on (line 674)

of Example 5.11. The reason why these 3 instances are considered as instances of repair meaning is that they help to resolve the discrepancies because of the absence of ‘*miner*’ from the instruction receiver’s map (line 673) as the extract above shows.

Two other instances of marked Theme denote the reintroducing function to refocus on the reintroduced information to clarify that the landmarks are found on the map represented by the first marked Theme (line 494) and to confirm the locations of the landmarks represented by the second marked Theme (line 513) of Example 5.12 below, ‘*miner*’ and ‘*swamp*’ to confirm the location of ‘*rocks*’. The example is taken from the dialogue of group four; the full data script of the dialogue is presented in Appendix K.

Example 5.12

- 464) IG4: ok, because I have a miner between the old... right in the middle between the old mine and the mountains but a little bit closer to the mine
.
.
470) IG4: and then um so what do you have below kind of on the next?
471) IR4: well, I got kind of two columns, a left and a right column. And then... so on the left column it goes start old mine, swamp, cottage, stone giant, hills, farm
472) IG4: ok
473) IR4: ok
474) IG4: so I don’t have... I have a swamp, I don’t have cottage and I don’t have... what was the other one?
.
.
494) IG4: ok so between... ok let’s see...I’m trying to think what’s the best way to do this, um so between the swamp... ok... **so on my map** there is like the old mine and the swamp
495) IR4: ok
.
.
509) IG4: um it’s... so do you have rocks?
510) IR4: no, I don’t have rocks too
511) IG4: I have rocks right under miner, so miner would be kind of in the middle of the page, right
512) IR4: yeah yeah
513) IG4: **right under miner kind of almost parallel but little lower than the swamp** I have rocks
514) IR4: ok

Interestingly, map task data collected in the current study shows also instances of marked Themes’ occurrence in clusters where Circumstantial Adjuncts “pile up at the beginning of the clause” (Matthiessen, 1992: 53) as in Example 5.12 above (line 513). 5 instances

out of the 59 marked Themes appear in clusters in the map task dialogue; 3 perform refocusing Function, F and the other two repair meaning function, D. The five instances are listed in Appendix W. In Example 5.12 above, ‘*right under miner kind of almost parallel but little lower than the swamp*’ is an example of refocusing function as noted already. The occurrence of ‘*right under miner*’, ‘*kind of almost parallel*’ and ‘*but litter lower than swamp*’ in cluster gives precise description on the location of the missing ‘*rocks*’ from the IR4’s map (line 513) which is the reason of refocusing on ‘*miner*’ and ‘*swamp*’. Example 5.13 below taken from the dialogue of group seven is an instance of repair meaning function and it shows the occurrence of the spatial elements in succession within the marked Theme ‘*so directly across the mushroom house almost to the other side of the page but not quite*’. In this example, IR7 gives extra details on the location of the ‘*hills*’ on her map by uttering ‘*directly across from the mushroom house*’ with ‘*almost to the other side of the page*’ and ‘*not quite*’ (line 1126) to describe precisely the location of the ‘*hills*’.

Example 5.13

- 1120) IR7: do I go under the mushroom house or over the mushroom house?
 1121) IG7: under the mushroom house
 1122) IR7: ok wow ok under the mushroom house ok
 1123) IG7: do you have a duck pond?
 1124) IR7: no
 1125) IG7: ok
 1126) IR7: so directly across [from the mushroom house] almost to the other side of the page but not quite, I have hills
 1127) IG7: [aha]
 1128) IG7: yeah I have them too
 1129) IR7: ok good,....

In Examples 5.12 and 5.13, the successive thematic spatial elements have the effect of “contextualization” (Matthiessen, 1992: 53). In Example 5.13 for instance, the context of describing the location of ‘*hills*’ by taking the location of the ‘*mushroom house*’ as a point of departure provides relevant clues or details (i.e. *almost to the other side of the page*) and (*not quite*) with relation to establishing common grounds between the interlocutors to effortlessly describe the locations of the ‘*hills*’.

5.4 Summary of the marked Theme analysis

The analysis presented in this chapter considered the ratio of use of the marked Theme and accounted for the functionality of the marked Theme as a point of departure of the clause message and the reasons why the interlocutors chose to use marked Theme in the map task interaction. The analysis on the use of the marked Theme, approaching the clause message from an unusual angle, showed that marked Theme is very unusual structure. The examples presented above on the use of marked Theme illustrated its functionality in the map task dialogue. The interlocutors used marked Theme to foreground a previously mentioned location due to its importance to better organise the message and more easily guide each other to landmarks on the map and aided them in the interaction about the route consequently contributed to the success of/smooth running of the interaction. The interlocutors of the map task foregrounded a previously introduced location to introduce new landmarks and new details about the route, repair meaning, check understanding, check the availability of landmarks, and refocusing on it to describe the location of another landmark that its location is not yet agreed on. The use of these functions varied in frequency of use and with relation to the speakers' role. Some of the functions were used more than the others; some of them were typical of the instructions givers, others were typical of the instruction receivers while some others were used by both.

The analysis also showed that marked Themes occur in sequence and in clusters. Taking the location of a given landmark as a point of departure provides the interlocutors with relevant details (that are basically related to this landmark and the area around it: *next, below, above, to the left to the right etc... of it*) at a given point of the interaction regarding the description of the route and landmarks' location. The relevant details contribute to establishing the common ground between the interlocutors that is important to maintain the interaction. Therefore, the interlocutors take them as point of departure leading to the occurrence of marked Theme in sequence or use them after the first Circumstantial Adjunct within the marked Theme as an elaboration of the point of departure of the clause message. The occurrence of the marked Theme in sequence or clusters facilitates the description of the route.

The examples on the use of the marked Theme presented above showed that the previously introduced location was: 1) location of a landmark, for instance a '*stone giant*' in Example 5.2 above; 2) world knowledge related to the spatial locations and directions

(i.e. inherently introduced information), for instance '*diagonally*' in Example 5.11 above; 3) information available in the physical context of the map task interaction, for instance '*the map task sheet; the instruction giver and the instruction receiver; the route line*') as in Examples 5.5 and 5.12 above. The examples showed also that the previously mentioned information is reintroduced within the marked either through: 1) repeating it, for instance '*old mine*' in Example 5.6 above; 2) using an anaphoric reference expression to refer to it, for instance '*that*' in Example 5.1 above; 3) reintroducing it only in the first marked Theme and omitting it from the other marked Themes when a sequence of marked Themes occur, for instance '*old mine*' in Example 5.11 above is mentioned in the first marked Theme and is omitted from the second and third marked Themes.

In the following chapter, Chapter Six, the findings of the analysis of the prosodical realisations of the marked Theme are considered. Marked Theme is used to reintroduce previously mentioned information as illustrated in this chapter. As the previously introduced information is not made information focus (Halliday and Matthiessen, 2014) as noted in 3.3, p. 423, the analysis in the next chapter focuses on how the reintroduced information in the 59 marked Themes is realised prosodically

CHAPTER SIX: MARKED THEME PROSODIC ANALYSIS

6.1 Introduction

As noted in Chapters One and Five above the present study explores how marked Theme contributes to structuring map task dialogue. To reveal the contribution of the marked Theme, the 59 marked Themes used in the data generated by the map task are structurally and prosodically examined. Chapter Five above presented the findings of the structural analysis of the marked Themes (i.e. accounting for marked Theme's contribution as a point of departure of the message and as a device that orients the clause message to rest of the discourse in structuring the map task dialogue). The current chapter presents the description of the prosodic analysis of the marked Theme. The purpose of this analysis is to reveal how the 59 marked Themes were realised and how they contributed to structuring the map task dialogue from a prosodic point of view. The prosodic aspects that are examined in the current study which are reviewed in Chapter Three above are tonality, tonicity and key. As described in 1.1 above, tonality is the segmentation of speech; what the speakers decide to present as a piece of information (Tench, 1996). Tonicity refers to the focus of information; "it expresses what the speaker decides to make the main point or burden of the message" (Halliday, 1970: 40). Key is the pitch height of the onset, the first prominent syllable within the tone group whether high, mid or low (Brazil, 1997).

The research question explored in relation to examining prosody of the marked Themes is: how do tonality, tonicity and key choices of the 59 marked Themes of the map task dialogue aid the map task's interlocutors in describing the route and the location of the landmarks? So the following sections detail how these prosodic aspects are identified in the current research and describe how the interaction between marked Theme and its prosody contribute to the completion of the map task dialogue.

6.2 How marked Themes' tonality, tonicity and key choices are identified

To easily analyse the tonality of the marked Themes, the parts from each of the sound files of the data that contain the 59 marked Themes were edited using Audacity software. Finding out whether marked Themes of the map task dialogue are uttered in separate or non- separate tone groups is examined in terms of whether marked Themes contain tonic

syllables (i.e. information focus), as the occurrence of the marked Theme in its tone group entails that they contain informational foci (Tench, 1996). So, to identify whether marked Themes were uttered in separate or non- tone groups, Praat software (Boersma and Weenink, 2014) was used to visualise the pitch curve of the extracts that contain marked Themes in each sound file of the data. Visualisation of the pitch curve on the marked Themes shows whether a syllable within the marked Theme carries the main pitch movement and hence a marked Theme is uttered in its own tone group. So, using Praat software (ibid), the parts of the map task dialogues that contain the 59 marked Themes were transcribed into tone groups with boundaries signalled by ||...|| as shown in Examples 6.1, 6.2 and 6.3 and Figure 6.2 of Praat image below showing the tone group boundaries. The tonic and the prominent syllables that precede the tonic syllables were identified according to the intonation coding symbols listed on p. xi.

Then to identify key choices, the following steps were carried out: (i) the onset syllables, the first prominent syllables within the tone groups were identified and transcribed by ear with the assistance of Praat; (ii) the key value that is the hertz value of the pitch height realised on each onset syllable was noted. The hertz value represents a number of the pitch height shown on the Praat image; (iii) the noted pitch height on each onset syllable within each tone group was analysed into high, mid or low in relation to the pitch height of the prior onset and transcribed respectively as H, M and L. Example 6.1 below from the dialogue of group three illustrates how key choices are identified in relation to the pitch height of the prior onset syllable for each speaker (the syllable in capital is the onset syllable; the number is hertz value of the pitch height; the numbering of the turns in the example is kept the same as that of the data script of group three in Appendix K.

Example 6.1

308) IG3: ||SO 118 **M**|| we're at the START 89 **M**||

309) IR3: ||YEAH 204 **M**||

310) IG3: ||UM 83 **M**|| and beLOW 95 **M** the start is the old mine||

311) IR3: ||YEAH 107 **L**||

When identifying key choices, it was taken into account that the values of high, mid and low are relative and vary from speaker to another and among female and male and within the discourse of the same speaker. Therefore, assigning the high, mid and low choices in

the map task dialogue vary among the participants and within the discourse of the same speaker. In case of the male and female speaker, the variation in the key value is related to the vibration frequency of the vocal cords. Female's vibration of the vocal cords is higher than that of the male. So, what is mid key in case of male speaker might be low key in case of the female speaker. Example 6.1 above illustrates the difference between the instruction giver who is a male speaker and instruction receiver who is a female speaker in terms of the key values. The hertz value 118, 89, 83 and 95 of the male speaker (lines 308, 310) are realised as mid key whereas the hertz value 107 of the female speaker (line 311) is realised as low. Similarly, the hertz value 204 within the tone group (line 309) is realised as mid key as the speaker is female whereas similar values or others within the same range were realised as high key in case of a male speaker. In Example 6.1 above (line 308), the hertz value 89 in the second tone group is lower than that of the first tone group 118 (line 308) yet it is identified as mid not low because the speaker is male. The difference in the hertz value between the adjacent tone groups within the discourse of the same speaker has been taken into account when notating the key choice as high, mid or low. So, the key choice in the second tone group (line 308) is realised as mid not low also because it is in the same range of the hertz value of the prior tone group, the first tone group (line 308).

Within a discourse, the values of high, mid and low of the key are also relative because they vary within the discourse of the same speaker. Speakers usually start with high key and then it gradually declines according to the supradeclineation theory (Wichmann, 2000). In Example 6.1 above (line 308), the hertz value 89 in the second tone group is lower than that of the first tone group 118 (line 308) yet it is identified as mid not low because the speaker is male.

The following sections detail the findings of the analysis of the tonality, tonicity and key choices of the 59 marked Themes used in the map task dialogues and explain how these aspects contribute to structuring the map task dialogue. The findings are presented through using in text examples from the map task dialogue. Marked Themes in these examples are written in intonation coding. The intonation coding symbols are presented on p. xi.

6.3 Tonality and tonicity analysis of the marked Theme

This section presents the findings of the tonality and tonicity analysis of the 59 marked Themes used in the map task dialogues. The aim of the tonality and tonicity analysis is to find whether marked Themes of the map task dialogues are presented as a piece of information (i.e. uttered in separate tone groups) therefore containing tonic accented information and what effect this has on structuring the map task dialogue during the successful completion of the task. With this aim in mind, the tonality and tonicity analysis is examined in terms of the following:

- 1) The 59 marked Themes are examined to see if they are uttered in separate tone groups or non- separate tone groups, marked Theme is uttered with the Rheme part of the clause in the same tone group.
- 2) Examining the informational status of the tonic accented information within the 59 marked Themes to see whether it is recoverable or non- recoverable, previously or not previously mentioned in the discourse.
- 3) With relation to 1 above, marked Theme might contain textual and/or interpersonal Themes alongside the obligatory marked topical Theme within the tone group (Halliday and Matthiessen, 2014) as the description of the structure of Theme in 2.3.1, p. 29 shows. So, the tonality analysis examines whether the textual Themes found in the marked Themes of the map task dialogues are uttered in the same tone group with the marked topical Theme or in separate tone groups (i.e. whether marked Theme is uttered in one tone group as a single Theme or in more than one tone group) and what effect this has on the map task interaction. As noted in 2.3.1, p. 31, the interpersonal Themes are not discussed in the current research because they occur only in 2 out of the 59 marked Themes; these two marked Themes occur in the dialogue of group 12 presented in Appendix K and are numbered 1567 and 1718 as shown in Appendix J.

Tonality analysis of the 59 marked Themes of the map task dialogue shows, Table 6.1 below, that all marked Themes are uttered in separate tone groups hence contain tonic syllables with the exception of one instance that was found within the same tone group with the Rheme part. This finding suggests that marked Themes used in the map task dialogue almost always occur in separate tone groups. Intonation coding of the 59 marked Themes used in the 12 groups of the map task dialogue is presented in Appendix N.

Table 6.1 The distribution of the 59 marked Themes with relation to tonality and tonicity analysis

Separate tone group/ containing tonic syllable	58
Non- separate tone group/ tonic syllable within Rheme	1
Total number of the marked Themes	59

The extract from the dialogue of group two in Example 6.2 below presents the only instance of marked Theme that is uttered in the same tone group with the Rheme. Marked Theme ‘*on mine*’ is uttered with the Rheme ‘*I have got fenced meadow*’ in the same tone group and ‘*fenced*’ is made tonic as the intonation coding and Figure 6.1 of the Praat image below show. So marked topical Theme ‘*on mine*’ is presented as Given information as it is not made the information focus (Halliday and Matthiessen, 2014). The numbering of the turns in Example 6.2 is kept the same as that of the data script of group two in Appendix K:

Example 6.2

- 177) IG2: ok so er on the bottom right... of the... of the sheet there should be er...
 ||on MINE i have got a \FENCED meadow||, have you got anything, in this
 [area?]
 178) IR2: [yeah] I have fenced meadow too.

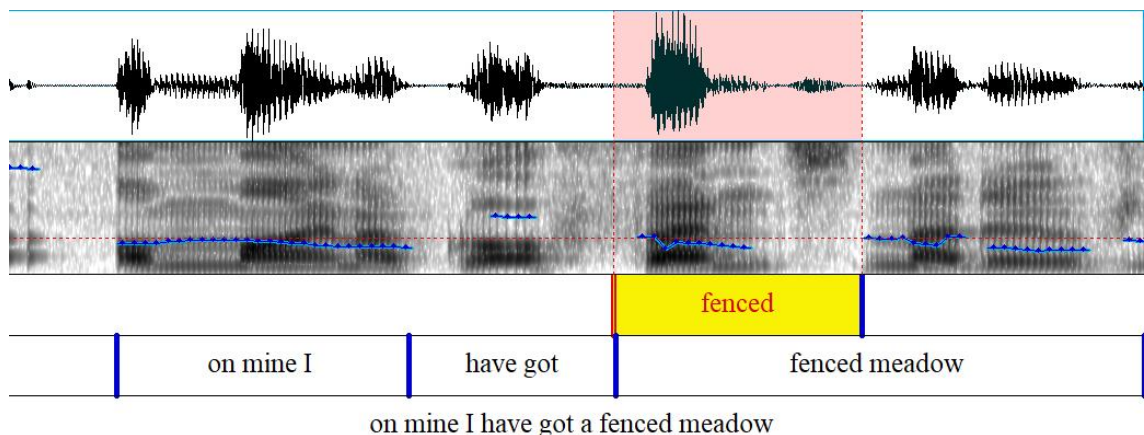


Figure 6.1 Praat image illustrating the occurrence of the marked Theme ‘*on mine*’ in the same tone group with the Rheme ‘*I have got fenced meadow*’, ‘*fenced*’ is made tonic

With relation to the informational status of the 58 tonic accented information within the 58 marked Themes identified in Table 6.1 above, the co- text of each of marked Theme was checked to find out whether the information that is made tonic within the marked Theme is recoverable or non- recoverable (i.e. previously or not previously mentioned in the discourse). Examining the co-text of each of the 58 marked Themes shows that all the syllables that are made tonic in the 58 marked Themes are previously introduced in the discourse, they are recoverable. In other words, the information presented in these syllables is presented as if it were New (non- recoverable; not previously mentioned in the discourse) as it is made the information focus. This finding shows that in the 58 marked Themes of the map task dialogue, recoverable information is made information focus and this equally holds for both the instruction givers and the instruction receivers. Example 6.3 below contains two marked Themes, one uttered by the instruction giver (line 201) and the other by the instruction receiver (line 198). The example is taken from the interaction of group two; it is used as illustrative and representative example of 58 marked Themes of the map task with relation to uttering them in separate tone groups and tonic accenting of the recoverable information by the instruction givers and the instruction receivers. As with other examples given above, the numbering of the turns in the extract is kept the same as that of the data script of group two in Appendix K.

Example 6.3

- 195) IG2: ok so do you have the west lake?
 196) IR2: I do, that's above now.
 197) IG2: yeah, do you have trig point?
 198) IR2: no, || NEXT to \WEST LAKE|| i have FRAMED \LAND|| [which is to the right of west lake]
 199) IG2: [err] to the west of er... oh er sort of above... [so sort of the north east direction of west lake]
 200) IR2: [yeah, that's right]
 201) IG2: ||-YEAH|| \SO|| in a SORT of NORTH er south DIREction of WEST \LAKE|| there is a PLACE called TIRG POINT /HERE||
 202) IR2: ok

'*West lake*' is introduced when IG2 checks whether it exists on the IR2's map (line 195) so, '*west lake*' is recoverable information as it is available in the discourse. Yet, IR2 and IG2 have chosen to present it as if it is not being previously mentioned hence making

‘west’ tonic (i.e. information focus) as it carries the main pitch movement and making whole marked Themes ‘next to west lake’ and ‘in a sort of north direction of west lake’ respectively the focal and uttering them in separate tone groups as the intonation coding in Example 6.3 and Praat image 6.2 show. The two marked Themes have a repair meaning Function; IR2 reintroduces ‘west lake’ in the marked topical Theme, ‘next to west lake’ (line 198) to clarify that she has ‘framed land’ instead of ‘trig point’ ‘next to west lake’. IG2 reintroduces ‘west lake’ in the marked topical Theme, ‘in a sort of north direction of west lake’ (line 201) to clarify the exact location of ‘trig point’ on his map.

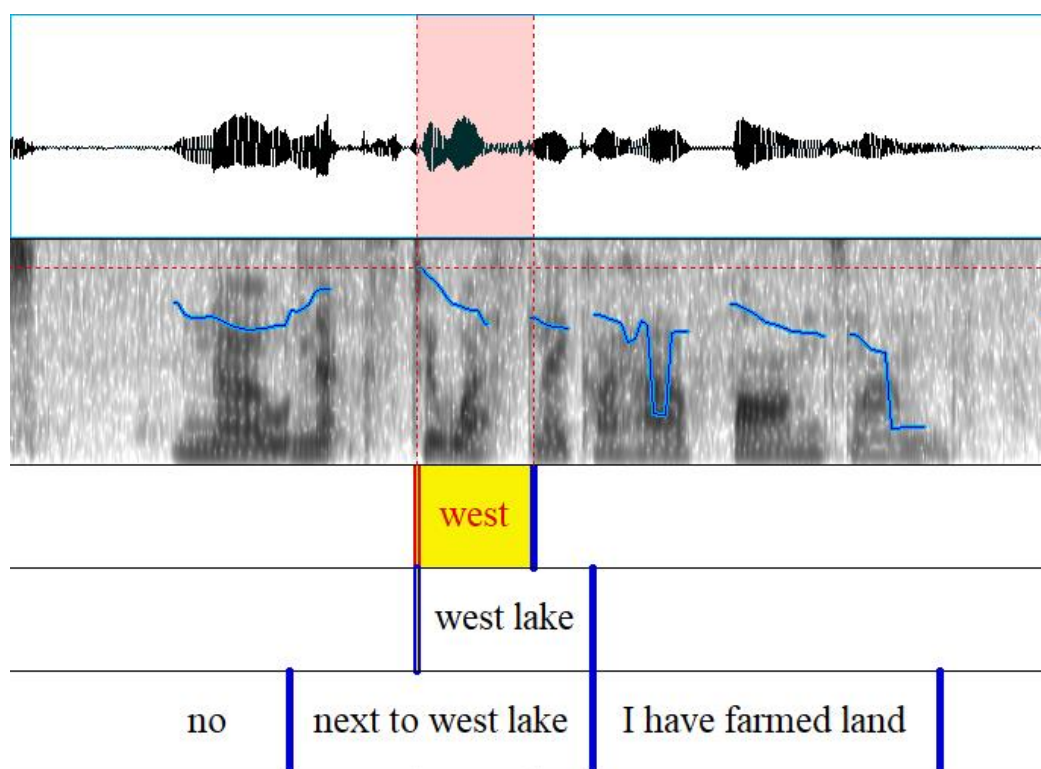


Figure 6.2 Praat image illustrating tone groups boundaries and the tonic accenting of previously mentioned ‘west’ (uttered by IR speaker)

Example 6.3 above shows that the previously introduced information is projected as New (Halliday and Matthessien, 2014). According to Berry (2013b), ‘west lake’ is discourse given but speaker new. This suggests that tonic accenting does not necessarily reflect new information because Given and New refer to the way the interlocutors choose to present information (Halliday and Matthessien, 2014). So, the informational status of ‘west lake’ and of other reintroduced information that is made information focus in the marked Themes of the map task represents the map task speaker’s assessment of information status rather than its actual state whether it exists or not in the discourse (O’Grady, 2017a).

In other words, from the SFL point of view, IG2 and IR2 present previously mentioned information ‘*west lake*’ as non-recoverable (Halliday and Matthiessen, 2014) because they choose to make ‘*west lake*’ the burden of their clause message as its location is important to repair meaning. Moreover, if ‘*west lake*’ were not important then IG2 and IR2 would not have repeated it; rather they would use a referential expression, ‘*it*’ to refer to it instead. But because ‘*west lake*’ is important, it is repeated and made focal as it is the burden of the message as noted already. In other words, ‘*west lake*’ is the news that the speaker wants to present to the hearer (Halliday, 1985). This explains the reason for reintroducing it and making it information focus.

With relation to tonality, the occurrence of ‘*next to west lake*’ and ‘*in a sort of north direction of west lake*’ in separate tone groups “adds weight to the Theme” (O’Grady, 2017a: 6) and makes Themes “perfectly audible” (Berry, 2013a: 262) consequently invites the attention of the IG2 and IR2 respectively in Example 6.3. This has contributed in guiding each other easily to the intended location to continue the description of the route. The occurrence of the marked Theme in a separate tone group is not only important to attract the hearer’s attention to the information contained in the Theme; it also attracts the hearer’s attention to attend to an upcoming piece of information and it signals that it is important to continue with the route description as Example 6.4 from the interaction of group six illustrates.

Example 6.4

- 930) IG6: but below the mushroom house um and then ... ||so in LINE with the
YELLow \HOUSE|| on the BOTtom [of the \PAGE] || there is DUKE \POND||
- 931) IR6: [yeah]
- 932) IR6: yeah
- 933) IG6: and so the line is sort of like heading in the direction in the farm but it
has to go up a little bit around the duck pond
- 934) IR6: oh yeah so it goes up before the duck pond
- 935) IG6: yeah so it just sort of follows the top of the duck pond
- 936) IR6: um ok yeah

The intonation coding of ‘*so in line with the yellow house on the bottom of the page*’ in Example 6.4 shows that it is said in separate tone group. IR6 attends to the information that follows the marked Theme as the overlapping utterance ‘*yeah*’ of IR6 (line 931) shows.

In conclusion, the tonality and tonicity analysis described in this section shows that the speakers of the map task uttered marked Themes in separate tone groups and made recoverable information tonic. The tonic accenting of previously mentioned information equally holds for the instruction givers and the instruction receivers. The speakers presented previously mentioned information (landmarks and their location) as non-recoverable because they wanted to make it the burden of their message (i.e. the news they wanted to present to their hearers) due to its importance for route description as illustrated in Example 6.3. The tonic accenting of the recoverable information will make the hearers attend to it and realise its importance in the interaction. Similarly, the occurrence of the marked Theme in separate tone groups has contributed to attract the hearer's (the instruction giver or the instruction receiver) attention and guide him/her easily to the intended location on the map hence to continue with the route description. The occurrence of the marked Theme in separate tone group gives it informational weight (O'Grady, 2017a) and makes it audible (Berry, 2013b) consequently invites hearer's attention to the information due to its importance to continue the description of the route.

6.3.1 The tonality analysis of the textual Themes

This section describes the tonality analysis of the textual Themes that occur before the marked topical Theme within the thematic structure in terms of whether they are uttered with the marked topical Theme in the same tone group or in their own tone groups and the effect this has on the map task interaction. Other approaches such as Conversational Analysis (e.g. Hertiage, 2013; House, 2013) and Corpus Linguistics (e.g. Mauranen, 2004) treat textual Themes as turn initial discourse markers. In the current study, as noted, the purpose of the analysis is to examine the structuring role of the textual Themes in the map task dialogue in terms of the informational weight given to them. In other words, the analysis aims at finding out the reasons for uttering textual Themes in their own tone groups and how it contributes in structuring the map task dialogue.

So, the 59 marked Theme instances were examined to identify the instances that contain textual Themes plus the marked topical Theme. The instances that contain Themes other than the topical Theme are multiple Themes whereas the instances that contain only the topical Theme are simple Themes (Halliday and Matthiessen, 2014) as thematic structure described in 2.3.1, p. 29 shows.

The analysis in Table 6.2 below shows that 44 are multiple Themes and 15 are simple Themes out of the overall 59 marked Theme instances. The 59 marked Themes are identified into simple and multiple marked Themes in Appendix O.

Table 6.2 The analysis of the 59 marked Themes into simple and multiple Marked Themes in the 12 Map Task Dialogues

Simple marked Themes	15
Multiple marked Themes	44
Total	59

Example 6.5 is for simple Theme and it is taken from the dialogue of group seven and Examples 6.6 and 6.7 are for multiple Theme containing interpersonal and textual Themes respectively and they are taken from the dialogue of group twelve. The full data script of the dialogues of groups seven and twelve is presented in Appendix K.

Example 6.5

Over the castle [**Marked Topical**], I don't have a cactus

Example 6.6

Yeah [**textual**] I think [**interpersonal**] from tree [**marked Topical**] we can see where we go then

Example 6.7

Ok ok so [**textual Themes**] from there [**marked Topical**] we're looking at sort of err one o'clock um area from where we are to the yellow house

The analysis in Table 6.3 above shows that textual Themes occurred in all the 44 multiple Themes whereas interpersonal Themes unsurprisingly occurred in only two multiple Themes, items 1567 and 1718 of the dialogue of group twelve as shown in Appendix O. Some of the multiple marked Themes were found containing more than one textual Theme as Example 6.7 above shows. As noted in 2.3.1, p. 31 and in 6.3, p. 122, the role of the interpersonal Themes in the map task interaction is not examined in the current research because only two interpersonal Themes are used and they are not enough to examine the role of the interpersonal Theme in the map task interaction. The limited occurrence of the interpersonal Themes compared to the textual Themes was predicated

because of the nature of the map task. The topic of interaction in the map task is restricted; it is about the route and the landmarks. So, the interaction on the route provides contexts for the interlocutors to express what they think only about for example the location of a landmark or route layout as the use of ‘*I think*’ in Example 6.6 above. So, the topic of the map task does not provide the contexts for the use of the interpersonal meaning such as validation, persuasion, desirability and so on. Therefore, examining the interpersonal meaning’s role in organising the map task dialogue is beyond the scope of the current study and not much can be said here about it due to the topic of the map task as noted already.

Table 6.3 The occurrence of the textual and interpersonal Themes in the 44 multiple Themes of the Map Task dialogues

Textual Theme	44
Interpersonal Theme	2
Total of Multiple Themes	44

The tonality of the 44 multiple marked Theme was examined to find out whether the textual Themes are uttered with the marked topical Theme in the same tone group or they occur in their own tone groups. As with the tonality analysis carried out in 6.2 above, Praat software (Boersma and Weenink, 2014) was used to visualize the pitch curve on the textual Themes to find out whether they carry the main pitch movement (i.e. made tonic) and hence are uttered in their own tone groups. The tonality analysis of the textual Themes in Table 6.4 below shows that 30 multiple marked Themes out of the overall 44 are uttered as a single Theme whereas the other 14 instances are found in more than one tone group because the textual Themes are not uttered with the marked topical Theme in the same tone group. The identification of the 44 multiple marked Themes into one tone group as single Theme and more than one tone group as shown by the intonation coding is presented in Appendix P.

Table 6.4 Tonality analysis results of the 44 multiple marked Themes into one tone group as single Theme and more than one tone group

Multiple Marked Theme in one tone group as a single Theme	30
Multiple Marked Theme in more than one tone group	14
Total of the multiple marked Themes	44

With relation to the results of the tonality analysis of the textual Themes, the textual Themes preceding the marked topical Themes within the marked Themes are identified into:

(1) Textual Themes that are found in independent tone groups and they are made tonic as in Examples 6.8, 6.9 and 6.10. As the intonation coding shows, the textual Themes ‘*so*’, ‘*then*’, ‘*ok*’ do not occur in the same tone group with the marked topical Themes ‘*horizontally*’, ‘*to the right of old mine*’, ‘*at that point*’ and they are coded in their own tone groups:

Example 6.8

||SO|| \horiZONtally|| it’s about HALF way up the \CARavan park||

Example 6.9

||and \THEN|| to the RIGHT of OLD \MINE|| do you have a \MINer||

Example 6.10

||OK|| so at THAT \POINT|| i would be kind of the MIDDLE of the \PAGE|| I \THINK||

(2) Textual Themes that are found in the same tone group with the marked topical Theme and are not made prominent and represent given information. The textual Themes ‘*so*’ is uttered with the marked topical Theme ‘*on mine*’ in the same tone group as the intonation coding in Example 6.11 below shows:

Example 6.11

|| so on \MINE || it’s CALLEd an OLD \MILL||

The textual Themes that occurred before the marked topical Themes in the map task interaction are conjunctive and continuative (Halliday and Matthession, 2014) and they

are presented in Tables 6.5 and 6.6 respectively. The Tables illustrate the frequency of occurrence and the degree of the intonational prominence (pre- tonic prominent, tonic, non-prominent) of these textual Themes.

Table 6.5 Conjunctives Textual Themes preceding the marked topical Theme in the 44 multiple marked Themes of the map task interaction

Conjunctive textual Themes	Overall occurrence of each conjunctive textual Theme	Non-prominent	Pre-tonic prominent	Tonic
So	20	17	0	3
and+ then	14	11	0	3
Then	1	1	0	0
And	2	2	0	0
But	1	1	0	0
Total	38	32	0	6

Table 6.5 shows that 38 occurrences of conjunctive textual Themes are found in the thematic structure of the multiple Themes prior to the marked topical Themes of the map task dialogues. The 38 occurrences are distributed among the continuatives ‘*so*’, ‘*and+ then*’, ‘*then*’, ‘*and*’, and ‘*but*’. In terms of the informational weight given to these conjunctives, out of the 38, 32 are not prominent, 6 are tonic so none is pre- tonic (i.e. none is prominent) as Table 6.5 shows. ‘*So*’ is the most frequently used linker as it is found in 20 instances out of 38 instances. Next comes ‘*and +then*’ with 14 instances. ‘*And*’, ‘*but*’ and ‘*then*’ are used less frequently. ‘*And*’ occurs in 2 instances; ‘*but*’ and ‘*then*’ are used once. ‘*So*’ is found non-prominent in 17 instances out of its 20 occurrences; it is uttered in separate tone group in the other 3 instances and hence made tonic. Similarly, ‘*and+ then*’ is found non- prominent in 11 instances out of its 14 occurrences and uttered in separate tone group hence made tonic in the other 3. ‘*Then*’, ‘*and*’ and ‘*but*’ are all non- prominent.

Table 6.6 Continuative Textual Themes preceding the marked topical Theme in the 45 multiple marked Themes of the map task interaction

Continuative textual Themes	overall occurrence of each Continuative textual Theme	Non-prominent	Pre- tonic prominent	Tonic
Ok	9	4	0	5
Yeah	2	0	0	2
Well	3	0	0	3
Overall	14	4	0	10

As for the continuative textual Themes that are found preceding the marked topical Theme and being part of the thematic structure of the multiple marked Themes of the map task interaction, Table 6.6 above shows that 14 continuative textual Themes are used. The 14 occurrences are distributed among the continuatives ‘*ok*’, ‘*yeah*’ and ‘*well*’. In terms of the informational weight given to these continuatives, 10 out of the 14 are made tonic and the other 4 are non- prominent. So, like the conjunctives textual Themes, none of the continuative textual Themes is pre- tonic (i.e. none is made prominent). ‘*Ok*’ is frequently used in comparison with other continuative textual Themes ‘*yeah*’ and ‘*well*’. 9 marked Themes are found containing ‘*ok*’. ‘*Well*’ is used in 3 instances and ‘*yeah*’ in 2 instances. ‘*Ok*’ is made tonic in 5 instances and it is uttered in its own tone group; it is found non- prominent in the other 4 instances. In case of ‘*yeah*’ and ‘*well*’, they are made tonic and occur in separate tone groups.

Tables 6.5 and 6.6 above show that the interlocutors of the map task do not tend to give prominence to the conjunctive and continuative textual Themes that are found in the thematic structure of the marked Themes as none is made prominent (i.e. none is pre- tonic). Yet, 6 out of the 38 conjunctives and 10 out of the 14 continuatives are uttered in their own tone groups and therefore made tonic. So, the number of the textual Themes that are uttered in separate tone groups and made tonic is high taken into consideration textual Themes’ function of signalling relations between units of discourse. So, the context of occurrence of each of the above textual Themes is examined to find if there is a relation between how they are realised prosodically and their function in the map task interaction. The role of the conjunctive textual Themes ‘*so*’, ‘*and+ then*’, ‘*then*’, ‘*and*’, and ‘*but*’ is examined in terms of the lexio- semantic relations of enhancement, extension and elaboration as they function as conjunctions (Halliday and Matthiessen, 2014). The description of the analysis of the conjunctive and continuative textual Themes is made with reference to examples of their occurrence in the map task dialogues. As the focus is on the reasons for uttering the conjunctive and the continuative textual Themes in separate tone groups and henceforth made tonic, the examples presented will be for their occurrences in separate tone groups. Yet, the analysis of each of the conjunctive and continuative textual Themes is presented in Appendix Q. In the examples used in this section, the whole marked Theme is emboldened and the intonation coding of the marked Theme and the Rheme is provided to show: (1) tone group boundaries between the two

parts; (2) the occurrence of the conjunctive and the continuative textual Themes in separate or non- separate tone groups; and 3) the tonic syllables that are capitalised and underlined.

‘So’ signals the relation of enhancement as it denotes the meaning of cause- effect (Halliday and Matthiessen, 2014) of reaching a place or landmark that leads to another landmark. ‘So’ also denotes the sense of continuity from a particular place that the interlocutors reach on the map to another. The causal- effect meaning expressed by ‘so’ in the map task is general not specific (Halliday and Matthiessen, 2014). As Example 6.11 below shows, IG2 uses ‘so’ to express the effect of reaching the current location on the map that is at the top of the ‘old mill’ on the IR2’s map. IG2 expresses this effect by illustrating the current location of the route on his map that is going in an easterly direction to the right as the example shows. ‘So’ is uttered in the same tone group with the marked Theme as the intonation coding shows (183). The example is taken from the dialogue of group two and the full data script of dialogue is presented in Appendix K.

Example 6.11

179) IG2: ok um do you see abandoned cottage on your map?

180) IR2: I do yeah

181) IG2: er is that about in the centre of the map?

182) IR2: it is yeah

183) IG2: yeah ok so where you so... let’s say that your route is at the top of the old mill at the start, uh... at this point || **so on** MINE|| it GOES|| -UH|| i suppose in an EASTerly DIrection|| or to the left er to the RIGHT||

184) IR2: ok

Yet in Example 6.12, ‘so’ is uttered in separate tone group as the intonation coding shows (line 54). IG1 describes to IR1 the diagonal shape that the route takes. IR1 faces difficulty following IG1’s instruction and asks IG1 to start the description again (line 49) from the top of the ‘mill wheel’ as it was the point from where IG1 has started describing the diagonal line (line 32). IG1 confirms to IR1 that his location by the ‘mill wheel’ is the right location (lines 52) and eventually realises that IR1 is struggling with following the instructions given to him after the ‘mill wheel’s’ location. Therefore, IG1 stops giving any new instructions and chooses to clarify to IR1 the current location of the diagonal line to prepare him for the next instruction (i.e. the location where the diagonal line ends) which is the detail that IR1 is struggling with. IG1 uses ‘so’ to express the current state of the route clearly to IR1 which is the effect of reaching this point on the map. IG1 utters

‘so’ in separate tone group hence making it tonic as the intonation coding in the example shows. It is likely that IG1 has chosen to utter ‘so’ in separate tone group to attract IR1’s attention and make him attend to the upcoming information signalling that the upcoming information will clarify IR’s confusion about the route. Example 6.12 is from the dialogue of group one; the full data script of the dialogue of group one is presented in Appendix K.

Example 6.12

- 28) IG1:do you have abandoned cottage on yours?
29) IR1: yes
30) IG1: excellent so you should be at the top left of the mill wheel
31) IR1: yeah
32) IG1: you need to go diagonally so you are in line with the abandoned cottage and then the diagonal stops at about half way to the height of the caravan park. Does that make sense?
33) IR1: half way to the height of the caravan park
34) IG1: yeah so caravan park is some amount high
. .
49) IR1: start again I am on... I’m on line... the k of the caravan park, I’m on, I’m at the top right of the mill wheel of the old mill,
50) IG1: yeah
51) IR1: yeah
52) IG1: and what we want is a diagonal line that goes from there to somewhere in the right which I am going to tell you where it ends
53) IR: yeah
54) IG: ||**SO**|| **horiZONtally**|| it’s about HALF way up the \CARavan park||
. .
59) IR1: ok

‘And+ then’, ‘then’ and ‘and’ express the relation of extension as new details are added. ‘And+ then’ and ‘then’ denote the meaning of ‘following’ in a spatial sense (i.e. what is next); ‘and’ has the meaning of addition. As ‘and+ then’, ‘then’ and ‘and’ signal extension meaning, one Example that is 6.13 below is used to illustrate this meaning in which ‘and +then’ is used. ‘And then’ is uttered in separate tone group. Example 6.13 is taken from the dialogue of group seven and the full data script of the dialogue of the group is presented in Appendix K:

Example 6.13

- 1136) IR7: ok so you want me to go over the duck pond but under the farm
1137) IG7: yeah
1138) IR7: ok and then where am I going?
1139) IG7: ||**and** -**THEN**|| -**UM**|| **UNDER** the **FARM**|| SCOOP UP to the **LEFT**|| and
finish just to the bottom um about an inch to the left of the hills
1140) IR7: an inch to the left of the hills and then write finish [in here] and then must
go up and then put an X ok.
1141) IG7: [yeah]

In Example 6.13 above, ‘*and + then*’ is uttered in separate tone group hence made tonic where the main pitch movement falls on ‘*then*’ as the intonation coding shows. IG7 utters ‘*and+ then*’ in separate tone group likely to gain planning/thinking time and assemble her thoughts about how to direct IR7 on the next step as the hesitation marker ‘*um*’ and the use of the level pitch movement on ‘*then*’ in the example show.

‘*But*’ is found expressing the relation of extension of the “replacive type” (Halliday and Matthiessen, 2014: 407) that denotes the meaning of ‘instead’. It expresses an alternative meaning that is in contrast with the meaning expressed in the prior clause in which the meaning is extended by adding details that are alternative to what is expressed. ‘*But*’ is used once as a conjunctive textual Theme prior to the marked topical Theme and it is not uttered in separate tone group hence not made tonic as Table 6.5 above shows. The only occurrence of ‘*but*’ is presented in Example 6.14 blow; it occurs in the dialogue of group four and the full data script of the dialogue of group four is presented in Appendix K:

Example 6.14

- 490) IG4: ...ok I see ok I actually do have the hills and a farm I wasn't looking that far
down, [ok great]
491) IR4: [that's good]
492) IG4: do you have a forest near the stone giant?
493) IR4: no
.
.
496) IG4: and then I don't have the cottage but I wrote that in there, and I don't have
the stone giant, ||**but beFORE** the **HILLS** and the **FARM**|| there IS a **FORest**||
but a bit more to the right like directly under the old mine... but [to the right of the
swamp]
497) IR4: [ok]

498) IR4: so that's... that's pretty much the same location as the cottage is, I think
499) IG4: ok

In the example, '*hills*' and '*farm*' are shared landmarks between IG4's and IR4's maps (line 490). '*Forest*' which is before the '*hills*' and '*farm*' is only found on the IG's map as IR4 has '*cottage*' instead next to the '*hills*' and the '*farm*' (line 498). So, IG4 uses the conjunctive '*but*' to show that she has '*forest*' instead of '*cottage*' and links the utterances with a replacive relation. The existence of the '*cottage*' instead of the '*forest*' on the IR4's map is confirmed by his response (line 498). '*But*' is not uttered in separate tone group as the intonation coding shows. IG4 knows that '*forest*' is not found on the IR4's map and she knows its location with relation to the IR4's map. So, it is likely that she does not need thinking time to assemble her thoughts with relation to the next instruction on locating the '*forest*' unlike Example 6.13 of '*and then*' above.

The continuative textual Themes, '*ok*', '*yeah*' and '*well*' are found preceding the marked topical Themes as Table 6.5 above shows. The analysis shows that '*ok*' signals a move in discourse as it denotes 'continuity' as in Example 6.15 below from the dialogue of group two. In some occurrences '*ok*' is found signalling also a response that denotes an 'agreement' in addition to the continuity sense as in Example 6.16 below from the dialogue of group three. In both examples, '*ok*' is uttered in separate tone group as the intonation coding shows. Yet in Example 6.17, '*ok*' is uttered with the marked topical Theme in the same tone group although it denotes the meaning of 'agreement' as in Example 6.16. The full data scripts of the dialogues of the groups two, three and twelve in which Examples 6.15, 6.16 and 6.17 are taken from respectively are presented in Appendix K.

Example 6.15

189) IG1: and then there should be... is there another fenced meadow there for you?
190) IR1: no, there isn't
191) IG1: ||**OK**|| **so on** **MINE**|| there is a FENCED **MEADOW**|| it's about say
halfway up the page on the left hand side
192) IR1: ok

Example 6.16

- 407) IR3: so you say we are kind of parallel to the tree
408) IG3: yeah, in between the tree and the yellow house kind of that way
409) IR3: **||\OK|| so at THAT \POINT||** i would [be kind of the MIDDLE of
the \PAGE_|| I \THINK||
410) IG3: [ok]

Example 6.17

- 1735) IR12: let's see if we've got a yellow house
1736) IG12: I've got a yellow house
1737) IR12: **||ok ok so FROM \THERE||** we're LOOKing at sort of err ONE
o'CLOCK||UM \EREA|| FROM where we ARE to the YELLow \HOUSE||
1738) IG12: yes
1739) IR12: yeah

The above examples show that 'ok' meaning is important; 'ok' is a hint that the interlocutors are able to follow the instructions about the route and the landmarks. So, the use of 'ok' motivates the interlocutors of the map task to continue with the route description and contributes to structuring the map task dialogue through maintaining its fluency. With relation to uttering 'ok' in separate tone group, the examples above show that there is variation as 'ok' is presented as a separate tone group although it denotes the same meaning.

The last two continuative textual Themes that precede the marked topical Themes of the map task dialogue are 'yeah' and 'well'. 'Yeah' is found denoting the sense of continuity through signalling a move in discourse. The two occurrences of 'yeah', Table 6.6 above, are found in separate tone groups hence made tonic. Example 6.18 from the dialogue of group two illustrates the use of 'yeah' and the full data script of the dialogue of group two is presented in Appendix K.

Example 6.18

- 195) IG2: ok so do you have the west lake?
196) IR2: I do, that's above now
197) IG2: yeah, do you have trig point?
198) IR2: no, next to west lake I have farmed land [which is to the right of west lake]
199) IG2: [err] to the west of er... oh er
sort of above... [so sort of the north east direction of west lake]

- 200) IR2: [yeah, that's right]
 201) IG2: ||-YEAH|| \uSO|| in a SORT of NORTH er south DIREction of WEST
 \uLAKE|| there is a PLACE called TIRG POINT /HERE||
 202) IR2: ok

As for 'well', it is uttered in separate tone group in its three occurrences hence made tonic, Table 6.6 above. As with the previous textual continuative Themes presented above, 'well' denotes the sense of continuity through signalling a move in discourse. In Example 6.19 from the dialogue of group two, 'well' signals a move in the discourse through denoting a response; the full data script of the dialogue of group two is presented in Appendix K:

Example 6.19

- 283) IG2: were there any landmarks there that I might er... that weren't on my map, sorry I never asked
 284) IR2: err || \uWELL|| just beLOW the MILL \uWHEEL|| the OLD MILL MINE is called the MILL \uWHEEL|| there was a PICKet /FENCE|| to the -UM|| SOUTH WEST of the OLD \uMILL||
 285) IG2: to the south
 286) IR2: west but we didn't go anywhere near that on our route
 287) IG2: to the south west
 288) IR2: yeah

In Example 6.20, 'well' signals continuity through providing a move in discourse in the form of a new or fresh start in the route description. The example from the dialogue of group five shows that IG5 was not sure about how to start route description and this is clear from the dysfluency and the incomplete clause 'so I am starting at the...' (line 672). So, 'well' bridges the gap that happens in the description and provides a sense of continuity through signalling a fresh attempt in route description:

Example 6.20

- 670) IG5: alright, um, well, the lines on my map are sort of curvy and bendy but I think I can direct you using sort of straight lines as it were
 671) IR5: ok
 672) IG5: so I am starting at the ... ||\uWELL|| ON \uMINE||it's on the TOP LEFT HAND \uCORner|| there IS an OLD \uMINE||

673) IR5: yeah

To summarise, the conjunctive textual Themes contribute to structuring the map task interaction; they link units of the map task discourse with enhancement and extension lexio- grammatical relations. No conjunctive textual Theme is found denoting the elaboration relation. In the map task interaction, the enhancement lexio-grammatical relation of a causal- conditional meaning signals the effect of reaching a place. As for the extension relation, it links the locations or the details on a previous landmark to the following ones by extension from the former location. The continuative textual Themes contribute to structuring the map task through denoting agreement and continuity; they signal that the interlocutors are able to follow each other and they perceive the information they give to each other in the right way. The conjunctive textual Theme ‘*so*’ signals also the meaning of continuity.

The conjunctive and continuative textual Themes are not made prominent (i.e. not given pre-tonic prominence) and almost all occur with the marked topical Theme in the same tone group hence are not made tonic either. The lack of intonational prominence on the conjunctive and continuative textual Themes signals them as Given (Halliday and Matthiessen, 2014). They do not represent the news that the speaker wants the hearer to attend to (ibid). In other words, nothing has happened in the context of interaction that requires projecting them as New information therefore they are not made prominent and presented as Given. Yet, the map task’s speakers present few of the textual Themes (no consciousness implied here) within their own information unit hence they are made tonic. Therefore, the textual Themes that occur with the marked topical Themes are informationally less prominent than the textual Themes that occur in independent tone groups as the lack of prominence signals them as Given (ibid) as described already. Yet, the reason why the interlocutors utter some of the textual Themes in separate tone groups and therefore are made tonic is to gain thinking/ planning time and try to assemble thoughts on how to direct the hearer on the next step; they function as discourse markers or hedges that help the speakers to assemble their thoughts as the above examples from the map task dialogue show.

The final section of the present chapter presents the description of the analysis of the marked Theme's key system, the pitch height of the onset syllable within the tone group to reveal what role the pitch height of the marked Theme has in the map task interaction.

6.4 The Analysis of the marked Theme's key system

This section describes the analysis of marked Theme's key system, the pitch height of the first prominent syllable that is the onset in a tone group. The analysis aims to find out what role key choices of the marked Themes has in the map task interaction. Key of the marked Themes is examined in terms of the following aspects:

- (1) The thematic and key choices of the interlocutors contribute to organising the text as noted in 3.9, p. 60. They orient and ground a message in its local context and signal how it is developed. Key orients the message through signalling expectations about the upcoming information as neutral, in line with or counters to the preceding information and Theme organises the text because thematic choice is motivated and influenced by the earlier co- text to ensure the development of the topic into a coherent text. So, drawing on the organising role of the Theme and key, do the key choices of the marked Theme ground and orient the clause message in its local context? so as to contribute to organising the map task dialogue.
- (2) Are marked Themes of the map task dialogue associated with certain key choice rather than another? In what context are they associated?
- (3) What meanings are generated of the interaction between marked Theme and high key choice?

To find out whether a particular key choice is more frequently associated with the marked Themes, the key choices of all Themes, the marked and the unmarked, in the map task dialogues were identified. Table 6.7 below presents key choices of all the Themes, the unmarked and the marked distributed across the 12 instruction givers and the 10 instruction receivers of the groups of the map task. Key choices of the discourse of the instruction receiver of groups one and eight are not considered because they did not use marked Themes as noted in 5.2, p. 96. So, the overall key analysis belongs to 22 speakers, 12 instruction givers and 10 instruction receivers. The coding of the key hertz value of the Themes of the 12 groups is presented in Appendix R. Key analysis of all the Themes, the unmarked and the marked of the map task dialogues shows, Table 6.7 below that mid key is the most frequent key choice next comes high and the low choices. Mid key

accounted for 1.173 (82.1%) whereas high and low accounted for 178 (12.4%) and 76 (5.3%) respectively of the key selection²³.

Table 6.7 Key choices of the dialogues of the 22 map task participants' (12 IGs and 10 IRs) in the 12 groups

Group no.	Participants	High key	Mid key	Low key
One	IG 1	15	69	11
	IR 1	/	/	/
Two	IG 2	10	72	0
	IR 2	14	36	0
Three	IG 3	4	65	6
	IR 3	21	45	3
Four	IG 4	5	82	0
	IR 4	6	45	0
Five	IG 5	8	67	4
	IR 5	5	45	3
Six	IG 6	15	60	2
	IR 6	6	76	7
Seven	IG 7	11	46	3
	IR 7	8	55	1
Eight	IG 8	1	36	0
	IR 8	/	/	/
Nine	IG 9	0	50	17
	IR 9	5	44	5
Ten	IG 10	0	53	3
	IR 10	0	41	0
Eleven	IG 11	20	52	1
	IR 11	2	44	5
Twelve	IG 12	10	44	1
	IR 12	12	47	4
Total		178	1.174	76
Percentage		12.4%	82.1%	5.3%

The analysis of the proportion of occurrence of the mid and high key on the 59 marked Theme in Table 6.8 below shows the proportion of the occurrence of the mid and high key on the 59 marked topical Themes. 38 (64.4%) marked Themes were found uttered on mid key whereas 21 (35.5%) on high key. The labels high marked Theme and mid marked Theme in Table 6.8 refer to the high and mid choices on the marked Theme respectively. Predictably, no marked Theme was found on low key because speakers

²³ Coding key of the whole data set of the map task dialogue needs too much time. Therefore, key of only parts of the dialogue of each group is coded.

commence their utterance with high or mid key and then the pitch height declines gradually across the utterance and ends with the lowest pitch height towards the end of the utterance. Key analysis of the 59 marked Themes is presented in Appendix S.

Table 6.8 the overall use of the high and mid key on the marked topical Themes of the 59 Marked Themes of the map task dialogue

Key choice on marked Theme	Occurrence	Percentage
High marked topical Theme	21	35.5%
Mid marked topical Theme	38	64.4%
Low marked topical Theme	0	0%
Overall	59	100%

Table 6.9 illustrates mid and high marked Theme used by the 12 instruction givers and the 10 instruction receivers across the 12 groups. 17 (80.9%) high marked topical Themes were uttered by the 12 instruction givers while 4 (19.0%) by the instruction receivers out of 21 high marked Themes. In the case of the mid marked topical Theme, 23 (60.5%) were found uttered by the 10 instruction receivers whereas 15 (39.4%) by the 12 instruction givers out of 38 mid marked Themes. It is worth here to refer back to the findings of the use of the marked Theme by the instruction givers and the instruction receivers presented in Chapter Five, Table 5.1, p. 95. The use of the marked Theme is nearly the same by the instruction givers with 32 and instruction receivers with 27 marked Themes. Table 6.10 below shows the use of the high marked Theme and the mid marked Theme by each participant across the groups. The analysis of the use of the mid and high marked Theme by speaker shows that the use of the high marked Theme and mid marked Theme is not only one or a few speakers do.

Table 6.9 the use of the high and mid marked Themes by the 12 IGs and 10 IRs

Marked Theme/ key choice	Use by the 12 IGs	Percentage of use by the 12 IGs	Use by the 10 IRs	Percentage of use by the 10 IRs	Overall use
High marked topical Theme	17	80.9%	4	19.0%	21
Mid marked topical Theme	15	39.4%	23	60.5%	38

Table 6.10 the use of the high and mid marked Themes by speaker's role across the 12 groups

Group NO.	Speaker's Role	Mid marked Theme	High marked Theme
1	IG1	0	3
	IR1	/	/
2	IG2	4	2
	IR2	2	0
3	IG3	0	2
	IR3	1	1
4	IG4	2	1
	IR4	2	0
5	IG5	1	1
	IR5	6	1
6	IG6	2	0
	IR6	1	0
7	IG7	1	3
	IR7	2	1
8	IG8	1	0
	IR8	/	/
9	IG9	2	0
	IR9	1	1
10	IG10	1	0
	IR10	3	0
11	IG11	1	3
	IR11	2	0
12	IG12	0	2
	IR12	3	0

The above analysis of the key of the map task dialogue including the 59 marked Themes shows that predictably mid key is the most frequent key choice next comes high key then low key. Similar findings are reported by Cheng *et al.* (2008) in their corpus driven study of the Hong Kong Corpus of Spoken English (HKSCE) and by O'Grady (2017a) who examines the key choices of the Themes (unmarked and marked) in the political UK parties' debate. Cheng *et al.* (2008) show that mid key accounted for 94, 320 (90.37%) whereas high and low choices accounted for only 9, 724 (9.33%) and 298 (0.28%) respectively out of 104, 360 of the overall key choices in the corpus.

As for the key of the 59 marked Themes, mid key is used more than high key as the analysis illustrates. 38 (35.5%) marked topical Themes were found on mid key whereas 21(35.5%) on high key. So, with relation to the use of mid key, high key is used less

because it is a marked key choice. In other words, it is like marked Theme as it does not occur frequently but its use is still relatively high attracted to the map task. More importantly, (35.5%) of the high key use is found with the marked Themes as Table 6.8 above shows taken into account the low proportion of the occurrence both of marked Theme (2.8%) out of the 2103 the overall thematic choice, Table 5.2, p. 96 and high key selection (12.4%) of the overall key selection, Table 6.7 above. This suggests that marked Theme tends to occur with the high key. Similar tendency of the association between high key and marked Theme is also reported by O’Grady (2017a) referred to in 3.10, p. 67. As for the use of the high and mid marked Themes with relation to the speaker’s role whether an instruction giver or an instruction receiver, high marked Themes are used more by instruction givers and mid marked Themes are used more by instruction receivers, Table 6.9 above.

The key choice of the 59 marked Themes is analysed depending on (i) the thematic components of the marked Theme (containing marked topical Theme only or textual Theme plus the marked topical Theme) and (ii) on marked Themes’ tonality (marked topical Theme and textual Theme are uttered in the same tone group as a signal Theme or in separate tone groups). So, the 59 marked Themes were made into 5 categories illustrated below and they are identified into these categories in Appendix T, Tables 1-5. The grained analysis of the key of the marked Theme into the five categories with relation to the thematic components and tonality is carried out to gain better insight into the key choices realised on the marked Theme. So, the categories are:

(A) Marked Themes with high marked topical Theme and mid textual Theme(s) that are uttered in independent tone groups:

Example 6.21

||SO 122 **M**|| horiZONtally 141 **H**|| it’s about HALF 127 **M** way up the caravan park||

(B) Marked Themes with high marked topical Theme only or with textual Theme(s) uttered in the same tone group with the high marked topical Theme as a single Theme:

Example 6.22

|| but befORE 216 **H** the hills and the farm|| there IS 156 **M** a forest||

C) Marked Themes with mid marked topical Theme and high textual Theme(s) uttered in independent tone groups:

Example 6.23

||OH 294 **H** yeah yeah|| so then LIKE 231 **M** directly beneath that || i've got a STONE 195 **M** giant||

D) Marked Themes with mid marked topical Theme and mid textual Theme(s) in separate tone groups:

Example 6.24

||OK 140 **M**|| YEAH 141.5 **M** || so on MINE 145 **M**|| it's CALLED 135 **M** an old mill||

E) Marked Themes with mid marked topical Theme only or mid marked topical Theme with textual Theme(s) uttered in the same tone group:

Example 6.25

|| so on the LEFT 123 **M** column|| it GOES 113 **M**|| START 118 **M**|| OLD 120 **M** mine|| SWAMP 135 **M**|| COTage 115 **M**|| STONE 122 giant **M**|| HILLs 122 **M** farm||

Table 6.11 shows that Category A contains 7 marked Theme instances. The 7 instances contain marked topical Themes plus textual Theme(s) and they are uttered on high key and mid key respectively. The 7 instances are listed in Table 1, Appendix T. Category B contains 14 instances and they are listed in Table 2, Appendix T. They are uttered on high key; 4 contain only marked topical Theme and the rest contain textual Theme plus marked topical Theme uttered in the same tone group as a single Theme. Category C contains only 1 instance and it is illustrated in Table 3, Appendix T. It contains textual Theme plus marked topical Theme but they do not occur in the same tone group. The textual Theme is uttered on high key while the marked topical Theme on mid key. Category D contains 6 marked Themes and they are listed in Table 4, Appendix T. The 6 instances contain textual Theme plus marked topical Theme that are uttered in separate tone groups and on mid key. Category E contains 31 instances and they are listed in Table 5, Appendix T. 11 instances contain marked topical Theme only and the other 20 contain textual Theme plus marked topical Theme uttered in the same tone group as a single Theme. So, with relation to key choices of the textual Themes, mid key is used frequently on the textual Themes.

Table 6.11 the distribution of the 59 marked Themes according to the 5 categories of the marked Themes and their use by the 12 IGs and 10 IRs across the 12 map task groups

Group No.	Speaker's Role	Category A	Category B	Category C	Category D	Category E	Overall speakers' use
One	IG1	2	1	0	0	0	3
	IR1	/	/	/	/	/	/
Two	IG2	2	0	0	1	3	6
	IR2	0	0	1	0	1	2
Three	IG3	0	2	0	0	0	2
	IR3	0	1	0	1	0	2
Four	IG4	0	1	0	0	2	3
	IR4	0	0	0	0	2	2
Five	IG5	0	1	0	1	0	2
	IR5	0	1	0	0	6	7
Six	IG6	0	0	0	0	2	2
	IR6	0	0	0	0	1	1
Seven	IG7	1	2	0	1	0	4
	IR7	0	1	0	0	2	3
Eight	IG8	0	0	0	0	1	1
	IR8	/	/	/	/	/	/
Nine	IG9	0	0	0	0	2	2
	IR9	0	1	0	0	1	2
Ten	IG10	0	0	0	1	0	1
	IR10	0	0	0	0	3	3
Eleven	IG11	1	2	0	0	1	4
	IR11	0	0	0	0	2	2
Twelve	IG12	1	1	0	0	0	2
	IR12	0	0	0	1	2	3
overall for each category		7	14	1	6	31	59

Three important findings stand out from the above analysis of the key of the map task dialogue: (1) with relation to the use of mid key, high key is used less because it is a marked key choice but its use is still relatively high attracted to the map task; (2) the association of the high key with the marked Themes mainly the marked topical Themes; (3) the use of the high marked topical Themes by the instruction givers more than the instruction receivers and the use of the mid marked topical Themes by the instruction receivers more than the instruction givers. So, the context of occurrence and the speaker's role of each of the 59 marked Themes have to be examined to reveal: (1) the reasons for the key selection of the 59 marked Themes used in the map task dialogue. In other words,

why some are uttered on high key while others on mid key and whether high key adds meaning to the marked Themes or its role is redundant (by examining if they are uttered on mid key and not high key); (2) why high key is associated more with the marked Themes that are uttered by the instruction givers whereas mid key is associated more with the marked Themes that are uttered by the instruction receivers. The answer to these two questions is provided in the next section when examining the meanings of the high marked Theme and the mid marked Theme in the map task dialogues. The description of the meanings of the high and mid marked Themes is presented with reference to the five Categories A, B, C, D and E of the marked Theme listed above; examples from the map task dialogue on the occurrence of the high and mid marked Themes are presented to illustrate these meanings and the contexts where high and mid marked Themes are used. To easily locate the extracts of the examples presented in this section in the master data script attached in Appendix K, the numbering of the turns in the extracts and of the marked Theme instances are kept the same. In the examples, IG and IR stand for the instruction giver and instruction receiver, followed by the group number e.g. IG1, IR1; IG2, IR2; etc. For ease of reference, these short forms of the speakers' role rather than the full forms, instruction giver and instruction receiver, are used when explaining the examples.

6.4.1 The meanings of the high marked Themes and mid marked Themes

Examining the context of occurrence of each of the 59 marked Themes reveals that the 21 high marked Theme and the 38 mid marked Themes are used in different contexts and they denote different meanings. These meanings are described below.

i. High marked Theme meanings

The 21 high marked Themes in Categories A and B are found projecting previously introduced information (i.e. recoverable) that is location on the map or the map as a whole to: a) present new details 1) about the route layout or 2) to describe the location of a new landmark that is not previously mentioned in the discourse; b) to locate a landmark after knowing that it does not exist on the other map; c) to check the availability of a (specific) landmark; d) to signal a new start or shift in route description; e) signal contrast by showing that the upcoming information: (1) is in contrast with what is predicated and/or (2) that the upcoming information is specifically about the speaker's map. Table 6.12 below shows that out of the overall 21 high marked Themes, 7 (33.3%) are used to present

new details, 6 (28.5%) are used to describe the location of a landmark after knowing that it does not exist on the other map, 3 (14.2 %) are used to check the availability of a (specific) landmark, 2 (9.5 %) to signal a shift in route description and make a new start and 3 (14.2 %) to signal contrast by showing that the upcoming information is in contrast with what is predicated and/or that the upcoming information is specifically about the speaker's map. So, projecting location is used more for presenting new details and for describing the location of a landmark after knowing that it does not exist on the other map than to check availability of landmarks, signal contrast and to signal a shift in route description. The analysis of the projection meanings of the 21 high marked Themes is presented in Appendix U.

Table 6.12 the meanings of the 21 high marked Themes and their use by the IGs and IRs

Function Category	Function Gloss	IGs' use	IRs' use	Overall use of each function	Percentage of use of each function
a ²⁴	Projecting location to present new details 1) about the route layout or 2) to describe the location of a new landmark. New information not previously introduced	5	2	7	33.3%
b	Projecting location to describe the location of a landmark after knowing that it does not exist on the other map. Introduced but not agreed on their location	5	1	6	28.5%
c	Projecting location to check the availability of a (specific) landmark	3	0	3	14.2 %
d	Projecting location to signal a shift in description and make a new start. High marked Theme grounds location to signal a shift or change in the location of description. It functions like a fresh start where the description of the route needs to change the direction of description to easily guide the hearer (whether an IG or an IR) to the next location on the map.	2	0	2	9.5 %
e	Signal contrast by showing that the upcoming information is 1) is in contrast with what is predicated and/or 2) that the upcoming information is specifically about the speaker's map	2	1	3	14.2 %
Overall use of IGs and IRs		17	4	21	100%

²⁴ The function categories of the high marked Themes are written with small case letters (a-e) to avoid confusion with the five marked Theme Categories (A-E) listed in Table 6.11 above.

In Category A, high marked topical Theme with mid textual Theme(s) that occur in independent tone groups, the speakers have chosen to reset the pitch on high key on the marked topical Theme as the utterance starts on mid key on the Textual Theme as the title of the Category suggests. Example 6.26 below from the interaction of group twelve illustrates the projection of location meaning of the high marked topical Theme to locate a new landmark. In the example, the whole marked Theme is underlined; marked topical Theme is emboldened; the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided; the onset syllable in each tone group is capitalised. The description of the route in lines 1574- 1585 is not included in the example as the gaps in the extract shows due to the length of the extract, yet the full data script of the dialogue of group twelve is presented in Appendix K:

Example 6.26

- 1567) IG12: ||**M** 163 OK ||**M** 182 TIM|| **at the H 227 VERY left hand side [of your... of your map]**|| **M** 173 IS there something that says|| **M** 141 OLD mine||
- 1568) IR12: [yeah]
- 1569) IR12: yeah
- 1570) IG12: is like a green thing
- 1571) IR12: [yeah]
- 1572) IG12: [and that's] just to the left of miner really but to the north east of swamp.
- 1573) IR12: yeah yeah.
- .
- .
- 1586) IG12: so that's where it says start on my map, [so there's an X there]
- 1587) IR12: [yeah]

In Example 6.26, the hertz value of the pitch on the textual Theme 'ok' is lower than that on the marked topical Theme '*at the very left hand side of your map*' that is realised on the onset syllable 'very' as the notation shows. The key choice on the textual Theme is mid whereas the key choice on the marked topical Theme is high. IG12 has chosen to reset the pitch to high on '*at the very top left hand side*' because it conveys information that is more important than that of the textual Theme 'ok' and the interpersonal vocative Theme, *Tim* and the high key is realised on 'very' because it describes the exact location where the start mark 'X' is located within the '*left hand side*' area of the map sheet.

So, it guides IR12 to the exact location of the start point. There is no pause or low pitch or low termination before the pitch reset on 'very'. However, the pitch declines across the two tone groups of the Rheme part of the clause as the notation of the hertz value

illustrates and this shows the importance of high pitch resetting on the marked topical Theme ‘*at the very top left hand side*’ due to its importance in effectively communicating to the IR12 where the start mark is as noted above. ‘*At the very left hand side of the map*’ is already foregrounded because it is the point of departure of the clause message (i.e. it is thematised). Yet, uttering it on high key is not redundant for two reasons: high key is realised on certain information within the marked topical Theme as described above and more importantly the information within the marked topical Theme is recoverable but IG12 has chosen to utter it on high key.

High marked Themes in Category B have the same thematic structure of Category A above, marked topical Theme only or marked topical Theme plus textual Theme(s). However, unlike Category A, the textual Theme(s) and the marked topical Theme are uttered as a single Theme as they occur in the same tone group. As noted above, Category B contains 14 instances and they are listed in Table 2, Appendix T. They are uttered on high key; 4 contain only marked topical Theme and the rest contain textual Theme plus marked topical Theme uttered in the same tone group as a single Theme. The speakers commence with a high key that is realised on the marked topical Theme not on the textual Theme. This instance occurs in the interaction of group four where the instruction giver has chosen to reset the pitch height to high on the marked topical Theme to locate a landmark after knowing that it does not exist on the other map by projecting the location of a previously introduced landmark. The instance is presented in Example 6.27 below. In the example, the whole marked Theme is underlined; marked topical Theme is emboldened; the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided; the onset syllable in each tone group is capitalised; the termination of the prior tone group that precedes the marked Theme is provided on the tonic syllable ‘*giant*’. The description of the route in lines 478- 489 is not included in the example as the gaps in the extract show due to the length of the extract, yet the full data script of the dialogue of group four is presented in Appendix K:

Example 6.27

- 474) IG4:....I have a swamp, I don't have cottage and I don't have... what was the other one?
475) IR4: stone **giant**
476) IG4: a stone **giant** I don't have [that]
477) IR4: [hills, farm]

- 490) IG4: ok I see ok I actually do have the hills and a farm I wasn't looking that far down, [ok great]
- 491) IR4: [that's good]
- 492) IG4: do you have a forest near the stone giant?
- 493) IR4: no
- 494) IG4: ok so between... ok let's see... I'm trying to think what's the best way to do this, um so between the swamp ok... || so on MY 221 M map|| there is like the OLD 179 M mine ||and then the SWAMP 163 M||
- 495) IR4: [ok]
- 496) IG4: [||and then] i DON'T 186 M have the cottage|| but i WROTE 163 M that in there ||and i don't HAVE 192 M the stone \GIant 154 M || **but befORE 216 H the hills and the farm**|| there IS 156 M a forest|| but it's a BIT 193 M more to the right|| like diRECTly 187 M under the old mine||... BUT [to 177 M the right of the swamp||]
- 497) IR4: [ok]

In Example 6.27 above, IG4 and IR4 try to find out the shared and unshared landmarks on their maps. 'Hills' and 'farm' are shared but 'forest' is only found on the IG4's map (lines 492, 493). On the IG4's map, 'forest' is near where the 'stone giant' is on the IR4's map (line 496) that is before the 'hills' and the 'farm' on the IG4's map. So, IG4 has chosen to project the location 'before the hills and the farm' to describe to IR4 the location of the 'forest' by resetting the pitch height to high key on the marked topical Theme 'before the hills and the farm' being realised on the syllable 'ore' of the preposition 'before' as the hertz value shows. So, 'ore' is made prominent, the onset syllable of the marked topical Theme's tone group as IG4 has chosen to project it due to its importance to locate the 'forest'. The textual Theme 'but' prior to the marked topical Theme is not made prominent as IG4 has chosen to project the preposition due to its importance in telling IR4 where 'forest' is on the map.

The resetting of the pitch height on the marked Theme is clear as the termination of the prior tone group, the pitch height on the tonic syllable 'GI' in 'giant, is low compared to the pitch height on the onset 'ore' as the hertz value shows. Although the difference in the hertz value between the onset of the prior tone group realised on 'have' and that of the tone group of the marked topical Theme realised on the syllable 'ore' is not that great especially that the hertz value on 'ore' is close to the mid key value of the IG4's voice, who is a female speaker, as the other hertz values of the tone groups '||and then i DON'T 186 M have the cottage|| but i WROTE 163 M that in there||' show, 'ore' sounds much

higher and much more prominent compared to how the onset ‘*have*’ and ‘*gi*’ in ‘*giant*’ of the prior tone group sound. It was noted earlier that the analysis of the hertz value of the onset syllable into the key choices, high, mid or low in this study is made depending both on Praat (Boersma and Weenink, 2014) and ear. In other words, the termination on the ‘*gi*’ syllable could be considered low rather than mid accordingly. The pitch height of the tone group of the marked Theme is higher than that of the Rheme part ‘*there is a forest*’ as the hertz value shows and this illustrates the declination in pitch height.

‘*Before the hills and the farm*’ is already foregrounded; it is made the point of departure of the clause message to more easily describe to IR4 the location of the ‘*forest*’. But, IG4 has also chosen to step up with the pitch on the marked topical Theme exactly on ‘*before*’ to locate the ‘*forest*’. Moreover, ‘*hills*’ and ‘*farm*’ are recoverable and IG4 and IR4 are aware that they are shared landmarks, but the area before the two landmarks on the IG4’s map is important as it contains the missing landmark (i.e. *forest*) from the IR4’s map. Therefore, IG4 has chosen to utter the marked topical Theme on high key. So, as with Example 6.26, high key role is not redundant. IG4’s intention to project ‘*before*’ with relation to the rest of the information in the marked Theme tone group and the information in the other tone groups is clear especially that the resetting of the pitch is not made on the textual Theme ‘*but*’ and it is not given any prominence either. So, the role of the high key is not redundant as mentioned.

So, Examples 6.26 and 6.27 above are from Categories A and B. The pitch height as the examples illustrate is reset to the high key on the marked topical Theme to project location on the map to describe the location of a new landmark that is not previously mentioned in the discourse that is Example 6.26 and to describe the location of a landmark after knowing that it does not exist on the other map after being mentioned in the discourse that is Example 6.27.

In the above two examples, the high marked Themes are uttered by the instruction givers. The instruction receivers use only four high marked topical Themes out of the total 21, Table 6.9 above. As Table 6.12 shows, the instruction receivers use the 4 high marked topical Themes to project previously mentioned information; the 4 instances are distributed equally among Functions: (a1, 2) to present new details about the reproduced route and to describe the location of a new landmark, Function (b) to describe the location of a landmark after knowing that it does not exist on the instruction giver’s map, and

Function (d) projecting the whole instruction giver's map to emphasize that the upcoming information is in contrast with what is predicated and that the upcoming information is specifically about the speaker's map. An instruction giver has uttered a fifth marked Theme on high key but it is not included in Categories A and B as the high key is realised on the textual Theme not on the marked topical Theme. This instance is included in Category C and is discussed below. The reason why the instruction givers use high marked Theme more than the instruction receivers is related to the fact that they have the route on their map. So, using high marked Theme to project details on the map is limited in the case of the instruction receivers as it depends on the amount of information they know about the route layout and the discrepancies on the map. So, in the course of interaction when they come to realise the discrepancies they use marked Theme to project these details by uttering it on high key as Example 6.28 below shows.

Example 6.28 taken from the dialogue of group three shows the projection function used by the instruction receivers. The example illustrates how high marked Theme '*ok so for me*' project details to signal contrast by showing that the upcoming details are specifically about the instruction receiver's map. The projected information is recoverable as it refers to the instruction receiver's map. The example is from Category B in which high key is realised on the marked topical Theme, '*for me*' not on the textual Themes '*ok*' or '*so*' as explained below. In the example, the whole marked Theme is underlined, marked topical Theme is emboldened, the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided, the onset syllable in each tone group is capitalised. The description of the route in lines 368-403 is not included as the gaps in the extract show due to the length of the extract. Yet the full data script of the dialogue of group three is presented in Appendix K:

Example 6.28

- 364) IG3: so I think the cottage must be in between the swamp and the rocks on mine
and then there is a forest underneath the cottage, I imagine.
365) IR3: I've got a stone giant
366) IG3 and IR3: (laugh)
367) IR3: right let's... let's go back to the mountains... where are...are we going from
the mountains?

·
·

- 404) IG3: kind of just on the right side of the swamp is where it goes down on my map.
 405) IR3: ok, that's cool. So I've gone down
 406) IG3: yeah
 407) IR3: so you say we are kind of parallel to the tree
 408) IG3: yeah, in between the tree and the yellow house, kind of that way.
 409) IR3: ok, so at that point I would be kind [of middle of the page], I think
 410) IG3: [ok]
 411) IG3: ok so... so the idea is to be going down on the left side at the moment, so
 412) IR3: ||ok so **for ME 270 H**|| that's KIND **229M** of [by the stone giant]|| i think 150
M||
 413) IG3: [ok]
 414) IG3: and then it goes across right on this map to the middle of well to in between
 the yellow house and the tree right to the other side of the map.
 415) IR3: ok so that's kind of by my gold mine
 416) IG3: right so that's kind of a straight line there.
 417) IR3: ok

In Example 6.28, IG3 assumes that IR3 has a '*forest*' underneath '*cottage*' on her map (line 364). The interaction is hindered as IR3 states that she has '*stone giant*' (line 365). To resolve the discrepancy about the route line at this stage of interaction, IR3 suggests going back to '*mountains*' as it is the last landmark they have agreed on its location. So, the interaction is resumed as IG3 starts describing the route from '*mountains*'. IG3 and IR3 have reached '*yellow house*' and '*tree*' (lines 404, 405) that are shared between their maps. IR3 is able to follow IG3's instructions (line 405) and IG3 confirms that the location of IR3's route line is right (line 406). Then, IG3 gives further details about the direction of the route line (line 408). At this point, the location of the route line according to the IG3's route line is at the middle of the page for IR3 as she states (line 409). IG3's next instruction (line 411) makes the route line by the '*stone giant*' on IR3's map. Because of the absence of the '*stone giant*' from the IG3's map and IR3's confusion about the route layout in terms of the location of the '*stone giant*' at an earlier stage of their interaction (line 365), IR3 has chosen to describe the reproduced route by taking her map (i.e. '*for me*') as a point of departure and uttering it on high key realised on the onset syllable '*me*' as key coding shows to signal that the upcoming details are specifically about her map, the route line with relation to the '*stone giant*'. So, the interaction between high key and marked Theme here projects that the upcoming details are related to IR3 and they contrast with the IG's map details. IG3 confirms that the details are correct as the rest of the interaction shows. The significance of uttering the marked topical Theme on high key is related to the fact that it is recoverable information, yet IR3 has chosen to project it to signal the contrast meaning.

Category C, the third category of marked Themes, includes marked Theme with mid marked topical Theme and high textual Theme uttered in independent tone groups. One instance of textual Theme is found occurring on high key that is the continuative textual Theme ‘*well*’. The instance occurs in the dialogue of group two and it is presented in Example 6.29 to show the significance of uttering ‘*well*’ on high key and to illustrate the context. As with the other examples illustrated above, the whole marked Theme is underlined, marked topical Theme is emboldened, the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided, the onset syllable in each tone group is capitalised. The description of the route in lines 171-280 is not included as the gaps in the extract show due to the length of the extract. Yet the full data script of the dialogue of group two is presented in Appendix K:

Example 6.29

- 167) IG2: ...do you have the old mill which is er... just below the caravan park and to the right?
 168) IR2: er... yeah mill wheel [is that right]
 169) IG2: [ok] yeah so on mine it’s called an old mill
 170) IR2: ok
 .
 .
 273) IG2: and... and that’s it so shall we talk that through once more before [finalizing it]
 274) IR2: [yeah]
 .
 .
 289) IG2: and then it goes up past the abandoned cottage
 290) IR2: ok
 291) IG2: were there any landmarks there that I might er... that weren’t on my map, sorry I never asked
 292) IR2: ||ER 252 **H**|| WELL266 **H**|| just beLOW 163 **M** the mill wheel|| the OLD 240 **H** mill mine is called the mill wheel|| there was a PICKet 230 **M** fence|| to the UM 192 **M**|| SOUTH 228 **M** WEST of the OLD mill||
 293) IG2: to the south
 294) IR2: west but we didn’t go anywhere near that on our route
 295) IG2: to the south west
 296) IR2: yeah

The above extract shows two parts of IG2 and IR2’s interaction, part one is of the start of the interaction (lines 167- 170) and part two shows the stage of interaction after IG2 and IR2 have successfully accomplished the map task (lines 273-288). IG2 asks IR2 to check if her map has landmarks that are not found on his map (line 283) in the area that is past

the *'abandoned cottage'* (lines 281, 283) after they have finished drawing the route. IR2 uses the continuative textual Theme *'well'* to signal a new turn and she utters it in separate tone group and on high key as the notation of the key hertz value shows (line 284). IR2 has chosen to commence with high pitch on *'well'* to signal that the following will be somehow contrastive that is the location of the *'picket fence'* will be unexpected.

Then the pitch steps down on the marked topical Theme *'just below the mill wheel'*; it is said on mid key that is realised on the second syllable of *'beLOW'* as the notation shows (line 284). The step down in pitch on *'just below the mill wheel'* is remarkably high as the hertz value shows. IR2 has chosen to step down in pitch and uttered marked topical Theme on mid key to signal the addition of *'picket fence'* which is new information from the location of *'mill wheel'* or *'old mill'*. *'Below the old mill/mill wheel'* is an established location, a location that is already shared/ known by both IG2 and IR2 (line 167-170). As described already, IG2 checks whether IR2 has any landmarks after they have successfully finished the task so the location of *'mill wheel'* is already known to them both so there is no reason to utter it on high pitch and this explains the remarkable step down in pitch height to be uttered on mid key and not high key. So, marked topical Theme here signals the addition of information and this explains why it is uttered on mid key. Mid marked Theme's function 'additive for locating new landmarks by extension from an established location' is described in the next section with relation to Categories C, D and E of the marked Themes. Category C is referred to in the next section as it contains mid marked topical Theme as Example 6.29 above shows.

So, to conclude the analysis of the high marked Theme's meanings, the pitch height is reset to the high key on the marked topical Theme to project details on the map to realise the following functions: present new details about the route layout or describe the location of a new landmark that is not previously mentioned in the discourse, describe the location of a landmark after knowing that it does not exist on the other map after being mentioned in the discourse; to check the availability of a (specific) landmark; to signal a new start or shift in description; signal contrast by showing that the upcoming information is unpredicted or/ and to that the upcoming information is specifically about the speaker's map.

High key is realised on certain information within the marked Theme tone group to project it due to its importance to realise these high marked Theme meanings. High key

is realised on certain information within the marked Theme tone group as it has the potential among the rest of the information to realise the high marked Theme meanings. For instance, in Examples 6.26 and 6.27 above, high key is realised on ‘*very*’ and ‘*before*’ as they are important to locate the new detail, the start mark ‘X’ and to locate a landmark ‘*forest*’ after knowing that it does not exist on the other map respectively as described already. The speakers chose to realise the high key on ‘*very*’ and ‘*before*’ to make them stand out from the other information within the marked Theme tone groups, ‘*left hand side of the map*’ and ‘*the hills and the farm*’ respectively in these two examples. The high key helps to draw the hearers’ attention and make the exact spot where the start mark ‘X’ is located within the ‘*left hand side*’ area and the ‘*forest*’ in the neighbourhood of the ‘*hills and the farm*’ clearer to hearers.

Whereas in Examples 6.28 and 6.29, high key is realised on ‘*me*’ and ‘*well*’ within the marked Theme ‘*ok so for me*’ and ‘*well just below the mill wheel*’ to signal contrast with relation to indicating that the upcoming details are specifically about the speaker’s map and to indicating that the upcoming details will be somehow contrastive in the sense that the location of the landmark is unexpected to the hearers respectively with relation to these two examples. So, high key helped also attract hearers’ attention to the exact and intended location or detail on the map with relation the above high marked Theme’s meanings.

ii. Mid marked Theme meanings

38 (64.4%) marked Themes out of the overall 59 marked Themes used in the map task dialogues are uttered on mid key as shown in Table 6.8 above. The 38 mid marked Themes are made into Categories C, D and E with relation to their thematic structure and tonality as the description and Table 6.11 above show. As with the 21 high marked Themes, the context of occurrence of the 38 mid marked Themes is examined to find out the meaning denoted by the interaction of mid key and marked Theme. The analysis shows, Table 6.13 below, that the 38 mid marked topical Themes in Categories C, D and E are found denoting additive meaning. Additive meaning refers to speakers adding details (new landmarks, new details about the route layout) when interacting about the route from established locations, locations on the map that are already agreed on by both the instruction givers and the instruction receivers as Example 6.29 above showed. So, previously mentioned locations are used to add the new details. So, unlike the projection

function of the high marked Theme, the additive meaning does not project information but rather states what further details are found at that location in the form of telling or narrating. Additive meaning has two sub- meanings: additive for extension and additive for clarification and conformation of information.

a) Additive for locating landmarks by extension from a previously mentioned location: this function takes the form of extension which refers to adding new details about the route layout or the new landmarks that are found at the locations that are already mentioned in the discourse as in Example 6.30 below.

b) Additive for the confirmation and clarification: it refers to the interlocutors adding additional details to clarify and confirm the prior details provided when interacting about the route. The additional details also confirm that the instructions were clear, the hearer was able to follow them and s/he is at the right location. So, the speaker gives more details about that location to enrich the description. The additional description includes details on the existence of a landmark, its name and location and on the route layout as in Example 6.31 below.

Table 6.13 below illustrates the additive sub- meanings denoted by the 38 mid marked topical Themes and their use by the instruction givers and the instruction receivers. It is important to remember that instruction givers use 15 mid marked Themes whereas instruction receivers use 23 of the overall 38 mid marked Themes, Table 6.9 above. 22 (57. 8%) out of the 38 mid marked Themes denote the additive for extension function and are equally used by the instruction givers and the instruction receivers, 11 for each. The other 16 (42.1%) mid marked Themes are found denoting the additive for clarification and confirmation function. The additive for clarification and confirmation function is used more by the instruction receivers than the instruction givers with 12 uttered by the former and 4 only by the latter. The analysis of the additive meanings of the 38 mid marked Themes is in Appendix V.

Table 6.13 additive meanings of 38 mid marked topical Themes and their use by the IGs and IRs

Function Category	Function Gloss	IGs' use	IRs' use	Overall use of each function	Percentage of use of each function
A	Additive for extension	11	11	22	57.8 %
B	Additive for clarification and confirmation of information	4	12	16	42.1 %
Overall use of IGs and IRs		15	23	38	100 %

Examples 6.30 and 6.31 below from Categories D and E illustrate mid marked Theme's functions, the additive for extension and additive for clarification and confirmation of information. The explanation will address the difference in the frequency of use of the mid marked Themes by the speaker's role and how the textual Themes are treated. In Category D, both the textual and the marked topical Themes are uttered on mid key and there is no resetting of the pitch on the marked topical Themes as the marked Themes denote the additive function to add new details by extension from a known location. Example 6.30 from the interaction of group ten illustrates the additive for extension function of the mid marked Theme from Category D. As with the other examples illustrated above, the whole marked Theme is underlined, the marked topical Theme is emboldened, the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided, the onset syllable in each tone group is capitalised. The full data script of the dialogue of group ten is presented in Appendix K.

Example 6.30

- 1438) IG10: and it curves round um to the right um and then I've got
[a mushroom house] on the right hand channel
- 1439) IR10: [yeah]
- 1440) IR10: I've got that too
- 1441) IG10: it goes to the right of the mushroom house continuing down
- 1442) IR10: yeah
- 1443) IG10: ||and THEN100 M|| UM 95 M|| **just beLOW 109 M that**|| UM 90 M|| it starts to CURVE 108 M left||
- 1444) IR10: mmhmm
- 1445) IG10: now I've got a duck pond in the middle channel

- 1446) IR10: I've not got anything else in the middle channel
1447) IG10: um so the picture imagine is just er like two centimetres...

'*Mushroom house*' is previously mentioned and IG10 and IR10 have agreed on its location (lines 1438, 1439). So, IG10 takes the location of the '*mushroom house*' (i.e. *just below that*') as a point of departure of his message and utters it on mid key to add new details about the route layout (line 1443) by extension from the location of the '*mushroom house*'. Mid key is realised on '*low*' in '*below*' as the notation of the hertz value shows. IG10 utters '*and then*' in separate tone group to gain planning time and assemble thoughts as described in 6.3.1, p. 135 and on mid key as the notation of the hertz value shows. There is no resetting of the pitch height to the high key on the textual Theme nor on the marked topical Theme. '*Just below that*' is not uttered on high key because there is no additional meaning to communicate, signalling contrast or unpredictability, other than telling IR10 the way the route is going, curving left. Therefore, the context does not demand projecting the location by making it prominent through high key. In other words, high key in this context would not be of any significance and its role would be redundant.

In Category E, marked Themes with mid topical Theme only or mid topical Theme with textual Theme(s) uttered in the same tone group, marked topical Theme is uttered on mid key to signal the clarification and confirmation meaning that contributes to enrich the description as Example 6.31 from the interaction of group twelve illustrates. In the example, the whole marked Theme is underlined, marked topical Theme is emboldened, the hertz value of the pitch height of the tone groups of the marked Theme and Rheme and the key choice are provided, the onset syllable in each tone group is capitalised. The full data script of the dialogue of group twelve is presented in Appendix K:

Example 6.31

- 1635) IR12: ... is gonna go down at some point now, isn't it?
1636) IG12: yeah yeah it... it goes dramatically down with um
:
:
1658) IR12: so, I'm guessing, uh well did you have castle?
1659) IG12: yes
1660) IR12: yeah so that's... that's obviously slightly to the right and quite <unclear words> three and half cm
1661) IG12: yes, I think your castle and...

- 1662) IR12: that's... that's the same place then castle and tree
1663) IG12: your castle and my tree are in the exact same place
1664) IR12: ||so at the MOMent 136 M|| the ROUTE 121 M i've got so far is just above the castle|| coz you said DROPPed 93 M dram dramatically down from mountains|| so i am in the area 100 M just above castle now||
1665) IG12: ok
1666) IR12: directly above it
1667) IG12: ok um do you have...

In Example 6.31, IR12 tries to guess the current layout of the route (line 1635) depending on IG12's description. IG12 confirms that IR12 was right (line 1636) about the way the route is going (i.e. dropping down). IR12 wants to clarify to IG12 how the route layout looks on his map. So, he asks IG12 whether he has a 'castle' (line 1658) because 'castle' is located below the 'mountains' as the images of the map in Appendix C shows where the route is dropping down from 'mountains' according to IG12's description. So, for IR12 'castle' is of importance; it will aid him to clearly describe to IG12 the current location of the route on the former's map. IG12 confirms that 'castle' is available on his map and informs IR12 of its location (lines 1659, 1663). IR12's guessing of the way the route layout is clearer now after IG12's confirmation of 'castle's' location (i.e. the route is above 'castle'). So to further clarify and confirm to IG12 the current state of the route on his (IR12's) map at this moment of interaction, IR12 has chosen to make the current moment of interaction the point of departure of his clause message (line 1664); he introduces it using marked Theme and utters it on mid key as notation of the hertz value shows (line 1664). Mid key signals that the upcoming details are additional information about the route and are in line with the previous description to clarify the state of the route and confirm that the instructions given by IG12 are clear and IR12 is at the right location. In other words, to mark that the task is going well and the details are not counter to expectation especially that both IG12 and IR12 have the 'castle' below the 'mountains'. IR12 depends on the information from the interaction between him and IG12 so his description is kind of deduction. In sum, the Examples 6.30 and 6.31 show that marked Theme is uttered on mid key in contexts where the marked Theme denotes an additive meaning, information expressed by the marked Theme either extend or confirm and clarify the information already given.

6.5 Summary of the marked Theme prosodic analysis

The current chapter described the prosodic analysis of the tonality, tonicity and key of the marked Theme. Tonality and tonicity analysis shed light on the reason why interlocutors of the map task uttered marked Themes in separate tone groups and accented previously introduced information. The chapter also presented tonality and structural analysis of the textual Themes, the textual elements that occurred before the marked topical Themes of the map task dialogues. Key system analysis of the marked Themes focused on the meaning generated of the interaction between key choice and marked Themes and whether marked Themes are associated with certain key choice.

Tonality analysis of the marked Themes showed that the interlocutors of the map task uttered marked Themes in separate tone groups and made recoverable information tonic to attract hearers' attention and guide them easily to the intended location on the map to continue with route description. The tonic accenting of previously mentioned information equally held for the instruction givers and the instruction receivers.

Tonality analysis of the textual Themes showed that textual Themes were uttered in separate tone groups and therefore made tonic to gain thinking and planning time. The conjunctive textual Themes contributed to structuring the map task interaction; they linked units of the map task discourse with enhancement and extension lexicogrammatical relations. The continuative textual Themes contributed to structuring the map task through denoting agreement and continuity.

Key analysis of the marked Themes showed that high key was less common than mid key with marked Themes. Yet, high key was associated with marked Themes because the limited proportion of the whole use of high key in the map task dialogue was found mostly associated with marked Theme instances. The analysis showed an interplay between marked Theme and key choice. Marked Themes were uttered on mid key in contexts where the marked Theme denoted an additive meaning, information expressed by the marked Themes either extends or confirms and clarifies the information already given. Marked Themes were uttered on high key in contexts that required projecting of previously mentioned (recoverable) locations due to their importance in realising high marked Theme meanings: presenting new details about the route layout; describe the location of new landmarks that are not previously mentioned in the discourse; locate landmarks after knowing that they do not exist on the other map; check the availability of

a (specific) landmark; signal a new start or shift in route description; signal contrast by showing that the upcoming information is unpredicted or/ and to that the upcoming information is specifically about the speaker's map. High key was realised on certain information within the marked Theme tone group as this information had the potential among the rest of the information to realise the mentioned high marked Theme meanings. High key helped also attract hearers' attention to the importance of the projected details in realising these meanings and guide them easily to find the exact and the intended location or details on the map.

CHAPTER SEVEN: DISCUSSION

7.1 Introduction

It is noted earlier that the broad premise underlying the current research is exploring how marked Theme and its prosodic realisations including tonic placement, tonality and key have aided the map task interlocutors in structuring their interaction. A structural and prosodic analysis was carried out on the 59 marked Themes that were found used in the map task dialogue to reveal their contribution to structuring it; the description of the analysis was presented in Chapters Five and Six above. The present chapter provides a discussion of the key findings of the analysis.

The findings in this chapter are presented with reference to the research questions explored in the current research. So, the first section of this chapter discusses marked Theme's contribution in structuring the map task interaction from a structural perspective: how marked Theme functions as a device for structuring the map task interaction and how this is related to the effect of word order in English language of making a Circumstantial Adjunct thematic (i.e. placed initially). The second section of this chapter discusses the contribution of marked Theme in structuring the map task interaction from the prosodic perspective: how tonic placement, tonality and key of the marked Theme aid the interlocutors of the map task in describing their route and in achieving their communicative purpose. The findings on the use of the marked Themes and the way they are realised prosodically are discussed with reference to Hallidayan SFL theory and the findings of the previous studies to reveal what is typical of the marked Themes used in the map task interaction. The chapter ends with a section that summarises the main points of the key research findings.

7.2 Research Q1

Q1. How does marked Theme function as a device for structuring the map task interaction? In other words, in terms of word order, what is the effect of making a Circumstantial Adjunct thematic, placed initially, in contributing to structuring the map task? The first research question aims to find out what role marked Theme's function of signalling that the clause message is approached from an unusual angle has in structuring the map task interaction and in the successful completion of the map task.

Theories referred to in 2.3 above show that thematic choices are either unmarked or marked. The choice between these two thematic choices depends on what the speakers decide to make the point of departure of their clause message. The speakers' decision upon their point of departure is constrained by the discursual demands (i.e. the co- text) to ensure that the thematic choice orients the clause message to the rest of the discourse (Halliday and Matthiessen, 2014) and contributes to the development of the text, which is a spoken text in the current context, into a coherent text. In other words, make a text a text (O'Grady, 2013b). So, thematic choices are not independent from the co- text of their occurrence. The case of making marked thematic choice signals that the speakers have chosen to make the point of departure of their clause message from an unusual angle as the context demands such a choice to ensure that the message is grounded in context and is oriented to the rest of the discourse. Thematic choices of the speakers are usually unmarked unless there is a very good reason (Halliday and Matthiessen 2014) or contextual pressure (Thompson, 2014) that demands making the point of departure of the clause message from an unusual angle and this means that the marked Theme choice is highly unusual.

In Chapter Five above, the analysis of the thematic choice in the map task interaction indicates that the interlocutors used marked Themes in their negotiation about the route. As it was predicated, marked Theme was highly unusual because only 59 marked Themes were used and they were much less frequent than the unmarked Themes (Halliday and Matthiessen, 2014). The 59 marked Themes were Circumstantial Adjuncts and almost all of them were realised by preposition phrases. No marked Theme was realised by a Complement. In case of map task context, the topic of interaction was related to locations of the landmarks, directions, route layout on the map and these were lexically expressed by Circumstantial Adjuncts as the findings of the analysis show. So the reason why marked Themes of the map task are Circumstantial Adjuncts is that they are typical of the interaction of the map task.

The next core analysis that was carried out on the marked Themes used in the map task dialogues aimed at exploring the reasons for using marked Themes. With this aim in mind, the contexts where marked Themes were used in the map task dialogue were examined. Examining the contexts showed that the 59 marked Themes performed the proposed 'Reintroducing Function': introducing information that was previously mentioned in the discourse as a marked Theme. The interlocutors of the map task took

the location of previously mentioned information as a point of departure of their clause message to foreground it due to its importance to more easily describe the locations of the landmark and guide each other around the map. As the examples from the map task dialogue presented in Chapter Five above showed, the location of the reintroduced information was foregrounded to achieve 6 proposed functions: ‘reintroducing information to introduce new landmarks’, ‘reintroducing information to introduce new details about the route layout’, ‘reintroducing information to check the availability of landmarks’, ‘reintroducing information to repair meaning’, ‘reintroducing information to check understanding’ and ‘reintroducing information to refocus on it’. So, with relation to Halliday and Matthiessen’s (2014) and Thompson’s views (2014) that there should be a good reason or a contextual pressure for the use of the marked Theme, in the context of the map task, marked Theme was used to aid the interlocutors in their description as it foregrounded locations at given points of interaction that were important to attract the attention of the interlocutors to them so as to successfully accomplish the task.

The analysis in Chapter Five showed that the 6 functions differ in terms of the frequency of use and with relation to the speaker’s role. In case of the first two functions of the marked Themes, Function A, ‘reintroducing information to introduce new landmarks’ and Function B, ‘reintroducing information to introduce new details about the route layout’, Examples 5.1 and 5.2 from the map task data presented in Chapter Five above showed the importance of the location of the previously mentioned landmarks to easily introduce the new landmarks that are found next, below, above, to the left or to right of the previously mentioned landmarks and easily introduce the new details about the route line. This helped to more easily guide the hearers to the locations of the new landmarks and describe the route layout to them. 15 marked Themes denoted Function A, ‘reintroducing information to introduce new landmarks’ and 9 instances denoted Function B, ‘reintroducing information to introduce new details about the route line’; that is (25.4%) and (15.2%) respectively out of the overall occurrence of the marked Themes, Table 5.3 above. So, (40.6 %) of the occurrence of the marked Theme was used to introduce new details on landmarks and route line. The negotiation about the route depends on introducing the landmarks and the new details about the route line as the interlocutors use them to solve the map task. The frequent use of the marked Theme as a means to introduce the new landmark was related to the contextual demands or constraints

in the negotiation about the route. Therefore, adding new details was the most frequently used marked Theme function in the map task dialogue.

With Function D, ‘reintroducing information to repair meaning’, reintroducing information as a marked Theme helped to overcome breakdown in communication and restore the interactive flow. As Example 5.6 above showed the breakdown in communication in the map task happened when the instruction receivers could not follow the instructions of the instruction givers as the latter introduced a landmark that was not found on the former’s map. The missing landmark was located next to a previously introduced and shared landmark where the instruction givers and the instruction receivers agreed on its location. The instruction givers chose to resume the interaction from the location that was next to the shared and previously introduced landmark and foregrounded it through approaching the clause message from its location as the breakdown in communication happened at its location to easily overcome the breakdown in communication and resume the interaction. With repair meaning function there was either 1) a complete loss of communication that was accompanied with a long pause when the hearers did not repair meaning by clarifying that they had a different landmark or that a landmark was missing from their maps, Example 5.6 above; or 2) no complete loss of communication happened as the hearers repaired meaning instantly by clarifying the discrepancy, Example 5.7 above. Function D, was denoted by 8 marked Themes that is only (13.5%) out of the overall 59 marked Themes, Table 5.3 above. Communication breakdown and repair meaning were likely to happen in the map task interaction due to the discrepancies found between the two maps and the limitation of interaction to the verbal channel as the participants were not allowed to share maps or see each other while interacting as noted in 4.4. D, p. 84. So foregrounding a location through making it a point of departure to repair meaning was predicated to be higher than its actual occurrence (i.e. the 13.5%). So, the use of marked Theme to repair meaning is low compared to the nature of the map task and the setting of interaction as described already.

Yet, this sort of low proportion of the use of marked Theme to repair meaning with relation to the nature of the map task is to be seen in the light of the high proportion of the use of Function F, ‘reintroducing information to refocus on it’ with 20 marked Themes (33.8%) of the overall 59 marked Themes, Table 5.3, p. 97. Function F is likely a variant of Function D as mentioned when describing Function F in that the interlocutors tried to resolve the discrepancies found when they realised that a landmark was not found on the

other map. The interlocutors used Function F, ‘reintroducing information to refocus on it’, to shift the topic of interaction to a previously introduced landmark to maintain route description as in marked Theme instance 347 listed in Appendix M from the interaction of group three or to locate another landmark that was previously introduced but its location is not agreed on or described yet as in Example 5.9. So, in these two contexts, the speakers chose to shift the topic of interaction to the nearest landmark, which is a previously introduced landmark, to the missing landmark and foregrounded the former’s location by making it the point of departure of their clause message to easily describe to the hearers the location of the latter. So, the refocusing Function is similar to the repair meaning Function. Yet, the two functions differ in that with the refocusing Function, the speakers, whether instruction givers or instruction receivers became aware during the course of interaction that a landmark was not found on the other map therefore they tried to resolve the discrepancies by refocusing on a shared landmark through making it the point of departure of the clause message before breakdown in communication happened. In other words, they tried to avoid breakdown in communication and maintain the interactive flow.

Functions D and F are different from Function A, ‘reintroducing information to introduce new landmark’ in that the interlocutors of the map task do not know whether the new landmark that they introduce is shared or unshared as in Example 5.1. They take the location of the shared landmark to introduce the new landmark whereas with Functions D and F, the interlocutors know that the landmark that they want to describe its location is unshared. Therefore, their approaching of the clause message from the location of the reintroducing information in these two Functions is deliberately made as they are aware that it will resolve the discrepancies. In other words, their choice of using the marked Theme in these two Functions implies consciousness compared to Functions A, B, C and E.

Marked Theme was also used to ‘reintroduce information to check the availability of landmark’ and ‘to check understanding’, Functions C and E respectively. With ‘checking availability’ Function, the location of the reintroduced information was used to seek information about the landmarks that were found next to it (the reintroduced information) because it directed the hearers to the intended location that the speakers were interested in knowing what landmark was found/whether a particular landmark was found as in Examples 5.4 and 5.5 respectively from the map task dialogue in Chapter Five because

the location of the reintroduced information is shared and is known to both. Examples 5.4 and 5.5 also showed that the reintroduced information was presented as a marked Theme but in the form of a question due to the information seeking nature of ‘the checking availability’ Function. In case of the ‘checking understanding’ Function, the instruction receivers approached their clause message from the shared locations to check with the instruction givers whether they (instruction receivers) are at the right location and that they understand the instructions of the instruction givers in the right way before receiving further instructions and details about the route as Example 5.8 in Chapter Five above showed. Marked Themes were not used frequently to denote Functions C and E as only 3 (6.7%) and 4 (5.0%) marked Themes denoted the two Functions respectively out of the overall 59 marked Themes, Table 5.3 above.

The map task dialogue showed instances of the occurrence of the marked Themes in sequence, two marked Themes uttered by the speakers in successive turns as in Example 5.2. The map task dialogue showed also instances of occurrence of marked Themes in clusters, the piling of Circumstantial Adjuncts at the beginning of the clause as in Example 5.12. Out of the total 59 marked Themes, marked Themes occurred in sequence in 3 instances that were presented in Examples 5.2, 5.6 and 5.11 and in clusters in 5 instances as in Examples 5.12 and 5.13. The occurrence of the marked Themes in sequence and clusters happened with repair meaning function, D and refocusing function, F which enhances the interlocutors’ ability to repair meaning and describe the location of the landmarks with relation to these two functions respectively. The occurrence of the marked Themes in sequence enhances the ability of the map task speakers to construct the common ground about the location of the landmarks and the route layout and facilitates the addition of the new details about the route line consequently aids the speakers to grasp the new details effortlessly as in Examples 5.2 and 5.6. For instance, in Example 5.6, p. 107, the second marked Theme contributed largely to repair meaning that was initiated by the first marked Theme in sequence. In Example 5.6, taking the location of a previously mentioned landmark as a point of departure by one of the speakers in the first marked Theme in sequence foregrounded the landmark and emphasized its importance as a common ground that was effective for repairing meaning. In so doing, the speaker urged the hearer (the current speaker) to take the same landmark also as a point of departure of her clause message and this helped her to effortlessly clarify to the other speaker what landmarks she had on her map consequently contributed largely to

repair meaning that was initiated by the first marked Theme. As for the occurrence of the marked Themes in clusters, it contributed to providing precise description on the location of the missing landmarks through giving more details that are realised in successive Circumstantial Adjuncts about the point of departure of the clause message related to a landmark that is being refocused on for the sake of describing the location of the missing landmark as in Examples 5.12 and 5.13.

Taking the location of a previously introduced landmark as a point of departure provided the interlocutors with relevant details (that are basically related to this landmark and the area around it: *next, below, above, to the left to the right etc... of it*) at a given point of interaction regarding the description of the route and the landmarks' location. These relevant details contributed to establishing the common ground between the interlocutors that was important to maintain the interaction. Therefore, the interlocutors took them as point of departure leading to the occurrence of marked Theme in sequence or used them after the first Circumstantial Adjunct within the marked Theme as an elaboration of the point of departure of the clause message. The occurrence of the marked Themes in sequence or clusters facilitated the description of the route. Therefore, the occurrence of the marked Themes in sequence and clusters have the effect of "contextualization" (Matthiessen, 1992:53) with relation to enhancing the common grounds between the interlocutors to effortlessly describe the details on the map.

As for the use of the marked Theme in the map task interaction with relation to the speaker's role, the analysis presented in Chapter Five above showed that marked Themes were used both by the instruction givers and the instruction receivers. The use of the marked Themes by the instruction givers to guide the instruction receivers to landmarks' location and route layout was predicated because of the availability of the route on their map. In other words, it was predicated that the availability of the route line on the instruction givers' map will aid them to structure their messages from an unusual angle of a location to best guide the instruction receivers while negotiating about the route (i.e. as a directing device to more easily guide the instruction receivers to a certain location). So, to an extent, the instruction receivers' use of the marked Themes was not predicated due to the absence of the route from their map. So, this suggests that the instruction receivers like the instruction givers chose to structure their message according to the

demands of the context, made the point of departure of their clause message from an unusual angle, in a way that best communicated the details on their map and aided their description and oriented their clause to the rest of the discourse on route description in order to make the discourse a coherent whole. The instruction receivers' use of the marked Themes contributed to effectively directing the instruction givers to what they (the instruction receivers) had on their maps and therefore describing to the instruction givers the location of the landmarks on their maps. The use of marked Themes by the instruction receivers, correspondingly, aided instruction givers in describing the route layout to the instruction receivers as the former easily described the locations of the landmarks and route layout with relation to the locations being foregrounded by the latter as in Example 5.7.

While the absence of the route from the instruction receivers' map and their role as followers of instructions did not hinder their use of the marked Themes, the roles of the instruction giver and receiver and the absence of the route from the latter's map had their effect on the type of the function performed by the marked Themes. The analysis in Chapter Five above showed that some marked Theme's functions were typical of the instruction givers and others were typical of the instruction receivers. Some other functions were found used by both yet they were more typical of the instruction receivers than the instruction givers or the instruction givers than the instruction receivers. In case of Function A, 'reintroducing of the previously mentioned information to introduce a new landmark', it was used by both the instruction givers and the instruction receivers as it is basically typical of the map task interaction as noted in 5.2, p. 100 when presenting the Function. However, the instruction receivers used marked Themes to introduce new landmarks more than the instruction givers did, as noted earlier with 10 and 5 occurrences out of the overall 15 occurrences, Table 5.3 because the instruction receivers' role in the map task was to tell the instruction givers what landmarks were found on their map.

As for Function B, 'reintroducing of the previously mentioned information to introduce new details about the route line', it was used both by the instruction givers and the instruction receivers, Examples 5.2 and 5.3 respectively. Yet, unlike Function A, 'reintroducing information to introduce a new landmark', Function B was: 1) used by the instruction givers more than the instruction receivers, with 7 and 2 instances respectively out of the overall 9 occurrences of the Function, Table 5.3 above, simply because it was

the instruction givers' role to locate the line; 2) more importantly, the instruction receivers use of Function B was to inform the instruction givers about the reproduced route on their maps, Example 5.3.

'Using marked Theme to check the availability of landmarks', Function C was only used by the instruction givers, Table 5.3 and Examples 5.4 and 5.5. Taking the location as the point of departure to check the availability of landmarks is typical of the instruction givers as they are aided by having the route on their maps. Function C is a way of introducing the new landmarks on the instruction givers' map and describing them to the instruction receivers. So, it is a kind of variant to Function A, 'reintroducing information to introduce new details'. Whereas, 'checking understanding', Function E was unsurprisingly used by the instruction receivers only, Table 5.3 and Example 5.8 because they do not have the route on their map, so they checked with the instruction givers whether they perceive the instructions about the route correctly and are at the right location by taking a particular location, current moment of interaction or current location of the route on their maps the point of departure of their clause message.

Function D, 'the reintroduction of information to repair meaning' is used by the instruction givers and the instruction receivers, Examples 5.6 and 5.7 respectively. The use of the repair meaning function by the instruction receivers is surprising especially that they were found using the function equally with the instruction givers with 4 instances for each, Table 5.3. It was noted when presenting the repair meaning function in 5.2. above that the absence of the route line from the instruction receivers' map makes their use of reintroducing information to repair meaning appealing. In other words, sorting out communication breakdown in the map task interaction is more typical of the instruction givers' role than the instruction receivers' as the former are doing the instructing role being guided by the route on their map. The ability of the instruction receivers to repair meaning with relation to the landmarks found on their maps suggests that they were given clear instructions about the route and the locations of the landmarks on the instruction givers' map. The clear instructions, correspondingly, enabled the instruction receivers to clarify the discrepancies on their map with relation to the details on the instruction givers' map. Therefore, the instruction receivers had a role in making the discrepancies between the two maps stand out consequently repair meaning. As noted also in 5.2, p. 108, the successful producing of the route line by all the groups as the dialogues of the map task

presented in Appendix K show suggests that instruction givers gave clear instructions and that the instruction receivers managed to follow them.

Function F, 'reintroducing information to refocus on it', was used by both the instruction givers and the instruction receivers, Examples 5.9 and 5.10 respectively. Yet, it is used more by the former with 12 and 8 instances respectively, Table 5.3. As noted in 5.2, p. 112 the 'refocusing' Function is typical of the instruction givers' role. The instruction givers took the lead in the interaction because of the availability of the route on their map so they gave the instructions about the route and enquired about the availability of the landmarks on the other map so as to be able to describe the route to the instruction receivers with relation to the landmarks and the route line on their map. Therefore, they discovered the discrepancies of landmarks but of course with the aid of the instruction receivers and they tried to resolve them using the route line and through refocusing on the shared landmarks. In other words, with relation to the way the route line goes on their maps, the instruction givers refocused on locations through making them the point of departure of their clause message to resolve the discrepancies and aid their description of the route. So, they were found using the 'refocusing' Function more than the instruction receivers. Function F, 'reintroducing information to refocusing on it' by taking its location the point of departure of the clause message is similar to Function C, approaching the clause message from previously introduced information to check the availability of landmarks in that both functions are typical of the instruction givers' role.

As for the instruction receivers' use of the 'refocusing' Function, it is related to the amount of details they come to know on the discrepancies between the two maps in the course of interaction. In other words, knowing what landmarks are missing from the instruction givers' map allows the instruction receivers to refocus on the shared landmarks and make them the point of departure of the clause message to describe the location of the missing landmarks from the instruction givers' maps. So, with relation to the instruction receivers' use of Function F, it is similar to Function D of 'reintroducing information to repair meaning' in that their use of the Function compared to the instruction givers' use is limited to what they come to know on the discrepancies between the two maps in the course of interaction.

The frequent use of a marked Theme function does not indicate its importance, or that it is more important than the less used functions. The function of the marked Theme

depends on the contextual demands and on the meaning that the speakers want to communicate to the hearers, for instance Function F, the refocusing was used more than the other functions as the above description shows due to introducing new landmarks in the interaction. Introducing new landmarks in the interaction made the interlocutors aware of the discrepancies as they realise that these landmarks are not shared. So, the interlocutors took the location of shared landmarks and refocus on them to be able to resolve the discrepancies about the unshared landmarks. Similarly, the frequent use of reintroducing of information to introduce new landmarks or to introduce new details about the route suggests that there was a contextual demand for using marked Theme at certain contexts to introduce the new landmarks or the new details about the route. So, frequency of use here does not indicate that a function is more important than the others, rather it is the contextual demands that determine the Function to be denoted by the marked Theme. Using marked Theme helped give clear and effective instructions to facilitate route description for the instruction givers to easily and effectively guide the instruction receivers throughout the process of redrawing the route on their maps. So, the type of the marked Theme's Function denoted in the map task interaction depends on the purpose of using it (apart from the general aim which is easily communicate the message to the hearers about the locations of the landmarks and route layout). So, the specific aims of using marked Theme in the map task interaction are the 6 proposed marked Theme's Functions described above.

The interaction of the map task is controlled as it is designed to negotiate how to redraw the route on the map that does not have it. So, map task speakers' desire (Thompson, 2014) and the discursual demand (O'Grady, 2017a) of approaching the clause message from an unusual angle is aiding them with their description of the route and the location of the landmarks and giving clear and effective instructions to the hearers to easily guide them around the map. So, it could be argued that 'describing route effectively' is the contextual pressure (Thompson, 2014) in the context of the map task that has led to the use of marked Theme at particular points of the negotiation about the route. Moreover, approaching the clause message from the location of the reintroduced referent, made it the point of departure of the clause message, helped in fitting the clause in the context and orienting it towards the rest of the route description (Halliday and Matthiessen, 2014). So, the contexts where marked Themes were used in the map task interaction showed that the thematic choices are motivated by discursual demands (O'Grady, 2017a) and that

Theme choices are constrained by the context (Thompson, 2014). The message is oriented towards the aspect that fits it with the co-text (Fries, 1995) and consequently contributed to achieving coherent interaction on the topic of the route (i.e. Geluykkens' topical coherence) (Geluykkens,1999) and this has contributed to structuring of the map task interaction.

The examples from the map task presented in Chapter Five above showed that the interlocutors of the map task tried to find shared information that helps them describe the locations of the landmarks to each other and aids them with solving the task because of the discrepancies between the two maps and the fact that they are not allowed to share maps and to interact only verbally. In the map task interaction, information related to the route layout and the landmarks become shared when the instruction givers and the instruction receivers agree on their location on their maps. The landmarks on the map task were of three categories: some were shared between the two maps while others were only found on the instruction givers' map and some others only on the instruction receivers' map. However, the instruction givers and the instruction receivers did not know which the shared and unshared landmarks were because they were not allowed to share maps nor were informed before the task what landmarks were on the maps. So, for the instruction givers and the instruction receivers all the landmarks were not shared. The instruction givers and the instruction receivers started to become familiar with the landmarks found on each other map in the course of negotiation about the route as the examples from the map task data presented in Chapter Five above showed. More importantly, the landmarks became shared once the instruction givers and the instruction receivers reached an agreement about their locations on the maps. Reaching an agreement on the landmarks and their location is a crucial aspect of achieving success in the interaction of the map task according to Anderson *et al.*'s (1991) '*sharedness*' feature as the interlocutors relied on them to redraw the route line. World knowledge related to spatial dimensions such as '*below, right, left, up, down, underneath, etc.*' also helped the instruction givers and the instruction receives when introducing new details as they represent shared knowledge.

Thus, the previously introduced information in the context turned into shared (i.e. mutual information) as it became known to both the instruction givers and the instruction receivers and they knew that each one knew about the information. So the instruction

givers and the instruction receivers had a mutual or shared knowledge about what each other knew in relation to the previously introduced landmark. This knowledge refers to the mutual knowledge²⁵ (Clark and Marshall, 1981) of the infinite regressive sort: the speaker knows the information that the hearer knows, the hearer knows the information that the speaker knows, the hearer knows that the speaker knows this information, the speaker knows that the hearer knows that he (speaker) knows this information, the hearer knows that the speaker knows that he (hearer) knows the information and so on indefinitely (cited in Sperber and Wilson, 1995:15- 20).

The reintroduced information functioned as a reference point and is used to describe the location of the other new landmarks and the route on the map. So, it helped the interlocutors direct each other to further stages during the interaction because it is shared. Therefore, the interlocutors of the map task endeavoured to establish this mutual knowledge so as to be able to finish the task. Their approaching of the clause message from the location of the reintroduced information helped foreground it (the information) which enabled them to give clear instructions on the locations of the landmarks and guide each other more effectively. The occurrence of the marked Theme in sequence and clusters also helped construct the common ground between the interlocutors as described in 5.2, p. 107 and 5.3, p. 114 respectively.

So to conclude, the use of the marked Theme in the map task interaction was basically related to the demands of reintroducing previously mentioned information to achieve the above 6 proposed marked Theme functions because the location of the reintroduce information is important to facilitate the description of the route and therefore contributed to developing a coherent text.

7.3 Research Q2

What role do the intonational realisations of the marked Theme of tonicity, tonality and key, the pitch height that the onset of the marked Theme's tone group is uttered on, have in structuring the map task interaction and in the successful completion of the map task?

²⁵ The infinitely regressive knowledge is identified under different terms in the literature. It was first identified by Lewis (1969) as common knowledge, Schiffer (1972) and Clark and Marshall (1981) as mutual knowledge.

Research question 2 was answered in Chapter Six, the prosody analysis chapter. The analysis was presented in two sections, the section of the tonality and tonicity analysis and the section of the key system analysis. The tonality and tonicity analysis was carried out to see whether the 59 marked Themes of the map task dialogues were uttered in separate tone groups henceforth containing information focus or in non- separate tone groups henceforth not containing information focus and this was to see what effect uttering the marked Theme in separate tone group and containing information focus had on the map task interaction. Tonality analysis of textual Themes, the conjunctive and the continuative elements that occurred prior to the marked topical Theme, was carried out to see whether they were uttered in independent tone groups and what effect this had on their role in the map task interaction. Key system analysis of the marked Themes was carried out to see the relation between key choice on the marked Theme and the context of occurrence and how key choice contributes to the map task dialogue.

With relation to the tonality and tonicity's analysis, the 59 marked Themes were uttered in separate tone groups and therefore containing information focus with the exception of one instance that was uttered in the same tone group with the Rheme part of the clause as Table 6.1 and Praat images 6.1 and 6.2 presented in Chapter Six above showed. The tendency of the marked Themes to occur in separate tone groups is in line with Tench's (1996) predications and O'Grady (2017a) who reports speakers' tendency of uttering marked Themes in separate tone groups in the UK political discourse. In the 58 marked Themes, previously mentioned information in the discourse (recoverable information) was made tonic. In other words, the information presented in these syllables is presented as if it were New (non- recoverable; not previously mentioned in the discourse) as it was made the information focus. The information expressed in the marked Themes is important in introducing new landmarks, adding new details about the route line, repairing meaning, refocusing on landmarks, check the availability of the landmarks or checking understanding as the analysis of the importance of using marked Theme as a point of departure of the clause with relation to the 6 marked Themes proposed functions presented in Chapter Five showed. Therefore, the speakers of the map task invite hearers' attention to attend to the information in the marked Themes by uttering marked Themes in separate tone groups as "separate tone group adds weight to the Theme" (O'Grady, *ibid*: 6) and makes Theme "perfectly audible" (Berry, 2013a: 262). In other words, presenting marked Theme as an information unit attract hearers' attention to the

importance of the information contained in the marked Theme to guide them to the intended location and continue with the route description as Example 6.2 in Chapter Six showed. The occurrence of the marked Theme of the map task in a separate tone group is not only important for attracting the hearers' attention to the information contained in the marked Theme; it also attracts the hearers' attention to attend to the upcoming piece of information and it signals that it is important to continue with the route description as Example 6.4 presented in Chapter Six showed.

Similarly, with relation to tonicity, the previously mentioned information was projected as New/ non-recoverable (Halliday and Matthessien, 2014) by making it tonic as illustrated by the Praat image 6.2 and the intonation coding in Example 6.3. of '*west lake*' landmark' to make the hearers attend to it as its location is important to continue the interaction about the route. According to Halliday (ibid), the non-recoverable information, which is presented as neither previously mentioned nor available in the physical context, carries information focus whereas the recoverable information, which is presented as previously mentioned or found in the physical context, does not carry information focus. By accenting the previously mentioned information within the marked Theme, the map task's interlocutors chose to present it as non-previously mentioned; from the SFL point of view, the speakers chose to project it as non-recoverable (ibid). In Berry's (2013b) terms, such information is discourse given but speaker new; the map task's speakers have chosen to project it as new because it is the news (Halliday and Matthiessen, 2014) that they want their hearers to attend to to continue with route description. The accenting of the previously mentioned information in the map task suggests that the accented information is not necessarily a non-previously mentioned information or not available in the discourse (ibid). Thus, the informational status of the items in a discourse refers to the way the interlocutors choose to present information as information status in SFL reflects speaker's assessment rather than its discourse status (O'Grady, 2017a). Also, in cases of marked Theme, usually realised as independent tone groups (Tench, 1996), the focus of information falls on the Theme as well as on the Rheme. The occurrence of information focus in initial position serves to foreground the information and attracts hearers' attention to its importance and easily guides them to the intended location on the map.

More importantly, with reference to '*west lake*' landmark in Example 6.3, '*west lake*' is reintroduced in the marked Theme through repeating it. The speakers usually do not

repeat items especially if the referential distance between their first and the second mention is not large; they tend to use referential expressions instead. But because the landmarks that were reintroduced within the marked Themes were important so they were repeated and made focal as it is the burden of the message (i.e. the news that the speakers want to attract hearers' attention to (Halliday, 1985)). This explains the reason for reintroducing them and making them focal. In other words, the map task speakers tend to repeat the previously mentioned information as a way of emphasizing on the landmark; it is the '*west lake*', '*castle*' etc... that they are talking about.

Given the fact that the information expressed in the marked Theme is already foregrounded due to its unusual structure, uttering marked Theme in separate tone group and presenting the previously mentioned information as if it were New to easily guide the hearers to locations on the map could be redundant. Yet, these prosocial aspects are still important as they make the information that the speakers try to communicate to the hearers salient and this is beneficiary for the hearers in the map task interaction to more *easily* grasp what information the speakers are trying to communicate to them henceforth is less effortful for the hearers especially in the case of the instruction receivers due to the absence of the route from their map.

With relation to the analysis of the textual Themes, the textual elements that occur prior to the marked topical Themes of the map task, textual Themes (both conjunctive and continuative) were used in the map task. The continuative and the conjunctive textual Themes contributed to structuring the map task dialogue. They contributed to organising the map task dialogue as they related the clause to the surrounding discourse. The continuative textual Themes constituted a setting for the clause and denoted the meaning of agreement and continuity as Examples 6.18, 6.19 and 6.20 presented in Chapter Six showed. The conjunctive textual Themes linked the map task discourse with enhancement and extension lexico- grammatical relations as Examples 6.12 and 6.13 in Chapter Six showed respectively.

Interlocutors of the map task did not give intonational prominence to the textual Themes. Yet, some of the textual Themes were made tonic because they were uttered in separate tone groups as the speakers wanted to gain thinking/ planning time and assemble their thoughts on how to direct the hearers on the next stage in the interaction as Example 6.13 presented in Chapter Six showed. So, the textual Themes were used in the map task as

discourse markers. The lack of intonational prominence on the textual Themes signals them as Given; they do not represent the news that the speakers want the hearers to attend to (Halliday and Matthiessen, 2014).

With relation to the findings on key choice of the marked Theme and how it contributed to structuring the map task, the analysis presented in 6. 4.1 showed that high key was less frequently used than mid key in the map task with 178 (12.4%) and 1.174 (82.1%) respectively as Table 6.7 showed. This finding is in line with the predications in the literature (Brazil 1997; Chun 2009; O’Grady 2010) and previous studies findings (Cheng *et al.*, 2008; O’Grady 2017a) on key use in an interaction. Mid key is the default choice whereas high key is the marked choice. As for the use of high and mid key on the marked Themes, high key was less common than mid key with marked Themes with 21 (35.5%) and 38 (64.4%) occurrences respectively as Table 6.8 showed. However, the limited proportion of the whole use of high key in the map task dialogue is found mostly associated with marked Theme instances. These findings are in line with O’Grady’s (2017a).

In the map task interaction, marked Theme was uttered on high key in contexts that required the projection of location expressed by the marked Theme to attract hearers’ attention and easily guide them to the desired location expressed in the Rheme part as Examples 6.26, 6.27 and 6.28 presented in Chapter Six showed. The projection of location is for presenting new details about the route layout; to describe the location of new landmarks that are not previously mentioned in the discourse; to locate a landmark after knowing that it does not exist on the other map; to check the availability of a (specific) landmark; to signal a new start or shift in route description; signal contrast by showing that that the upcoming information is unpredicted or/ and that the upcoming information is specifically about the speaker’s map. The projected location is previously introduced (i.e. recoverable) that is location on the map or the map as a whole. Examples 6.26 and 6. 27 showed that high key was realised on certain information within the marked Theme tone group as this information had the potential among the rest of the information within the marked Theme tone group to realise high marked Theme meanings. High key helped also to attract hearers’ attention to the exact and intended location or detail on the map with relation to the high marked Theme’s meanings.

The use of the high marked Theme functions differed with relation to the frequency of use as Table 6.12 in Chapter Six showed. Only 3 (14.2 %) high marked Themes were used to signal contrast and 2 (9.5 %) to signal a shift in description and make a new start out of the overall 21 high marked Themes. The projection for presenting new details and to describe the location of a landmark after knowing that it does not exist on the other map was the highest with 7 (33.3%) and 6 (28.5%) and 3 (14.2 %) occurrences for checking the availability of a (specific) landmark.

The findings on the meanings of the high marked Theme in the map task interaction is different from high key meaning and high marked Themes meaning reported in the literature. High key signals that the upcoming information will be in contrast with the prior information or counter to what the hearer would have expected (Brazil, 1997; Chun, 2002; O'Grady, 2010, Cheng *et al.*, 2008) so it denotes the meaning of contrast, unexpectedness or disagreement.

As for the high marked Theme meaning, O'Grady (2017a) observes that the association between high key and marked Themes in political discourse suggests a forthcoming departure of previously created expectations; or signalling an unexpected discourse transition. O'Grady bases his argument on the association of high key and marked Theme on high key and marked Theme's function of signalling discourse transition: marked Theme's function of signalling either that the perspective being developed in the clause is approached from an unusual angle (Halliday and Matthiessen, 2014) or transition within narrative (O'Grady, 2017a) whereas high key signals discourse transition by the disruption to the flow of the discourse because it projects either the introduction of a fresh topic or that the discourse is extended in a manner contrary to previously created expectations (Tench, 1996). In the map task interaction, the association of high key with the marked Theme does not signal counter expectation. High key is associated with marked Them to attract hearers' attention as stated above. The meaning denoted of the association between high key and marked Theme in the map task dialogue is not fully compatible with the meaning of the high key or with the meaning generated by the interaction between the high key and the marked Theme reported in the literature. The difference of meaning denoted of the association of the high key and the marked Theme between the map task and the political discourse could be related to the different context of interaction.

However, it was predicated that high marked Theme would be used to signal contrastive meaning depending on the predications and the findings of the previous studies on the meaning of the high key referred to above. Also, the discrepancies found between the two versions of the map would provoke the context for a contrastive meaning and it would be expressed predictably with high key. However, the reason for the limited occurrences of the high key that denoted contrast meaning might be related to the nature of the map task interaction. The instruction givers and the instruction receivers are instructed that there are discrepancies between their maps, but they are not informed what they are. So, they do not know which details are common and which are different on the maps. In other words, they do not have prior or shared knowledge about each other's map. This is different to what happens in usual interaction where the interlocutors may know that information is counter to what the hearers are expecting especially if they share information or have common ground. In other words, the speakers have prior knowledge of what their hearers might be expecting, and they tend to use high key or high marked Theme to signal contrast. This did not occur in the map task interaction. The interlocutors were more interested in using the high marked Theme to project locations to make them salient to attract the hearers' attention to them so as to easily describe what is found on their maps on that location. This explains the reason why most the high marked Themes were found performing 'projecting location to present details' Function in order to attract the attention of the hearers to its importance in describing the route and the interlocutors were not really after signalling contrast.

High marked Theme might be used to signal unpredictability or unexpectedness rather than contrast. The instruction givers and the instruction receivers present the details (landmarks' names, their location, route layout) as something unpredicted or unexpected in the sense that they might not be found on the other's map due to the fact that the maps are not identical. So, it could be argued that the interlocutors uttered marked Theme on high key as they are expecting or predicating that the details that they are about to add might not be found on the hearers' map and to attract the hearers' attention to what is found at a certain location on the map.

As for mid key use, the analysis in 6.4.1 showed that mid marked Themes were used to add information. Mid marked Themes were used in the contexts that required extending the details by adding the landmarks at the locations that were previously introduced for the purpose of showing what other landmarks were found at those locations or for

confirmation and clarification of prior information that was previously stated about the route at them as Examples 6.30 and 6.31 showed. In contrast with the high marked Theme function of projecting location, the additive function of mid marked Theme does not project location; it states what further details are found at that location in the form of telling or narrating. The expectations created by mid marked Themes are not counter to the hearers' expectation as the speakers used mid key when adding, confirming or clarifying these details. In other words, mid marked Themes create the expectations that the forthcoming information is in line with the prior information and not counter to it. This is in line with mid key meaning of expectedness and neutrality (Brazil, 1997; Chun, 2002; Chung *et al.*, 2009; O'Grady, 2010)

Mid key choice on marked Themes can be interpreted in terms of Nakajima and Allen's (1993) view of mid key as the addition of information in a pre-established framework. Map task interaction is typical of pre-established framework as the topic of interaction is pre-prepared; the interlocutors are instructed to tell each other the details on the route and the location of the landmarks found on their maps to reproduce the route on the instruction givers' map. Their interaction takes the form of narrating that is achieved by adding details. So, in contrast with high marked Theme, the interlocutors chose to utter marked Themes on mid key to signal the addition of information.

With relation to the use of the mid marked Themes and high marked Themes in terms of the speaker's role, they differ with the frequency of use. High marked Themes were used more by the instruction givers with 17 (80.9%) of the overall 21 high marked Themes and mid marked Themes were used more by the instruction receivers with 23 (60.5%) out of the overall 38 mid marked Themes as Table 6.9 above showed. Yet, the use of the high and mid marked Theme does not differ by the speaker's role in that they denote the same meaning whether it is used by the instruction givers or the instruction receivers as the high and mid marked Themes instruction givers' Examples 6.26 and 6.30 and high and mid marked Themes instruction receivers' Examples 6.28 and 6.31 above showed. The difference in the frequency of use between the instruction givers and the instruction receivers of the high and mid marked Themes is related to the additive and the projection meanings of the mid and high marked Themes respectively and to the nature of the instruction givers' role and instruction receiver's role in the map task dialogue. The instruction receivers' role is telling the instruction givers what they have on their map rather than directing the instruction givers because of the absence of the route on their

map. For the instruction receivers, it is a process of adding information to the interaction and adding to the information that the instruction givers have. So, the instruction givers will be able to direct the instruction receivers through manipulating both the information on their map and the instruction receivers' map to draw the route on the latter's map. Correspondingly, depending on the instruction givers' description, the instruction receivers add details to the interaction in the sense of stating, clarifying and confirming about what they have on their map. So, the instruction receivers' mid marked Themes were more like additive and inspired by what the instruction givers were telling them and they made unusual locations the point of departure of their clause messages to easily describe to the instruction givers what they had on their maps. With relation to the instruction givers, they had the map with the route and they are doing the role of information giver. Instruction givers made more use of the high marked Theme to attract the instruction receivers' attention to the lines, curves and the way the route is passing by the landmarks and to easily describe the route to the instruction receivers.

Marked Themes were said on mid key when used to add details and on high key when used to project location. So, there is an interplay between marked Theme and its key in the map task interaction because marked Theme is uttered on key that prosodically fits it with the rest of the discourse and creates the expectations that fits with the marked Theme meaning/function. In other words, marked Themes are uttered on key level that orients and grounds it prosodically to the rest of the discourse. The choice of the mid key and high key with the marked Theme in these contexts have contributed to grounding a message and locating it in its context and orienting it towards the co-text as it is motivated by the discursual demands. As its selection is constrained by the context and is motivated by the discursual demands, speakers' key choices in discourse are context related in terms of the kind of expectations that the speakers want to project (unexpected or in contrast with the previous discourse, expected or in line with the previous discourse, neutral neither signals contrast or expectedness) (Brazil, 1997; Chun, 2002; Chung, 2008; O'Grady, 2010) to their hearers' expectations. In the same way, key choices are motivated by the discursual demands in the sense they are chosen in a way that ensures providing sort of connectivity between the tone groups (i.e. similar to cohesive devices' role in text) consequently contributing to texturing the text. Key selection of the marked Theme was made in a way that ensures that the point of departure of the message (i.e. that

is expressed by the marked Theme) is prosodically located in its context and it orients the message to the rest of the discourse so as to contribute to structuring the interaction.

Thus, it could be argued that key is like Theme as its choice is constrained by the context and motivated by the discursual demands (Halliday and Matthiessen, 2014; O'Grady, 2017a). Key of the map task's marked Themes is realised in a way that is compatible with the marked Themes' function in the map task (i.e. not to be uttered on key that is misleading in terms of creating the wrong expectations by using the inappropriate key choice). Using the inappropriate key might cause confusion and will not contribute to easily guide the hearers to the place on the map or easily communicate to them the details on a missing landmark or route layout. So key will not contribute to organising map task interaction and creating a coherent discourse.

The use of the high marked Theme suggests the importance of this pattern in the map task interaction; it is a way to project information and help the interlocutors guide each other while negotiating about the route. The use of the high key is not redundant although it is used on a marked structure where the information is already foregrounded. The role of the high key on the marked Theme can be seen through the information where high key is realised on within the marked Theme. The speakers realised high key on part of the marked Theme which directs the hearers to the exact location that they want to direct them to. So, marked Theme helped in foregrounding the location by making it the point of departure but high key helped in showing to the hearers which spot exactly within the foregrounded location that the speakers want to attract their attention to henceforth this helped to easily communicate the speakers' message.

To conclude, the map task speakers did their best to communicate the details to each other and make reproducing the route easier. Therefore, they approached the clause message from unusual angle through using marked Theme. Marked Theme invited hearers' attention to attend to the speakers because of its marked structure. Marked Theme foregrounded details on the map such as landmarks that were previously introduced by reintroducing them and making them the point of departure of the clause message due to the importance of their location in guiding the interlocutors more easily to the next location on the map. So, marked Theme helped the instruction givers and the instruction receivers guide each other more easily to the information that they need to attend to on the map. This consequently contributed to achieving a coherent interaction on the topic

of the route (i.e. topical coherence) (Geluykken,1999) and aided them in completing the task and successfully reproducing the route on the instruction receivers' map.

The map task speakers also repeated landmarks' names and details related to their locations when they reintroduced them in the marked Theme rather than using referential expressions, although the referential distance was not large between the first and second mention of these details, as a way of emphasizing on these landmarks. The map task interlocutors chose to make the information within the marked Theme focal (i.e. burden of the message) although it is recoverable information; they uttered marked Theme in a separate tone group to make it audible and give weight to its content. They also uttered marked Theme on high key to emphasize the importance of the details provided by the marked Theme. So, the informational content of the marked Theme is not only projected structurally but also prosodically. These aspects helped the interlocutors draw each other's attention to the importance of information at given points of interaction and make the text coherent with respect to its environment.

With the pedagogical applications in mind, it is important to make the students aware of the thematisation phenomenon in English language and the role of the thematic choices in structuring the text to better organise their text. It is crucial to draw the students' attention to the fact that placing an element initially within the clause emphasizes the element's importance (Forey, 2009: 136) and highlights the angle which the clause message is approached from. With relation to using marked Theme, it is important to draw students' attention to the availability of such structures in English and what difference they make in text. This will improve their spoken and written English (i.e. in presentation, assignments and research writing). With relation to the researcher's experience as an English foreign language lecturer, students' choice of Theme is very limited to starting with the unmarked Theme, both on the spoken and written levels. This is attributed to the fact that English foreign language curriculum of modules like scientific debate, listening and speaking, composition, essay and research writing do not emphasize how Theme is realised in the various structures and the fact that there is a correlation between thematic choice and developing a successful text. So, when designing curriculum for English Foreign Language Learners, these aspects need be taken into consideration (Jing, 2015).

As a practice to learn to use marked Theme, map task dialogues can be used as teaching tool to draw the students' attention to the marked Theme pattern. Map task can be used as a problem solving exercise of reproducing the route to illustrate the function of the marked Theme. Teachers can make the students listen to the sound files of the map task dialogues and follow the written script of these dialogues. The teacher should draw the students' attention to the contextual demands that make the speakers use marked Theme in a given point of the interaction through referring to the contexts and the functions performed by the marked Theme such as repairing meaning, refocusing, checking understanding etc. The key idea here is help the students learn about marked Theme and its importance in foregrounding details that represent shifts in spatial narration when describing locations. Make the students realise also that these shifts in description contribute to structuring the interaction or the text. With relation to intonation, transferring the findings on how marked Theme is realised will help the students learn about the intonation of the marked Theme.

The findings of the map task could be beneficial to real life world. As described already, the speakers of the map task did their best to easily and effortlessly direct each other to locations on the map especially through establishing the common ground in which they meet (i.e. locations they agreed on). In the same way, in real life world, whether having face to face communication or being on the phone, speakers should try to give clear instructions when directing someone to a location that best aids the information seekers to more easily find their destination. Speakers should foreground the spatial details especially the mutual ones between them and the information seekers and take them as point of departure of the clauses when describing the locations. Manipulating the relevant details that are kind of *next, below, to the left, to the right* etc. of the landmark when describing it will better contextualise the description (i.e. helps the information seekers with understanding the details given to them). Using the relevant details here is similar to uttering marked Theme in sequence or clusters as described with the map task dialogue. Focusing on the most relevant and distinctive landmarks found kind of near the target location through repeating them contributes to drawing the information seeker attention to these landmarks. Drawing on the prosodic findings of the marked Theme, it is important that the speakers present details as a unit of information to invite the information seekers' attention, making them information focal regardless of being recoverable and utter them on high key to signal that they are important and make them

stand out from the rest of the details. So, when directing people to locations, it is important to consider these aspects as ways of making the important details stand out and memorable by the information seekers who seek directions about buildings and locations.

The spatial orientation of the map task is similar to the texts used for example in tour guide books and signposts that are used to describe locations. The tour guide books need to be written in a way that foregrounds the locations and directs the information seeker effortlessly and easily to them. The thematic foregrounding of spatial details in the tour guide books is important for writing a successful description of locations (Berry, 2013b) consequently leading to having a successful text. The thematic foregrounding of locative information needs to be considered in workplace language such as that of an information desk at towns and of a tourist guide which helps to give clear and informative directions to people and tourists.

CHAPTER EIGHT: CONCLUSION

8.1 Conclusions

The current research arrived at the following results:

1. Marked Theme of the map task is used to reintroduce previously mentioned information and taken it as a point of departure of the clause message (i.e. foregrounding it) due to its importance in guiding the hearers more easily to locations on the map that are important to continue route description at given stages of the interaction. The previously introduced locations are foregrounded using marked Themes to achieve 6 proposed functions: introduce new landmarks, introduce new details about the route layout, check the availability of landmarks, repair meaning, to check understanding, to refocus on it.
2. The speakers of the map task project the previously mentioned information within the marked Theme as if it were New information and utter marked Theme in separate tone group to attract hearers' attention to the importance of the information expressed by the marked Theme in guiding them to further locations on the map.
3. There is an interplay between marked Theme and key choice in that marked Theme is uttered on mid key in contexts where the marked Theme denotes an additive meaning, information expressed by the marked Theme either extends or confirms and clarifies the information already given and on high key in contexts that require projecting of previously mentioned locations to attract hearers' attention to certain details within the marked Theme that are important to presenting new details about the route layout; to describe the location of new landmarks that are not previously mentioned in the discourse; to locate a landmark after knowing that it does not exist on the other map; to check the availability of a (specific) landmark; to signal a new start or shift in description; signal contrast by showing that the upcoming information is unpredicted or/ and to that the upcoming information is specifically about the speaker's map.
4. The tonic accenting of previously mentioned information does not necessarily reflect new information, not previously mentioned in the discourse because the interlocutors of the map task presented previously mentioned information as if it were New. So, New information for the speakers of the map task is a way of presenting information (Halliday

and Matthessien, 2014) to attract hearers' attention to the importance of the information in route description.

5. The reintroduced location (i.e. information) within the marked Theme is already foregrounded given that marked Theme is an unusual structure, so uttering marked Themes in separate tone groups and the tonic accenting of the previously mentioned information within the marked Theme to attract hearers' attention to locations on the map could be redundant. Yet, in the context of the map task given the fact that the speakers cannot share maps and that there are discrepancies between their maps, this redundancy is beneficiary for the hearers. These prosodic features make the details which the speakers try to communicate to the hearers salient and this is beneficiary for the latter in that they will more *easily* grasp what information the speakers are trying to communicate to them which is less effortful for the hearers especially in the case of the instruction receivers due to the absence of the route from their map. The fact that previously mentioned information is presented as if it were New is significant as the hearers know that it is previously mentioned so projecting it as if it were New by the speakers will make the hearers attend to it.

8.2 Suggestions for further research

Although the topic of interaction in the map task is limited in that it is about the route, yet the current study has added to the knowledge on the function of marked Theme, approaching the clause message from unusual location, in discourse and to the knowledge of the interplay between intonation and Theme in structuring the spoken discourse. The below are suggestions for further research to extent the current study:

1. Examining the role of 'tone', the main pitch movement, used on the tonic syllables within the marked Themes of the map task in contributing to structuring the map task dialogue.
2. Looking at the unmarked Themes choices of the map task dialogues and how they contribute to structuring it with relation to whether they are uttered in separate tone group and made on high key choice.

3. Examining the role of Halliday's marked Theme in the map task from Firbas' (1992) Functional Sentence Perspective (FSP) Theory to see whether Halliday's marked Theme has similar function with relation to Firbas' theme in the map task dialogue.

4. The reason of using marked Theme and the way it is realised prosodically can be examined using Relevance Theory (Sperber and Wilson, 1986/ 1995), a theory of communication and cognition that accounts for how speakers communicate their meaning to their hearers from a pragmatic perspective. According to the theory, speakers try to guide their hearers to grasp the meaning they intend to communicate by producing a stimulus that can attract hearers' attention to that intended meaning. Correspondingly, the hearers pay attention to the perceptually salient aspects in the input; they guide them to the intended meaning among the other meanings. So, Relevance Theory can be a good analytical tool to further know about the intention of the interlocutors of the map of approaching clause message form unusual angle and the projection of previously mentioned information as if it were New and uttering marked Theme on high Key.

5. Combining SFL and other approaches such as Conversational Analysis or Corpus Linguistics in the study of the textual Themes to add to the knowledge on their role in the conversation. Considering the interpersonal meaning of the Textual Themes with relation to their choice and the tone realised on them. The findings with relation to these aspects will help reveal what happens in everyday interaction.

6. Considering other settings such as the inclusion of the paralinguistic data (body language, facial expression etc.) when conducting the map task to see what changes the paralinguistic details will make to the way the map task's interlocutors interact to draw the route.

7. Replicating the map task for Kurdish and Arabic languages to reveal the textual resources, both structural and prosodic, used by their native speakers to structure the interaction. Comparing the findings of these replicated studies with that of the English map task arrived at in the current study to uncover the similarities and differences with relation to the use of the marked Theme (the occurrence of a Circumstantial Adjunct initially) and the way it is realised prosodically. Replicating the study for other languages has both pedagogical and academic implications. Pedagogically, drawing the attention of the Kurdish and Arab English Foreign language learners to the similar and the different textual resources between English and their mother language helps them know what

textual resources are English specific so as to adopt them and avoid that of their mother language when writing and speaking in English as noted in 1.2, p. 7. Consequently, this will help them improve their English. Academically, the findings on the textual resources of languages other than English will “enrich systemic functional linguistics (SFL) theory by adding to the theoretical understanding of the textual metafunction and its interplay with other metafunctions” (Arús, 2017: 194) and the findings will also shed light on the structural and prosodic features of these languages.

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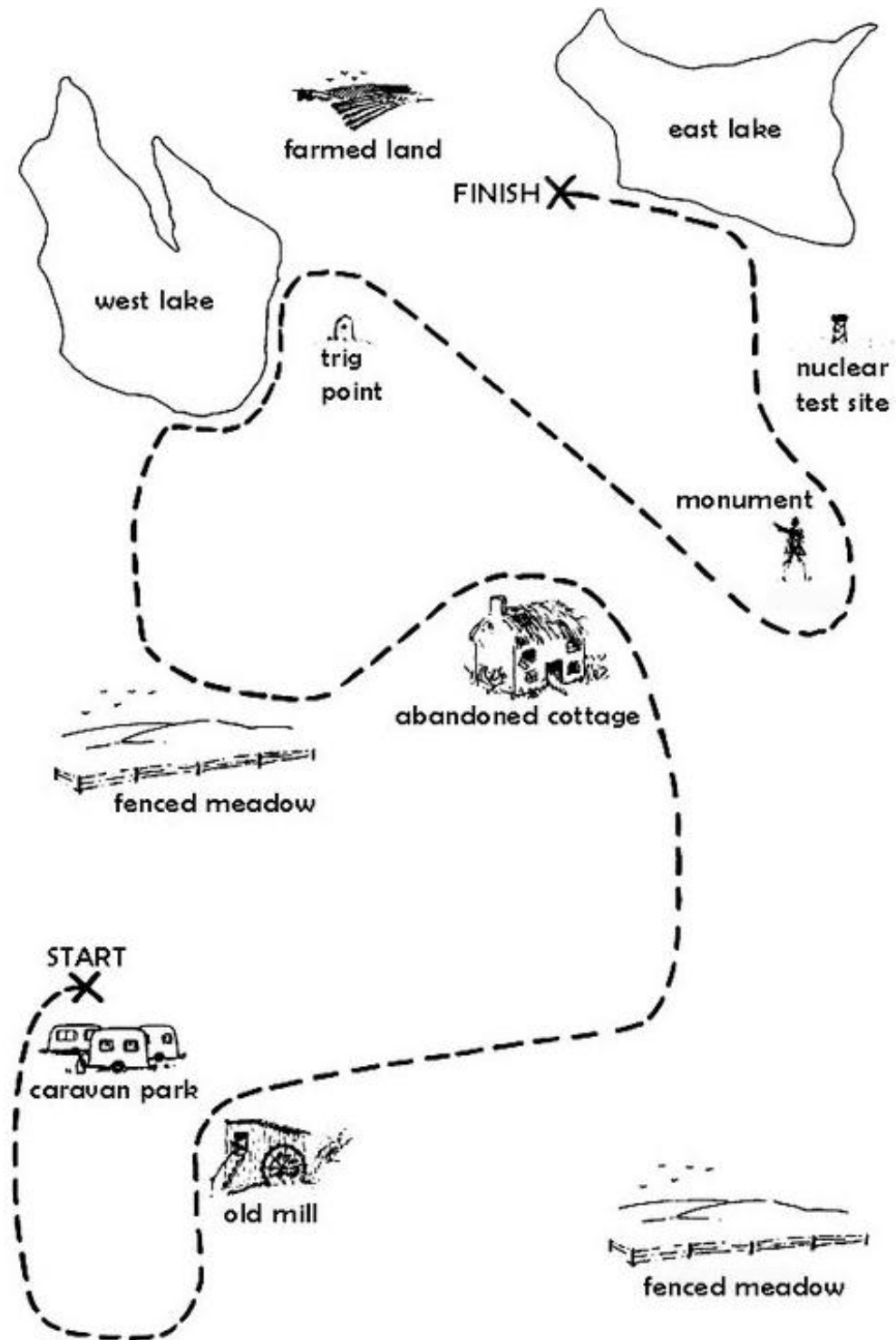
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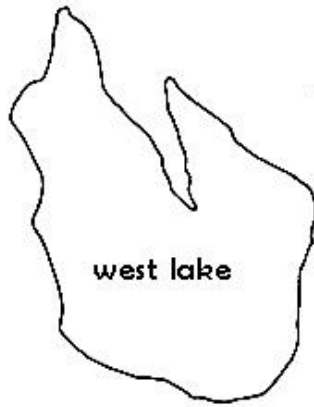
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Appendices

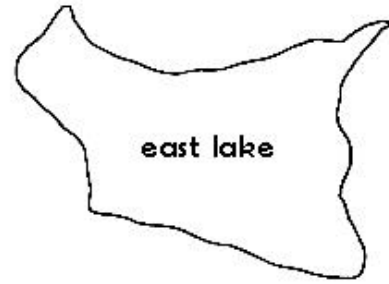
Appendix A

The instruction giver's and the instruction receiver's maps used in stage one of data collection





farmed land



golf course



monument



abandoned cottage

START



caravan park



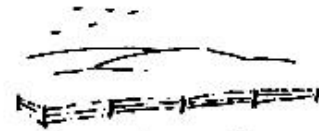
forest



mill wheel



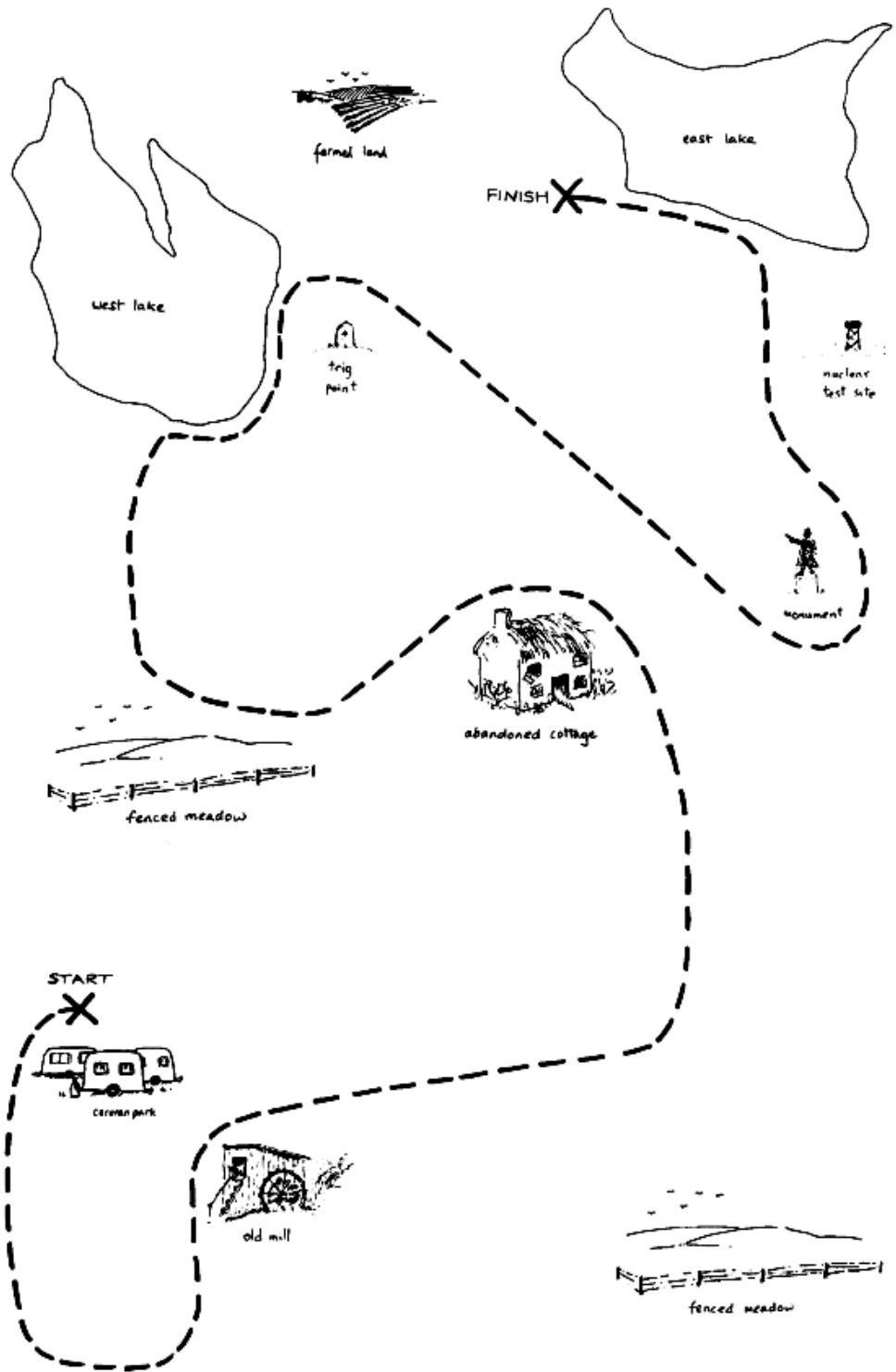
picket fence

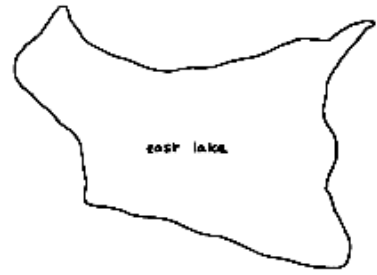


fenced meadow

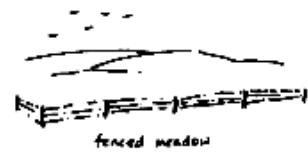
Appendix B

The original instruction giver's and instruction receiver's maps used in stage one of data collection as found in HCRC Corpus website



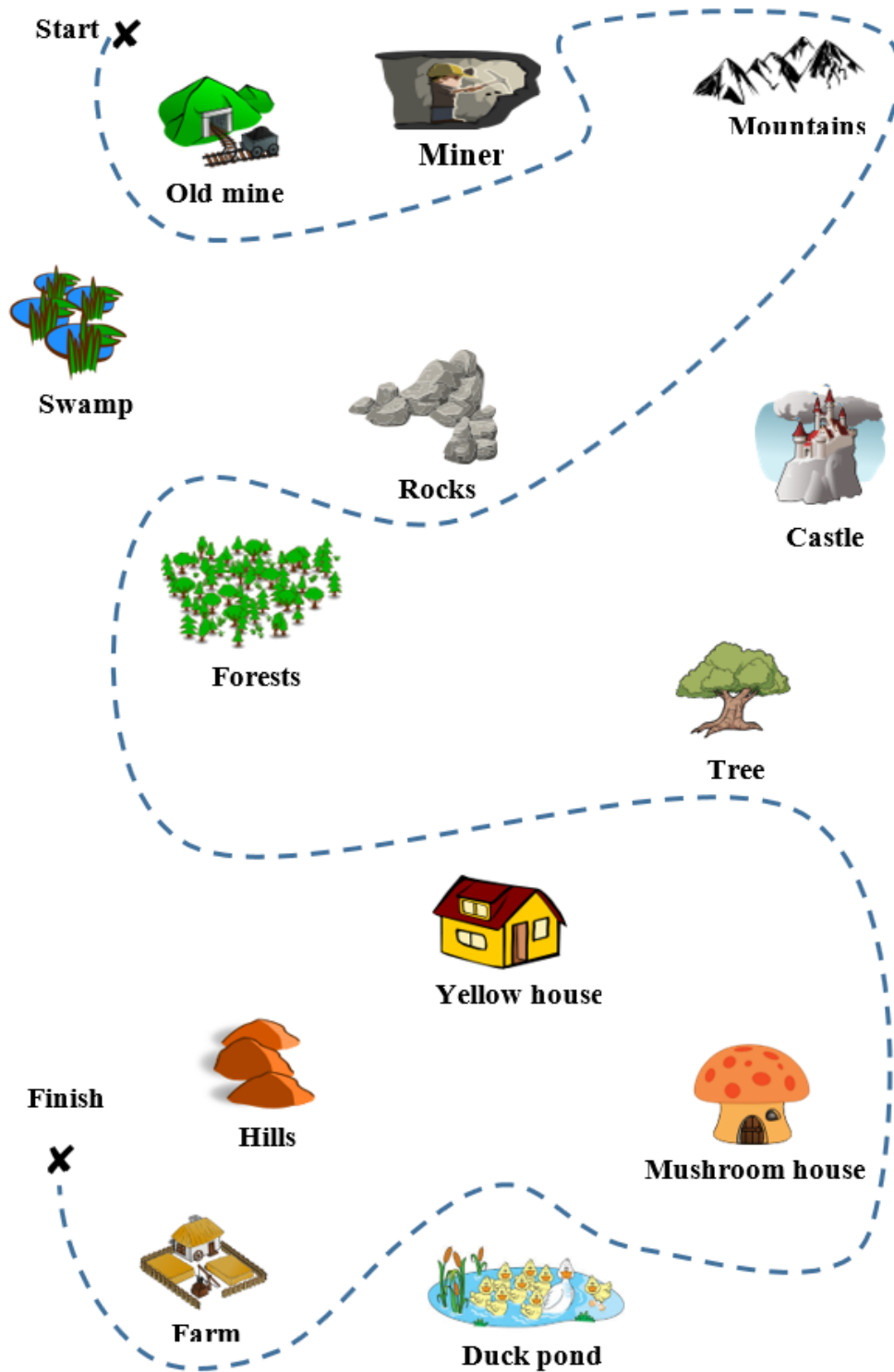


START
X



Appendix C

The instruction giver's and the instruction receiver's maps used in stage two of data collection



Start X



Old mine



Mountains



Swamp



Cactus



Castle



Cottage



Tree



Stone giant



Gold mine



Yellow house



Hills



Mushroom house



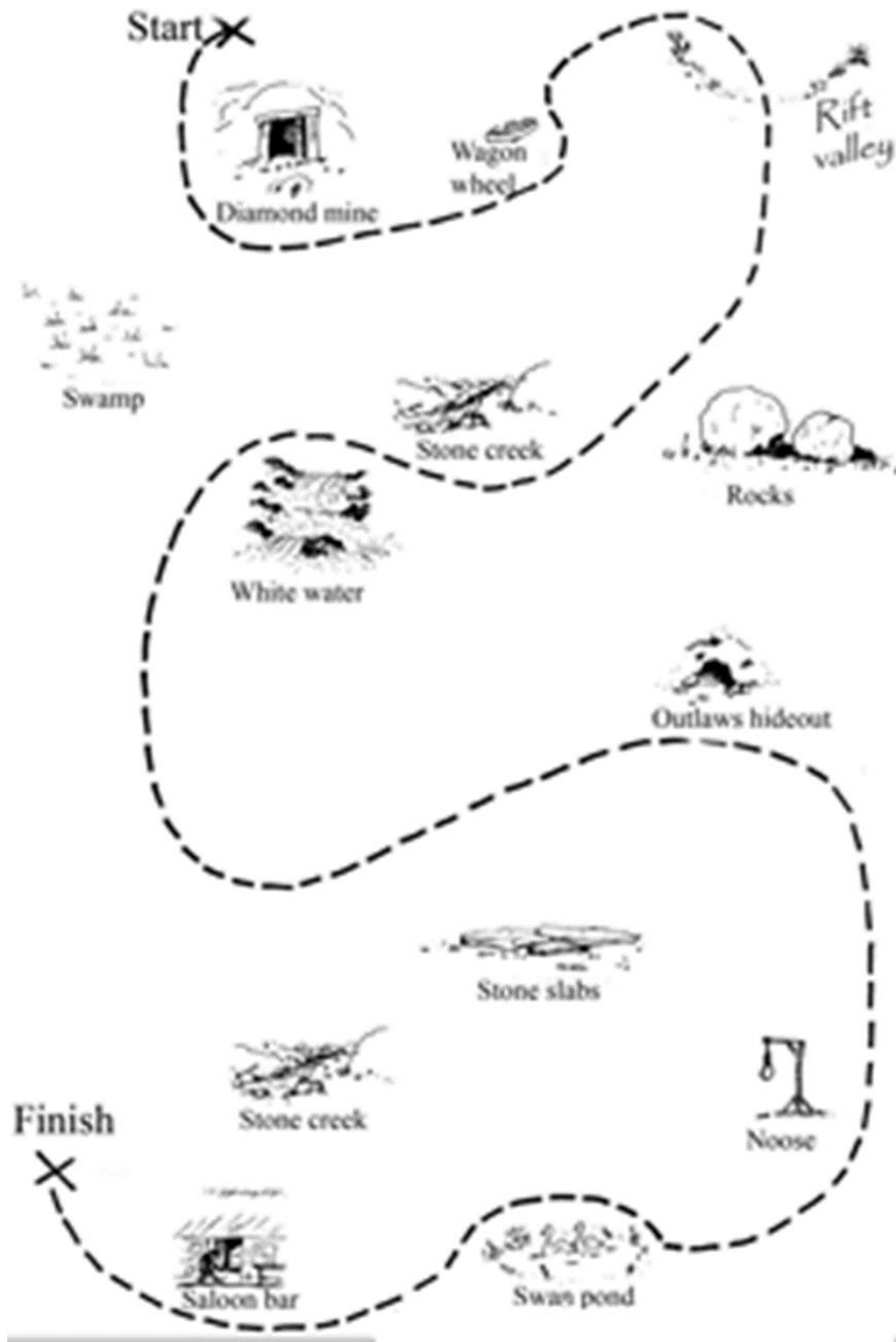
Farm



Mountains

Appendix D

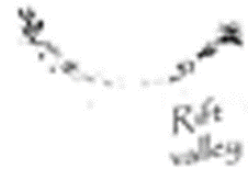
The original versions of the map of the HCRC Map Task in which the layout of the map's versions used in stage two of data collection was driven from



Start X



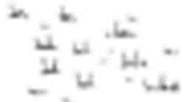
Diamond mine



Rift valley



Cactus



Swamp



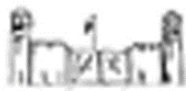
Rocks



Rapids



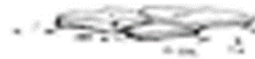
Outlaws hideout



Manned fort



Gold mine



Stone slabs



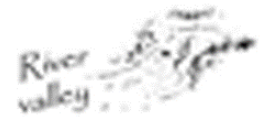
Stone creek



Noose



Saloon bar



River valley

Map 2f

Appendix E

The instructions on the tasks given to participants in stage one of data collection

Dear participants, you will be working on the following three tasks and you will be recorded in them:

i. Warm up task

Its involves talking about general things (like talking about oneself, telling each other what you have been doing yesterday, etc..) for few minutes. The purpose of the task is to introduce each other. Your conversation will be recorded. You will be instructed when to move to the second task. There will be a divider between you in this task so as to get used to the setting that you will be interacting only verbally when working on the map task that is main task of the study.

ii. Map task

Please, it is very important that you follow the below instructions when working on this task:

- 1) It is not allowed to share maps.
- 2) It is important that you interact only verbally when working to solve the task.
- 3) Only three sources of information are available to help you work on the task: i) the instructions, ii) what appears on the map sheet the landmarks and the route line in case of the and in the case of instruction giver's map and iii) what to be said during the interaction.

iii. Reflective task

After finishing the map task, you are asked to reflect on your experience on doing the task in terms of the clarity of the task and the instructions.

Appendix F

Documents of the ethics procedures

(1) Ethics form

Proposal Form A: Fast track approval²⁶

This form is only to be used where the research being undertaken does not involve vulnerable participants or deception, but does involve information from or about living people that is not already in the public domain.

Submitted by: Nadia Z. Elias Staff **PG (PhD)**

Date: 30-06-2014

Researcher's Name: Nadia Z. Elias

Principal Investigator/Supervisor if different: Dr Gerard O'Grady

Project Title: Exploring how intonation helps achieve topical coherence in the spoken discourse in English

Proposed dates of research: 02-07-2014

Reasons for choosing Fast track route (please tick):

	Tick
I have completed the checklist, with no issues arising.	✓
I will be gathering personal data about individuals (e.g. names, contact details, biographical or educational information, or other personal information) that needs to be held securely.	✓
I will be gathering opinions, or making observations or measurements of individuals' behaviour.	✓
My participants are over 18 years of age.	✓
My participants are not members of a vulnerable group or temporarily in a vulnerable situation.	✓
All the participants will sign a consent form.	✓
All the participants will receive a debriefing document.	✓
My procedures will fully comply with the information given in the consent and debriefing documents.	✓
Students and research assistants: I have fully discussed this project and this application with my supervisor/the Principal Investigator	✓
Other:	

²⁶ An electronic version of this example is available in the Research folder of both the staff and the postgraduate parts of the ENCAP Shared drive.

I would like to discuss aspects of this research with a member of the Ethics Committee. Please indicate the focus of this discussion:	
---	--

Brief description of the research:

1. Aim, hypothesis

Aim: the research aims at investigating how intonation signals information structure in a way it helps achieve topical coherence alongside the interaction that happens between the participants in conversation.

Hypothesis: 1-Intonation has a role in achieving topical coherence in conversation alongside the interaction that happens between the participants.

2- If the speaker assumes that the information is already known to the recipient, he will present it as Given i.e. recoverable by assigning Theme status to it. In such a case topical coherence is achieved in their conversation. But if the recipient would not be able to understand, he will assign the status of New-Rheme to the information which is presented by the speaker as Given- Theme. As a result, the participants would fail in achieving topical coherence.

2. Basic method

The data that is represented by the conversation of the participants will be collected by using 'Map Task' method

3. Type(s) of information that will be obtained, incl format.

Participants' conversation that is to be recorded while working on the map task.

4. If you are using an existing dataset, briefly explain its origin and how ethics issues (might) apply.

Be prepared to supply, if requested, a copy of:

- the checklist
- the consent form
- the debriefing document
- examples of the materials being used (e.g. questionnaire, stimuli)

(2) Debriefing Document Template

Exploring how intonation helps achieve topical coherence in the spoken discourse in English

“July 2014”

Thank you for taking part in this study.

This research aims at investigating how intonation signals information structure in a way it helps achieve topical coherence alongside the interaction that happens between the participants in conversation.

The research hypothesizes that firstly, intonation has a role in achieving topical coherence in conversation alongside the interaction that happens between the participants. Secondly, if the speaker assumes that the information is already known to the recipient, he will present it as Given i.e. recoverable by assigning Theme status to it. In such a case topical coherence is achieved in their conversation. But if the recipient would not be able to understand, he will assign the status of New-Rheme to the information which is presented by the speaker as Given- Theme. As a result, the participants would fail in achieving topical coherence.

The data that is represented by the conversation of the participants will be collected by using ‘Map Task’ method

The data that the participants have provided will be held confidentially. You retain the right to withdraw your data without explanation and retrospectively, by contacting the researcher named below.

If you have any questions about this study or your participation in it, please contact:

Supervisor: Dr. Gerard O’Grady

Centre for Language and Communication Research

Cardiff University

John Percival Building

Colum Drive, Cardiff

CF10 3EU

Email: OGradyGN@cardiff.ac.uk

Researcher: Nadia Zako Elias

MA Language and Communication

Centre for Language and Communication Research

Cardiff University

John Percival Building

Colum Drive

Cardiff

CF10 3EU

Email:EliasNZ1@Cardiff.ac.uk

(3) Sample of the consent form of one of the participants

Consent Form

Title of project:

Exploring how intonation helps achieve topical coherence in the spoken discourse in English.

I understand that my participation in this project will involve working on a map task where my conversation will be recorded, and that it will require approximately 30 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason.

I understand that I am free to ask any questions at any time. If for any reason I experience discomfort during participation in this project, I am free to withdraw or discuss my concerns with *Nadia Elias*.

I understand that the conversation provided by me will be held confidentially, such that only the Experimenter can trace this information back to me individually. The information will be retained for up to four years, when it will be deleted/ destroyed. I understand that I can ask for the information I provide to be deleted/destroyed at any time.

I, _____ consent to participate in the study conducted by [*Nadia Elias*, School of English, Communication & Philosophy, Cardiff University under the supervision of Dr. *Gerard O'Grady*

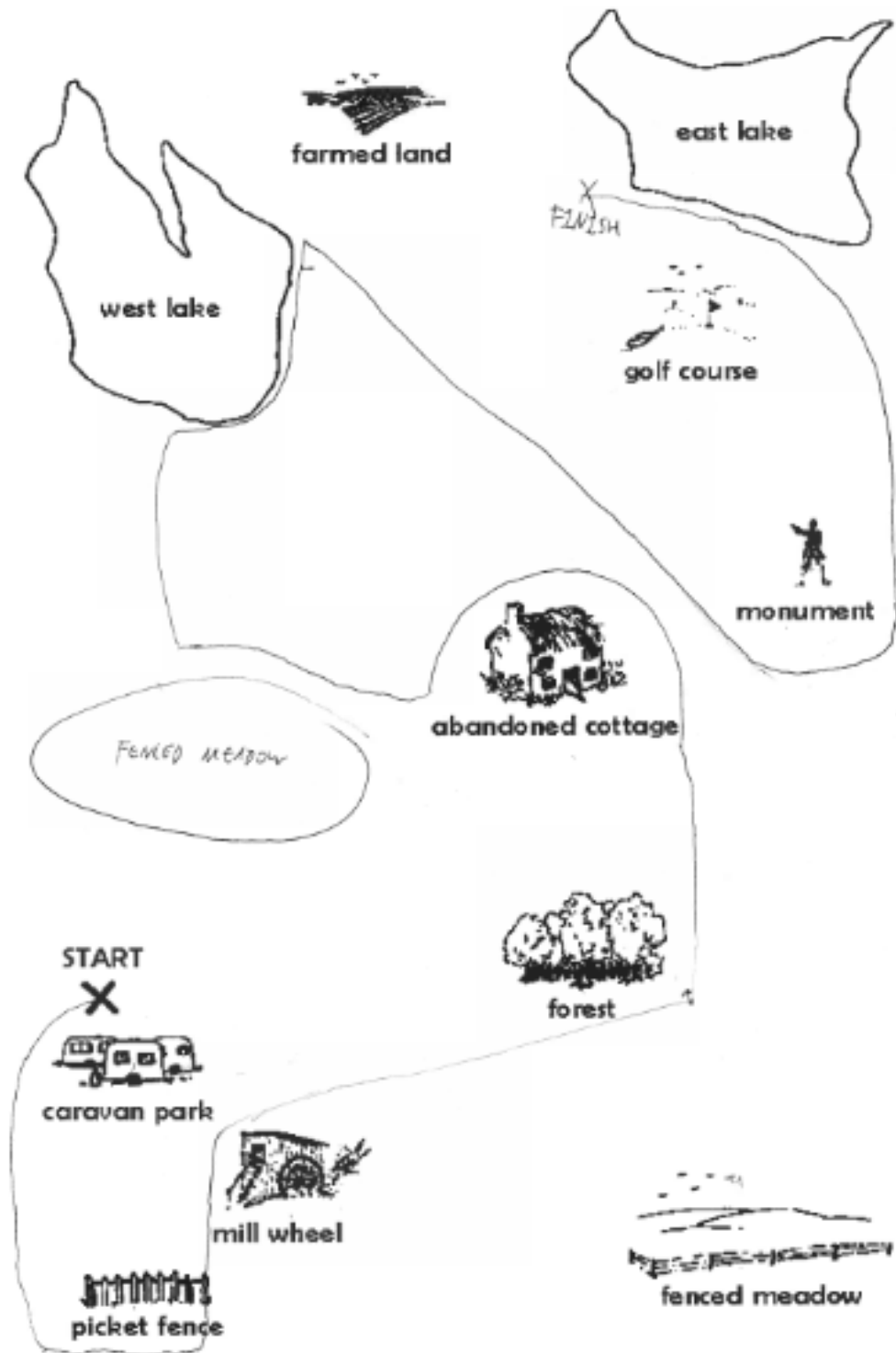
Signed: 

Date: 3/12/15

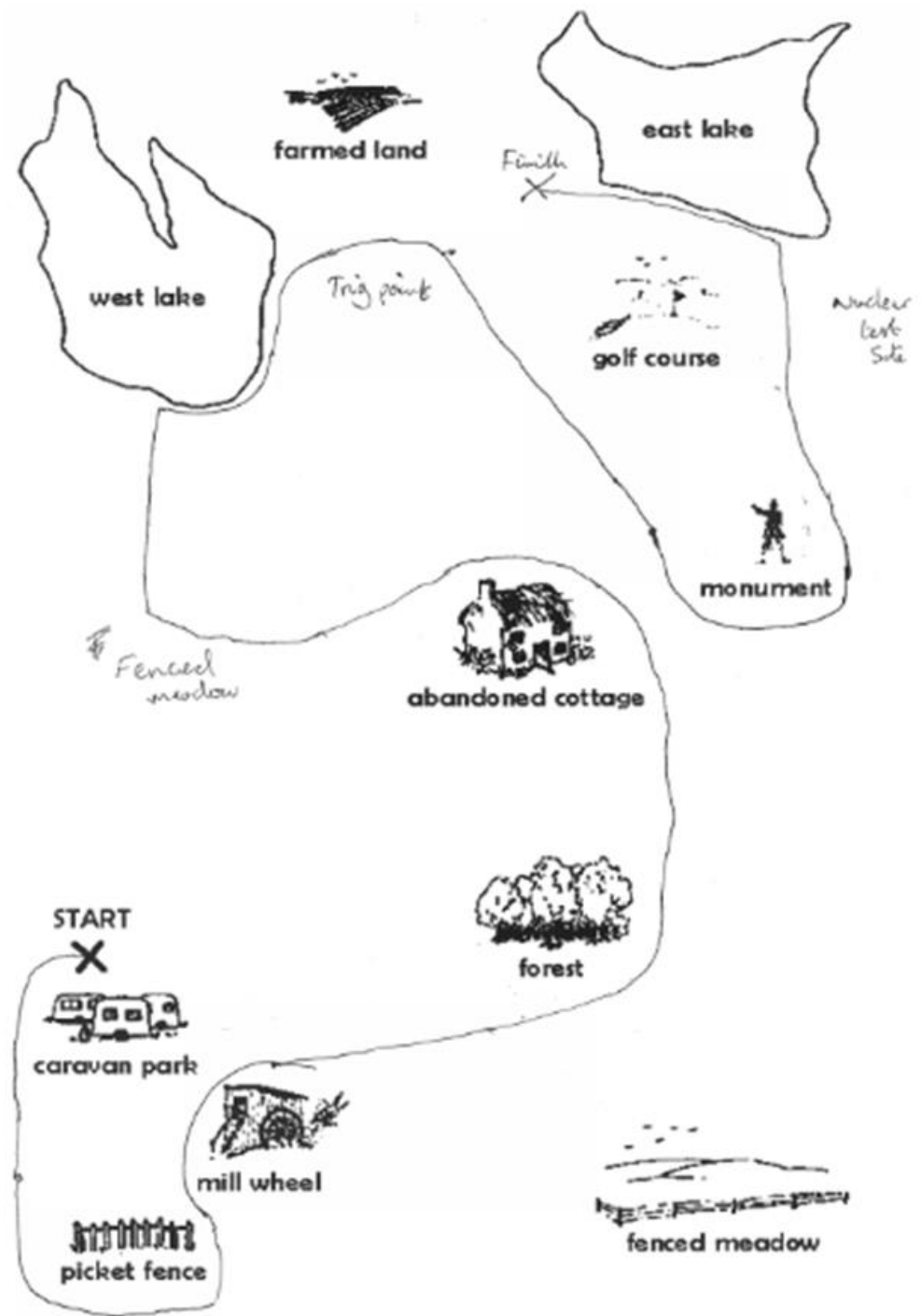
Appendix G

The instruction receivers' maps of groups one and two in stage one of data collection showing the reproduced route on the maps

(1) The map of the instruction receiver of group one



(2) The map of the instruction receiver of group two



Appendix H

The reflection of the four participants of groups one and two on working on the map task in stage one of data collection

Group One:

a) Instruction giver's reflection:

So, I guess when we started we probably should have just gone through the whole map and figured out what was on my map that wasn't on Ed's, I didn't have picket fence, forest or maybe golf course, I can't remember. So, it would have been useful because then you could've said go through the picket fence or go around the forest or whatever. So that might have been helpful.

Uuuu, I think the bit we struggled on was going from mill wheel to the right of forest or where I didn't know there was a forest there...because, it's... we could have just gridded it out I guess but it would've been easier to just say it's about twenty degrees or something, and then we could have yeah, gone straight to it.

Uuuuummm, I guess the lakes are quite helpful if the list didn't have the lakes, the list would have been much harder because we could use, the way they were shaped to where to go to on each lake and where to leave each lake. Whereas otherwise it would have been substantially more difficult because you wouldn't have been able to go around the bottom, you wouldn't have been able to say stop at this point or anything like that. Whereas not having a fence meadow and a mill wheel is kind of ok because you can just rely on the west lake and caravan park. Yah I guess that's almost everything, umm. Yeah.

Yeah having the names was quite good. Using the k in caravan park is a better reference than I don't know the wheel on one of the caravans because there's only on k. The same for the e in the cottage or the t in monument. So, it just makes it easier than relying on the pictures and then saying move so amount of distance away from the picture because everybody's idea of diff... distance is different right. So just yeah using the letters gives you a slightly more accurate place to go to on each of the pictures than saying go to pen... fence post number three in the fence meadow or something like that. Yeah there wasn't a point where I was like oh no. oh no I don't think there was a point where which was either oh no I'm completely lost I don't know where I'm meant to be on the map now.

Because if ever that happened you'd just backtrack to the last point you knew where you were and then carry on.

b) Instruction receiver's reflection:

Uumm yeah it was interesting. The little bits of confusion did come in where you had the sections where uuuuhh things didn't exist and trying to get sort of where you're supposed to be going, and where you're supposed to be going from, from things that don't exist on your map and so in relation to things the things that don't exist but especially the fenced meadow by the abandoned cottage, that was quite tricky, I think. Umm but yeah, I mean some of the instructions weren't so clear or at least I had different interpretations of what he was saying, so it was then just stopping and clarifying what exactly was being said. And to do that was trying to repeat back to him what I... what at least I'd interpreted umm from what he said. Umm yeah

Group Two:

a) Instruction giver's reflection:

So giving directions the first time I... it... it was a little bumpy at the start but the once I started thinking well North East South West was probably the way to go that that made things easier as opposed to left and right and bottom and top.

Umm, yeah uh I tried avoiding distances even doing maths I... I... I... wasn't really sure how much a centimetre is uh guessing uh hehem (laugh)... so yeah uh i... it worked really well. Uh I felt the challenge went quite well.

Ok yeah yeah so uh with relation to the...the wording uh that's used on the, on the maps there I think most of the wording was uh fairly consistent uh I mean there was one difference in the mill wheel and the uh and the mill and uh and even at this... but I can't actually... I... I mean they looked to be in the same position but for all I know one could be slight north of the other so I might have gone through one uh alright uh but otherwise the... the wording is... is very helpful I mean i... i... if the wording hadn't been there it might, this challenge might have been a lot harder. I mean ...uh cause it would have been a case of describing what I might of called a a field uun someone else might have called a meadow for example. So uh I think that the wording makes the challenge uh uh a little

easier in that respect uh a as oppo cause um especially when there's different landmarks on different maps.

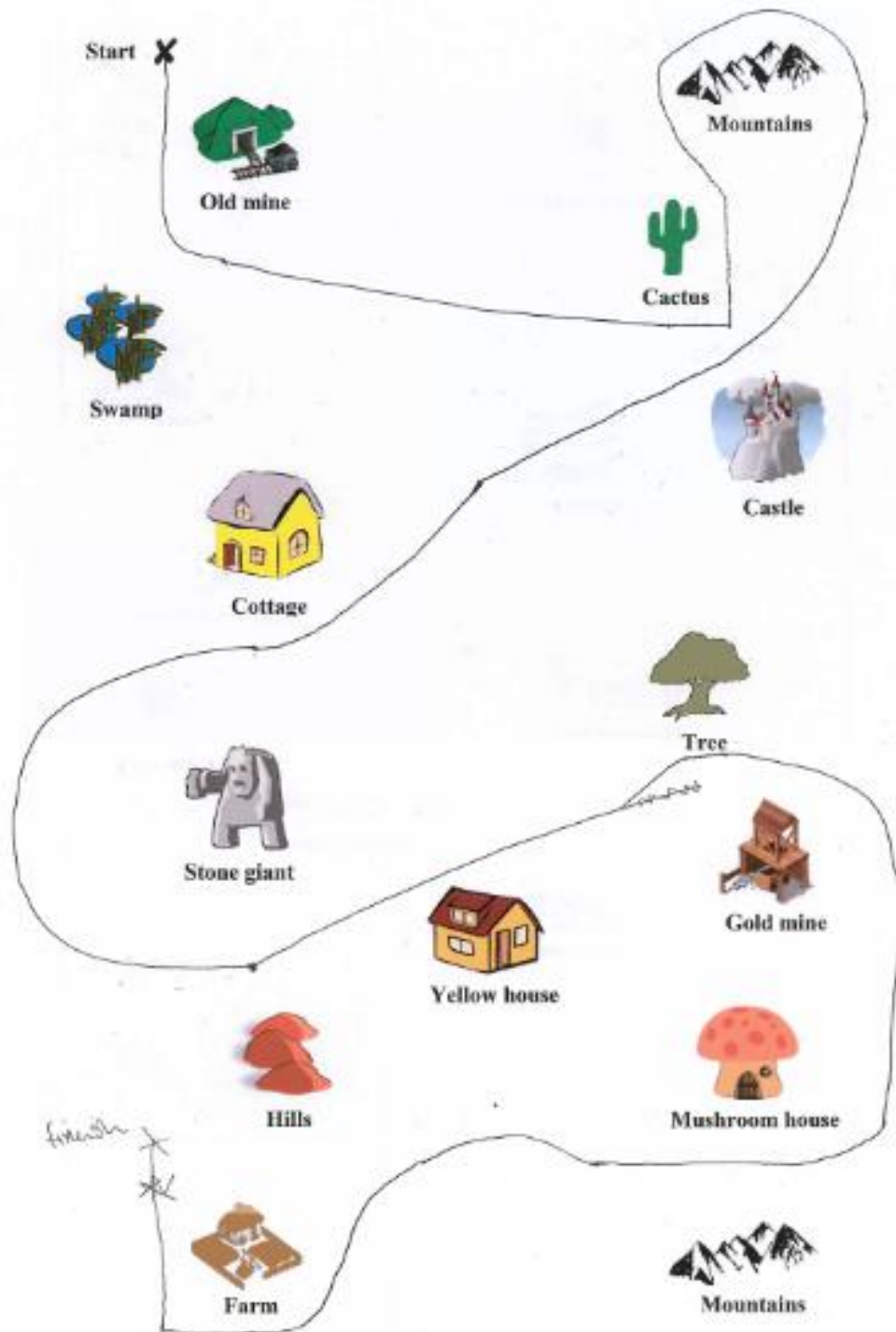
b) Instruction receiver's reflection:

Um, the instructions were clear, um it was a little bit difficult with us both having different maps to have a look at and some places, um landmarks were on my map but weren't on the other map. Um, and also uh directing someone um past landmarks that you can't see but once, once we um, could pinpoint where they were in relation to the ones that we had it became a little bit easier to direct from the start point to the finish point. Um, it, I'm not sure if we were supposed to use um in centimetres or how far along but I think that um,... um I think that we worked together well in um getting to the finish point, um and um and I'm glad it didn't take too long.

Um the wording I think helped, um although yes, they were called different things on the map, and some were mi... some things were missing, um i... i... it worked out quite well because we could see where they were in relation to other things uh and they did help us to get to our destination.

Appendix I

A sample of one of the instruction givers' map of stage two of data collection illustrating the reproduced route



Appendix J

The 59 Marked Themes used in the 12 map task dialogues/ marked Themes are emboldened

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
Group One	IG1	54) so horizontally it's about half way up the caravan park
	IG1	58) horizontally it's to the right just to the right of the abandoned cottage
	IG1	123) ok so to the right of west lake probably one centimetre may be one and half there is a trig point
	IR1	/
Group Two	IG2	169) so on mine it's called an old mill
	IG2	177) on mine I have got a fenced meadow
	IG2	183) so on mine it goes uh I suppose in an easterly direction or to the left er to the right.
	IG2	191) ok so on mine there is a fenced meadow
	IR2	198) next to west lake I have farmed land just to the right of West Lake
	IG2	201) yeah, so in a sort of north er south direction of west lake there is a place called trig point here
	IG2	235) so er on the map have you got a monument?
	IR2	284) well, just below the mill wheel the old mill mine is called the mill wheel, there is a picket fence to the um south west of the old mill
Group Three	IG3	347) so from the mountains we end up on the right you know <unclear word> the far side of the mountains to... to the left or nearer side of the castle
	IG3	356) so left of the castle what's on your map?
	IR3	409) ok so at that point I would be kind of middle of the page, I think
	IR3	412) ok so for me that's kind of <unclear word> by the stone giant, I think
Group Four	IR4	471) so on the left column it goes start, old mine, swamp, cottage, stone giant, hills, farm
	IG4	494) so on my map there is like the old mine and the swamp
	IG4	496) but before the hills and the farm there is a forest
	IG4	513) right under miner kind of almost parallel but little lower than the swamp I have rocks

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
	IR4	606) directly above the mushroom house there is a gold mine
Group Five	IG5	672) well, on mine it's on the top left hand corner there is an old mine
	IG5	677) next to the old ...old mine what have you got?
	IR5	678) (a) to the right of the old mine I have mountains (b) and below I have a swamp (c) and diagonally I have a cactus
	IR5	747) so under my swamp I have a cottage a little like a little yeah cottage
	IR5	759) (a) slightly up from the cottage I have a castle (b) and then slightly down from the cottage I have a tree
	IR5	788) from the cottage to the castle it was horizontal up
	Group Six	IG6
IG6		930) so in line with the yellow house on the bottom of the page, there is duck pond
IR6		946) so then like directly beneath that I've got a stone giant
Group Seven	IG7	1028) and then to the right of the old mine do you have miner?
	IR7	1042) and then below the cactus I have a castle
	IG7	1060) over the castle I don't have a cactus
	IR7	1126) so directly across from the mushroom house almost to...to the other side of the page but not quite I have hills
	IR7	1129) and then below the hills I have a farm
	IG7	1130) to the right of the farm I have a duck pond
	IG7	1139) and then um under the farm scoop up to the left
Group Eight	IG8	1155) and then to the right of the old mine there is a miner
	IR8	/
Group Nine	IG9	1239) and then from there <unclear words> it comes straight across the mountains
	IR9	1250) and then underneath castle I have tree
	IG9	1264) from that position it curves up and around forest which
	IR9	1340) so from the start it goes right down under the mine

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
Group Ten	IR10	1374) and then below that (elided: I've got) the cottage
	IR10	1396) on the left hand side I've got the ma... the old mine, a swamp the... there is a cottage, a stone giant
	IR10	1402) and then on the right hand side, the mountains are in line with the old mine
	IG10	1443)and then um just below that um it starts to curve left
Group Eleven	IG11	1483) ok well, to the right of the old mine on my map there is ...a....a guy chiselling away and he is called miner
	IR11	1484) so to the right of the old mine I have mountains and a cactus
	IG11	1514) and then on my map there is a... symbol just down and left of your cottage called forests
	IR11	1515) down and left I have a stone giant
	IG11	1516) ok with your stone giant I want... you... need to make like a 'C' shape around it quite a big 'C' about two thumbs heights
	IG11	1546) on mine it's directly below the yellow house
Group Twelve	IG12	1567) ok Tim at the very top left hand side of your... of your map, is there something that says old mine?
	IG12	1588) and then from that out comes a blue not dotted line
	IR12	1664) so at the moment the route I've got so far is just above the castle coz you said dropped dram... dramatically down from mountains
	IR12	1718) yeah I think from tree we can see where we go then
	IR12	1737) ok ok so from there we're looking at sort of err one o'clock um area from where we are to the yellow house

Appendix K

The script of the map task dialogues of the 12 groups in which marked Theme was used. In the script the numbering continues throughout the dialogues; the clause that contains the marked Theme is emboldened and marked Theme is underlined

The Dialogue of Group One

- 1) IG: so you should have a map with you which is ere... a caravan park, old mill, and all that thing [yeah]
- 2) IR: [yeah]
- 3) IG: ok so the start point... have you got a start point marked on yours?
- 4) IR: just above the caravan park
- 5) IG: yeah, that's right ok so it snakes left and then stop when you get to the c of the caravan park at the bottom of that [yeah]
- 6) IR: [yeah]
- 7) IG: ok now it comes almost vertically down er staying about a centimetre or so away from the left edge to probably I guess two centimetres above the top edge above the bottom edge, sorry
- 8) IR: ok
- 9) IG: so now you should be in the bottom left corner, yeah
- 10) IR: yeah
- 11) IG: ok now it comes right, till it's in line or just shorter off the bottom of the old mill, so come right until you are in the left edge of the old mill, and then go up
- 12) IR: old mill
- 13) IG: do you not have old mill?
- 14) IR: no
- 15) IG: ah!
- 16) IG: ok so there is an old mill to the bottom right of the caravan park
- 17) IR: ok
- 18) IG: so may be just put a circle or something, it's probably... if you circle...
- 19) IR: [ok yeah ok I have got a mill wheel], yeah
- 20) IG: [you got a mill wheel]
- 21) IR: yeah
- 22) IG: that's fine, then

- 23) IR: where I am going from the bottom left corner
- 24) IG: go right until you come level with the mill wheel to the left edge of the mill wheel
- 25) IR: ok
- 26) IG: and now go up until you come to the top of the caravan park the k in the caravan park
- 27) IR: k in caravan park, yeah
- 28) IG: and then just curve off those edges a bit because they are not straight and it's gonna be the same for all the edges actually, so we'll just do that at the end, we'll just get you get you there, do you have abandoned cottage on yours?
- 29) IR: yes
- 30) IG: excellent, so you should be at the top left of the mill wheel
- 31) IR: yeah
- 32) IG: you need to go diagonally so you are in line with the abandoned cottage, and then the diagonal stops at about half way to the height of the caravan park, does that make sense?
- 33) IR: half way to the height of the caravan park
- 34) IG: yeah, so caravan park is some amount high
- 35) IR: so it's only about... it's only a short distance then
- 36) IG: so it's quite long but it's quite sho... like short... high twice
- 37) IR: yeah
- 38) IG: yeah, have you got that?
- 39) IR: half way to the top of the caravan park
- 40) IG: yeah, until you come to the right of the abandoned cottage
- 41) IR: ok
- 42) IG: so you should have a diagonal line that goes till about three quarters way across the page
- 43) IR: so I am going to all way towards the abandoned cottage
- 44) IG: no ok, so if you get your pen
- 45) IR: yeah
- 46) IG: and do a dot, half way to the height of the caravan park, and to the edge of the cottage, so if you square it off like that
- 47) IR: yeah
- 48) IG: and then just join the... old... bottom left corner of the old mill and that dot together and you will have a diagonal line

- 49) IR: start again, I am on... I'm on line... the k of the caravan park, I'm on, I'm at the top right of the mill wheel of the old mill
- 50) IG: yeah
- 51) IR: yeah
- 52) IG: and what we want is a diagonal line that goes from there to somewhere in the right, which I am going to tell you where it ends
- 53) IR: yeah
- 54) IG: **so horizontally it's about half way up the caravan park**
- 55) IR: horizontally
- 56) IG: vertically
- 57) IR: yeah
- 58) IG: **horizontally it's to the right just to the right of the abandoned cottage**
- 59) IR: ok
- 60) IG: and then you should just join the diagonal and it should be quite shallow but quite long
- 61) IR: yeah
- 62) IG: great, ok so now we are at the right there and you want come up till you're at the top of the abandoned cottage so just... it is basically a straight line that curves a little bit
- 63) IG: so if you just take... take your pen and go to the corner that you've just done and just curve it in a natural way till you're at the top of the cottage
- 64) IR: yeah
- 65) IG: and now you are at the top of the cottage about midway through the page
- 66) IR: yeah
- 67) IG: great, so now it curves again, in a... do you have a fenced meadow?
- 68) IR: yes
- 69) IG: great, and it's just to the left of the abandoned cottage
- 70) IR: no
- 71) IG: ah brilliant, so but... so your caravan park is on the bottom left, your abandoned cottage is in the middle and your old little mill wheel is bottom right of the caravan park, yeah
- 72) IR: yeah
- 73) IG: great, and the fenced meadow is where
- 74) IR: bottom right

- 75) IG: oh, I have got two, ok so I've also got a fenced meadow diagonally left from the abandoned cottage, so it's probably two centimetres across and two centimetres down, and it is the same size as the one in the bottom right
- 76) IR: yeah, ok
- 77) IG: so if you got two centimetres across and two centimetres down
- 78) IR: yeah so where I am going from the abandoned cottage then
- 79) IG: you want go to the bottom right corner of the fenced meadow
- 80) IR: I am going round the top of the
- 81) IG: yeah so you are going round the top of the abandoned cottage to where my fenced meadow is which I will [try to explain to you]
- 82) IR: [ok]
- 83) IR: ok
- 84) IG: so have you got a circle for fenced meadow on yours?
- 85) IR: I've drawn one, yeah
- 86) IG: yeah great, ok so you're at the bottom right... the top right corner of the fenced meadow
- 87) IR: yeah
- 88) IG: great, now snake it left and up slightly ever so slightly until you are about three quarters of the way to the left... of the left of the fenced meadow
- 89) IG: so you are about a quarter of the way into the fenced meadow
- 90) IR: ok
- 91) IG: yeah
- 92) IR: yeah
- 93) IG: ok now do you have a west lake?
- 94) IR: in the top left
- 95) IG: top left yeah, ok so you see how... there is like a pointy bit on the left corner
- 96) IR: top left corner
- 97) IG: bottom left corner
- 98) IR: yeah
- 99) IG: and then it sort of comes circularly and does a little jutty bit in
- 100) IR: it's got like a w, that was three is three, yes, it's fine I see
- 101) IG: yeah ok, so come to the top of that jutty bit... come to the bottom, so there is a little jutty in bit at the bottom of the west lake
- 102) IR: um

- 103) IG: where it meets at the right come up
- 104) IR: it's jutting bit at the bottom of the west lake
- 105) IG: yeah
- 106) IR: ok
- 107) IG: is your west lake a different picture to mine?
- 108) IR: no, it is... no... fine
- 109) IG: mine is like a v
- 110) IR: it is fine, keep going
- 111) IG: ok, and then just come round the west lake
- 112) IR: round the left hand side
- 113) IG: right hand side, sorry
- 114) IR: right hand side yeah, how far
- 115) IG: so does yours eventually... it goes kind of flat on the right hand side
- 116) IR: yeah
- 117) IG: quite high up and then it goes diagonally left
- 118) IR: yeah
- 119) IG: comes before just it starts going flat on the right hand side
- 120) IR: yeah
- 121) IG: do you have a thing called trig point?
- 122) IR: no
- 123) IG: **ok so to the right of west lake probably one centimetre may be one and half there is a trig point**
- 124) IR: ok [is it diagonally right]
- 125) IG: [it's] sorry
- 126) IR: is it diagonally right?
- 127) IG: no, it's... it's in line with the bottom of
- 128) IR: ok
- 129) IG: so if you circle there,
- 130) IR: yeah
- 131) IG: and then come cir... come round... curve it round again around the top of that circle for about I guess a centimetre and half across
- 132) IR: yes
- 133) IG: then, do you have a monument?
- 134) IR: um, my monument by the abandoned cottage

- 135) IG: yeah to the top right of it yeah
- 136) IG: yeah yeah
- 137) IR: yeah
- 138) IG: ok so now you just draw a diagonal about a half centimetre to a centimetre from the bottom of the monument to the point we were just at (cough), sorry
- 139) IR: yeah
- 140) IG: ok now curve it round the monument until you get to the t in the word monument
- 141) IR: yeah
- 142) IG: and do you have a nuclear test site?
- 143) IR: no
- 144) IG: ok so above the monument
- 145) IR: yep
- 146) IG: up and right it's probably two centimetres up and it starts where the t in monument finishes
- 147) IR: ok
- 148) IG: just put a circle there
- 149) IR: yeah
- 150) IG: and you want come left around that circle and then up to the west lake up to the east lake, sorry
- 151) IR: to the bottom right corner of the east lake
- 152) IG: till not to the bottom right hand corner but about half way down
- 153) IR: ok ok
- 154) IG: ok and then just come around the bottom of the easts lake just follow it round until you are about a centimetre away from that bottom left corner
- 155) IR: yeah
- 156) IG: and put a cross that is the finish, aft... actually do you have farmed land?
- 157) IR: yes
- 158) IG: ok so it is only the two things that are different three things trig point nuclear site
- 159) IR: do you have anything <unclear words> have we finished that?
- 160) IG: yes, we have finished that's it I think that... that's it.

The Dialogue of Group Two

- 161) IG: ok so Ashtar do you have the start point and finish point at least?
- 162) IR: Ah, I have the start but I don't have the finish
- 163) IG: ok so er so the start is somewhere near the bottom left... well may be a third up on the left, right
- 164) IR: er I don't know what further up the on the left would be, [I got...]
- 165) IG: [no, about third] of the way up
- 166) IR: a third of the way up, well I've just got that the starting point is a caravan park
- 167) IG: ok so yeah, so that's about right yeah, um ok so do you have the old mill which is er... just below the caravan park and to the right?
- 168) IR: er... yeah mill wheel [is that right?]
- 169) IG: [ok] yeah **so on mine it's called an old mill**
- 170) IR: ok
- 171) IG: so the route I have starts just above where it's got caravan park and it loops to the left and down
- 172) IR: ok
- 173) IG: and then it comes... it goes all the way... it goes down most of the page then loops up around the old mill with the mill below the route, did that make sense?
- 174) IR: um, sort of, so it loops to the left and down, and it goes around the old mill
- 175) IG: yeah, with the old mill below the route
- 176) IR: old mill below the route, ok
- 177) IG: ok so er on the bottom right... of the... of the sheet there should be er... **on mine I have got a fenced meadow**, have you got anything in this [area?]
- 178) IR: [yeah] I have fenced meadow too
- 179) IG: ok um, do you see abandoned cottage on your map?
- 180) IR: I do, yeah
- 181) IG: er is that about in the centre of the map?
- 182) IR: it is, yeah

- 183) IG: yeah, ok so where you so... let's say that your route is at the top of the old mill at the start, uh... at this point **so on mine it goes uh I suppose in an easterly direction or to the left er to the right**
- 184) IR: ok
- 185) IG: and it goes to just above the fenced meadow, and then it goes up past the abandoned cottage on the right of the abandoned cottage
- 186) IR: so up... towards the abandoned cottage on the right, [yeah]
- 187) IG: [on the right] and then it goes over the abandoned cottage and down again a little bit, just a little bit
- 188) IR: ok
- 189) IG: and then there should be... is there another fenced meadow there for you?
- 190) IR: no, there isn't
- 191) IG: **ok so on mine there is a fenced meadow**, it's about say halfway up the page on the left hand side
- 192) IR: ok
- 193) IG: and... the route goes above the fenced meadow so it... so ir... goes above the abandoned cottage down a little bit and then it comes back up
- 194) IR: ok
- 195) IG: ok so do you have the west lake?
- 196) IR: I do, that's above now
- 197) IG: yeah, do you have trig point?
- 198) IR: no **next to west lake I have farmed land** [which is to the right of west lake]
- 199) IG: [err] to the west of er... oh er sort of above... [so sort of the north east direction of west lake]
- 200) IR: [yeah, that's right]
- 201) IG: **yeah, so in a sort of north er south direction of west lake there is a place called trig point here**
- 202) IR: [ok]
- 203) IG: [so] ... may be just put like a mark there to indicate because the... the route till now go... it will hit the shore line of west lake, it's... sort of southerly points...
- 204) IR: ok
- 205) IG: and then it will go... follow the coast line round but avoiding this trig point
- 206) IR: ok

- 207) IG: and then it goes above trig point and it heads in in... a south easterly direction, do you want me to repeat that?
- 208) IR: yeah, one second
- 209) IG: ok
- 210) IR: so... hits the southern part of...of west lake
- 211) IG: [follow the coast line]
- 212) IR: [follow the coast line]
- 213) IG: it follows the coast line, I mean just around so where so... I indicate this trig point it ...just sort to the the... south east
- 214) IR: ok
- 215) IG: and it goes around this trig point
- 216) IR: ok
- 217) IG: uh then it goes in a... in a south easterly direction around trig point
- 218) IR: so is... where this farm land... where is trig point in regards [to that then?]
- 219) IG: [it]... it's directly south of the... farmed land
- 220) IR: er right ok <unclear words>
- 221) IG: oh sorry
- 222) IR: that's ok so trig point is south of that you said
- 223) IG: yeah so it's it's... south of the farmed land and it's east of the west lake, but sort of more south east
- 224) IR: ok ok so then ...so say it again, so we follow the coastline, we go past trig point
- 225) IG: yeah, so above trig point
- 226) IR: above trig point
- 227) IG: and then and then the route goes very much in a straight line in a... south easterly direction
- 228) IR: er
- 229) IG: ok is... does that... make sense?
- 230) IR: hold on, so we've gone pa we've gone... do we go all the way up around the coast line?
- 231) IG: not all the way up, it just sort of goes past trig point, and then it turns around there
- 232) IR: ok so we turn around trig point and where do we head?

- 233) IG: south east
- 234) IR: south east, and what we are heading towards
- 235) IG: **so er on the map have you got a monument?**
- 236) IR: I have, yeah
- 237) IG: yeah, so is that sort of in the middle of the page on the right?
- 238) IG: er it is the furthers thing I have on the page on the right
- 239) IG: er er
- 240) IR: and it is... it is in the middle yeah, because I have east lake and the golf course above it
- 241) IG: ok I haven't got a golf course on mine, where's the golf course?
- 242) IR: it's just below east lake
- 243) IG: er sss... in the sou...south of east lake
- 244) IR: yes, kind of a little bit to the west, but still south of east lake slightly to the west
- 245) IG: ok, so because I've got a nuclear test site on mine
- 246) IR: and where is that?
- 247) IG: that is south of east lake again but it's more to the south east
- 248) IR: ok
- 249) IG: so er... so er you got monument, haven't you?
- 250) IR: yeah
- 251) IG: its north of the monument but to the east of it slightly
- 252) IR: ok I have got you, ok
- 253) IG: ok so the route goes south east, and it goes around the monument and below the monument
- 254) IR: ok
- 255) IG: and then it comes up, and if you've indicated where the nuclear test site is, the route now comes around the monument but by passes the nuclear test site on the left
- 256) IR: ok
- 257) IG: and I assume it goes around your golf course er following up to the coast of east lake
- 258) IR: so the nuclear test site should be on my left as it past it, is that right?
- 259) IG: no no sorry, should be on the right sorry, my left and right is not very good

- 260) IR: that's ok, so that the nuclear test site will be on my right and past the golf course you said
- 261) IG: yeah, the golf course I assume then will be on the left and then it hits... it hits the east lake co... er coast line
- 262) IR: yeah
- 263) IG: and then the finish point er is just sort of to the west of the east lake coast so if your... if your route hits the coast line
- 264) IR: yeah
- 265) IG: and then you go west from there
- 266) IR: yeah
- 267) IG: if you've just er instead of following the coast line round when it turns to go north
- 268) IR: yeah
- 269) IG: if you just go straight maybe a centimetre er er you finish
- 270) IR: right so just before, did you have farmed land?
- 271) IG: so it... it... it's... er it's to the south east of the farmed land
- 272) IR: ok, that's fine
- 273) IG: and... and that's it, so shall we talk that through once more before [finalizing it]
- 274) IR: [yeah]
- 275) IG: so let's go back to the start, so the caravan park's to the south of the start point
- 276) IR: yeah
- 277) IG: and then the route goes around the caravan park a bit and down south, and then it loops around the old mill
- 278) IR: yeah
- 279) IG: er going above the old mill it then goes in aa... an easterly ss...direction
- 280) IR: yeah
- 281) IG: and then it goes up past the abandoned cottage
- 282) IR: ok
- 283) IG: were there any landmarks there that I might er... that weren't on my map sorry I never asked
- 284) IR: er **well, just below the mill wheel** the old mill mine is called the mill wheel, there was a picket fence to the um south west of the old mill

- 285) IG: to the south
- 286) IR: west but we didn't go anywhere near that on our route
- 287) IG: to the south west
- 288) IR: yeah
- 289) IG: oh, it well it might have done because mine I... I... I probably didn't mention that the route goes quite a bit south, so it probably loops around your er what did you call it, picket fence?
- 290) IR: yeah, because it went above the old mill, didn't it? and then easterly towards where the fenced meadow is
- 291) IG: it went straight up yeah, then went straight up and around the top of the abandoned cottage
- 292) IR: that's right
- 293) IG: then it avoided the next is there... was there a fenced meadow to the... the east of the abandoned cottage?
- 294) IR: mine didn't have one, but I wrote it down
- 295) IG: and then it went above the fenced meadow there
- 296) IR: towards the west lake
- 297) IG: and then... then it went north towards the west lake
- 298) IR: mmhmm
- 299) IG: and then it followed the coast line around this trig point that I indicated
- 300) IR: yeah, that's right
- 301) IG: er avoiding the farmed land and then it went down to the south east around this monument
- 302) IR: yeah
- 303) IG: and then I avoided the nuclear test site and... and the golf course and went in between them
- 304) IR: and then it was on the left you just... just follow the east lake round, and it was between er east lake and farmed land
- 305) IG: yeah, so it is closer to the east lake than the farmed land but yes
- 306) IR: ok yeah, that's fine, I think I got the same point on the map
- 307) IG: ok, I think that's it

The Dialogue of Group Three

- 308) IG: so, we're at the start
- 309) IR: yeah
- 310) IG: um, and below the start is the old mine
- 311) IR: yeah
- 312) IG: and we go around the old mine, and then we meet the miner
- 313) IR: do you say there is a miner?
- 314) IG: there is a miner [err]
- 315) IR: [I don't have a miner] that is the only issue, I am missing things
- 316) IG: so there is a miner in between the old mine and the mountains
- 317) IR: ok
- 318) IG: and we go in between the miner and the mountains to go above the mountains
- 319) IR: ok, is the miner kind of right in the middle or is it?
- 320) IG: yeah, he is right [in the middle]
- 321) IR: [yeah]
- 322) IG: between the old mine and the mountains, and we go to the right of him, so we go past the old miner and then up above the mountains
- 323) IR: yeah, ok I got that
- 324) IG: and then below the mountains, is a castle, do you have a castle on yours?
- 325) IR: yes, I do
- 326) IG: ok and on... on the left of the castle are some rocks
- 327) IR: don't have that [(laugh)]
- 328) IG: [ok]
- 329) IR: I got the cottage and [a swamp just above it]
- 330) IG: [I...] I don't have a cottage [um]
- 331) IR: [yeah]
- 332) IG: I think, where your cottage is must be near where my rocks are
- 333) IR: ok
- 334) IG: um, do you have a forest?
- 335) IR: no [(laugh)]

- 336) IG: [ok] so we kind of may be go down um down diagonally left from the mountains
- 337) IR: so we go round the mountains, then we go down diagonally left
- 338) IG: yeah yeah
- 339) IR: do you have a cactus?
- 340) IG: I do not have a cactus, I have a tree
- 341) IR: is... is like between the mountains and the castle, [almost in the middle] but just kind of little bit to the left
- 342) IG: [yes, so you kind of]
- 343) IG: [ok]
- 344) IR: [that's... that's what I... so you]
- 345) IG: ok
- 346) IR: I was trying to work out how should I go around the cactus if I... if I should... should like go between it or not?
- 347) IG: so... **so from the mountains we end up on the right you know <unclear words> the far side of the mountains, [to... to the left or nearer side of the castle],** and then you say you have the swamp
- 348) IR: [yeah]
- 349) IR: yes
- 350) IG: um so we go pretty much close to the swamp, but underneath it, if the swamp is just below under the old mine on your map
- 351) IR: is not directly below, but is kind of just under the line
- 352) IG: yeah...[yeah ok]
- 353) IR: [and a] little bit to the left as well, so
- 354) IG: yeah, so that's the same place really, so what we are trying to do, is trying to go down diagonally left to the castle um, near what is on my map is um the rocks but you don't have that
- 355) IR: no
- 356) IG: um so.... **so left of the castle what's on your map?** so the castle is on the far side
- 357) IR: yeah, the castle is on the right
- 358) IG: yeah

- 359) IR: then on the far side like on the left is the swamp, and then below that and slightly to the right is the cottage
- 360) IG: ok
- 361) IR: I don't have any rocks
- 362) IG: right
- 363) IR: so
- 364) IG: so I think, the cottage must be in between the swamp and the rocks on mine and then there is a forest underneath the cottage, I imagine
- 365) IR: I've got a stone giant
- 366) IR and IG: (laugh)
- 367) IR: right let's... let's go back to the mountains ... where are... are we going from the mountains?
- 368) IG: so if we go um down and diagonally left from the mountains,
- 369) IR: yeah
- 370) IG: so we end up on the other side of the castle, and then we so... so we end up pretty much below the castle,
- 371) IR: <unclear words>
- 372) IG: but only kind of just below what it says castle
- 373) IR: ok alright, let's ok, hold on, I am about to do some scribbling out there, we are
- 374) IG: and then we come back around what is the rocks in mine up towards the swamp, but still below the swamp never go round the swamp
- 375) IR: ok I will go like around the cottage then above the cottage, but like around <unclear words> the swamp
- 376) IG: it might be below the cottage
- 377) IR: um I don't not <unclear words> oh, it's so hard to do, but like if I am going under the cottage then I feel like do a really weird a loop to stay under the swamp and then go down again [to get to the end] so I don't know if I should get above it or not.
- 378) IG: [ok... ok yeah so]
- 379) IG: you said it would do a weird loop if you go above it
- 380) IR: yeah
- 381) IG: I'd [say...]
- 382) IR: [no, if I go if I go below it] and still wanna go kind go up to the swamp

- 383) IG: ok so... so stay... stay above it then
- 384) IR: ok
- 385) IG: um
- 386) IR: so yeah, I am at the swamp now
- 387) IG: right so... so... so what things do you have on your map that will be an interesting one?
- 388) IR: um, I will do it like descending
- 389) IG: ok
- 390) IR: a cottage kind of on the left
- 391) IG: yeah
- 392) IR: then a tree on the right
- 393) IG: ok
- 394) IR: then stone giant, gold mine, yellow house, mushroom house, farm and then more mountains
- 395) IG: ok, so I have the tree, I have the yellow house, I have the mushroom house, I have the hills um I have a farm um so... so where we are at the moment, we just come... we are by the swamp
- 396) IR: mmhmm
- 397) IG: so do if we go down from the swamp
- 398) IR: [yeah]
- 399) IG: [to the point where] we kind of parallel to the tree
- 400) IR: ok
- 401) IG: so that we are underneath the tree
- 402) IR: how far like into the middle is this? [is it still quite far at the left?]
- 403) IG: [um]
- 404) IG: kind of just on the right side of the swamp is where it goes down on my map
- 405) IR: ok, that's cool, so I've gone down
- 406) IG: yeah
- 407) IR: so you say we are kind of parallel to the tree
- 408) IG: yeah, in between the tree and the yellow house kind of that way
- 409) IR: **ok so at that point I would be kind [of middle of the page], I think**
- 410) IG: [ok]
- 411) IG: ok so... so the idea is to be going down on the left side at the moment, so
- 412) IR: **ok so for me that's kind of [by the stone giant], I think**

- 413) IG: [ok]
- 414) IG: and then it goes across right on this map to the middle of well, to in between the yellow house and the tree right to the other side of the map
- 415) IR: ok so that's kind of by my gold mine
- 416) IG: right, so that's kind of a straight line there
- 417) IR: ok
- 418) IG: from... from the um from where was parallel to the tree [to the other side of the tree]
- 419) IR: [yeah]
- 420) IR: mmhmm
- 421) IG: in between the yellow house and the tree
- 422) IR: yeah
- 423) IG: and then, there's well... and then it goes straight down past the mushroom house after it goes to the trees
- 424) IR: ok
- 425) IG: so it goes on the right side of the mushroom house
- 426) IR: by the right side of the mushroom house, ok and after that
- 427) IG: after that it turns left underneath the mushroom house um but there is a duck pond on this map which isn't on your map
- 428) IR: ok where is that in relation to the farm?
- 429) IG: it's directly right of the farm
- 430) IR: ok and is it directly under the mushroom house or d' you reckon it's between my farm and mountains?
- 431) IG: it's kind of... it's... is parallel well it's um is in line with the yellow house
- 432) IR: yeah
- 433) IG: and is directly right of the farm
- 434) IR: ok [ok] not a... my mountains are underneath the mushroom house so I think, it's probably between the farm and the mountains, am I going underneath the duck pond?
- 435) IG: [so is kind of where these two meet]
- 436) IG: you go above the duck pond,
- 437) IR: oh, above the duck pond
- 438) IG: but then underneath the farm
- 439) IR: ok

- 440) IG: so in between the duck pond and the farm and then to the finish you basically go underneath the farm and to the finish on the...on the left there
- 441) IR: ok I don't have a finish
- 442) IG: you don't have a finish point
- 443) IR: sign sadly but um
- 444) IG: ok so um... I so... the finish point is um basically if you were to draw a diagonal line down from the hills and up from the farm um to... to the left of each
- 445) IR: yeah
- 446) IG: so if you were to draw um... to draw a line diagonally up and left from the farm and down and left from the hills it's basically where these two would meet or also kind of a um... there's probably an easier way to explain that actually um but it's... it's diagonally up from the farm if you were to follow that that line on the gate of the farm up.
- 447) IR: yeah
- 448) IG: so... so you know you it's already on a diagonal line there
- 449) IR: ok
- 450) IG: maybe if you'd follow the diagonal line from the top of the house that's so... so you've got of... the roof of the house.
- 451) IR: ok
- 452) IG: has a diagonal line on it
- 453) IR: yeah
- 454) IG: if you were to follow that up where it meets um the.... the text for the mushroom house and the hills if you were to draw a straight line from there that's where the finish is basically.
- 455) IR: oh, ok that helps, right I just draw a little line <unclear words> so I can get it um I think I've got it
- 456) IG: that's good, I think that's it then
- 457) IR: yeah, I hope so

The Dialogue of Group Four

- 458) IG: so, um what do you have at the top of your map?
- 459) IR: um, I got on the left a start location and on the right some mountains
- 460) IG: ok, some mountains err is there anything else um on the left of the mountains?
- 461) IR: um no, there is... there is an old mine just below the start location
- 462) IG: ok...ok is there anything between the old mine and the mountains?
- 463) IR: no not here no
- 464) IG: ok, because I have a miner between the old... right in the middle between the old mine and the mountains but a little bit closer to the mine
[than the mountains]
- 465) IR: [ok]
- 466) IG: [um and then...]
- 467) IR: [ok I am drawing one]
- 468) IG: yeah
- 469) IR: ok
- 470) IG: and then um so what do you have below kind of on the next?
- 471) IR: well, I got kind of two columns, a left and a right column. And then... **so on the left column** it goes start old mine, swamp, cottage, stone giant, hills, farm
- 472) IG: ok
- 473) IR: ok
- 474) IG: so I don't have... I have a swamp, I don't have cottage and I don't have... what was the other one?
- 475) IR: stone giant
- 476) IG: a stone giant I don't have [that]
- 477) IR: [hills, farm]
- 478) IG: I don't have hills or farm
- 479) IR: they are um distributed pretty much evenly so
- 480) IG: across... sort of under... so the swamp is on the left side
- 481) IR: yeah, well um they've... they're directly underneath the old mine
- 482) IG: ok so they... they just go down
- 483) IR: yeh
- 484) IG: so swamp and then a...a... and then what's up beneath swamp?

- 485) IR: cottage
- 486) IG: cottage
- 487) IR: and then stone giant
- 488) IG: cottage and then stone giant and then beneath that?
- 489) IR: um, hills and a farm
- 490) IG: ok, I see, ok I actually do have the hills and a farm, but I wasn't looking that far down [ok great]
- 491) IR: [ok, that's good]
- 492) IG: do you have a forest near the stone giant?
- 493) IR: no
- 494) IG: ok so between... ok let's see... I'm trying to think what's the best way to do this, um so between the swamp... ok... **so on my map there is like the old mine and the swamp**
- 495) IR: [ok]
- 496) IG: [and then] I don't have the cottage but I wrote that in there, and I don't have the stone giant, **but before the hills and the farm there is a forest but a bit more to the right like directly under the old mine, but [to the right of the swamp]**
- 497) IR: [ok]
- 498) IR: so that's... that's pretty much the same location as the cottage is, I think
- 499) IG: ok.
- 500) IR: um so it's hard to tell whether the cottage or the forest comes first like in terms of the um page if you divided it in half
- 501) IG: yeah
- 502) IR: then the cottage would sit just on the top of that half way line
- 503) IG: ok
- 504) IR: so where does the forest sit?
- 505) IG: the forest is definitely on the left side
- 506) IR: yeah
- 507) IG: a... just on the left side of the half way line
- 508) IR: but in terms of how far up it is
- 509) IG: um it's... so do you have rocks?
- 510) IR: no, I don't have rocks too
- 511) IG: I have rocks right under miner, so miner would be kind of in the middle of the page, right

- 512) IR: yeah yeah
- 513) IG: **right under miner kind of almost parallel but little lower than the swamp I have rocks**
- 514) IR: ok
- 515) IG: is that right above the cottage that would be nearer the cottage should be probably because point it's [coz right in the halfway]
- 516) IR: [yes, let's just...]
- 517) IR: let's just <unclear words> up and right of the cottage
- 518) IG: do you have yellow house?
- 519) IR: yeah yeah
- 520) IG: ok so the cottage is above the yellow house
- 521) IR: yes, quite a long way of the yellow house
- 522) IG: ok so the forest is probably...
- 523) IR: I am just wondering whether the... we got... we got some shared locations
- 524) IG: yeah maybe we should figure out all the things that we share
- 525) IR: and also I am assuming that they are in the same place, but that's not necessary true
- 526) IG: that's true
- 527) IR: ok um
- 528) IG: ok so we can talk about the... the relationship between the ones that we share then... so you have old mine
- 529) IR: yeah yeah
- 530) IG: you have a miner
- 531) IR: well, I have drawn a miner now, yeah
- 532) IG: oh so ok mountains... do you have, mountains?
- 533) IR: yeah.
- 534) IG: do you have... do you have a swamp?
- 535) IR: yeah
- 536) IG: you don't have rocks
- 537) IR: I don't
- 538) IG: do you have a castle?
- 539) IR: yes
- 540) IG: do you have... you don't have a forest
- 541) IR: no

- 542) IG: do you have a tree?
- 543) IR: I do have a tree
- 544) IG: you do, do you have a yellow house?
- 545) IR: yeah
- 546) IG: do you have a mushroom house?
- 547) IR: yes
- 548) IG: do you have hills?
- 549) IR: yes
- 550) IG: do y... you have a farm
- 551) IR: yes
- 552) IG: and you have a duck pond
- 553) IR: I don't have a duck pond
- 554) IG: ok ok so um may be if you've explained the relationship between all the ones that you have that I have the ones I just listed to make sure that they are in the same places
- 555) IR: ok so starting from the bottom of the page farm is in the bottom um sitting to the left
- 556) IG: ok mmmhmm that's the same as me
- 557) IR: hills directly above it
- 558) IG: ok yeah
- 559) IR: and then mushroom house is on the same line um, I can't never remember which one is longitude and which one is latitude like you know what I mean
- 560) IG: yeah, but... but it's...
- 561) IR: is like is like I am saying line
- 562) IG: aha
- 563) IR: but on the right hand side
- 564) IG: ok so it's on the right that's the same as me what's called that latitude
- 565) IR: ok
- 566) IG: I don't know if that's right or not
- 567) IR: and then
- 568) IG: that's <unclear words> I've got yellow house half way in between them and sit above them
- 569) IG: ok yeah, it's the same for me

- 570) IR: and there is I guess a bit of a break and then tree is kind of above mushroom house but offset to the left just slightly
- 571) IG: yes, same for me
- 572) IR: and about half way down the page, then castle is above that and offset to the right
- 573) IG: castle is above that to the right, yeah
- 574) IR: and then we've already talked about that old mine and the swamp which are underneath the start
- 575) IG: yeah and the swamp is offset to the left
- 576) IR: yeah, yeah ok <unclear words>
- 577) IG: ok so it's exactly the same... the thing that I have done you have... you have mountains
- 578) IR: I got one set of mountains at the top right and then one set of the mountains at the bottom right underneath the mushroom house
- 579) IG: oh underneath the mushroom house, my mountains... ok...
- 580) IR: ok what else you've got the... the pond where is the... at?
- 581) IG: ok so the duck pond is to the right of the farm on the same level as the farm between hills and mushroom house.
- 582) IR: ok
- 583) IG: does that make sense?
- 584) IR: yes
- 585) IG: ok and then um so I am... I am guessing the mountains would be on that same sort of level as the farm.
- 586) IR: ok
- 587) IG: ok what... ok and then you have hills, you have mushroom house, tree so the next one to so there's two, so you know where the miner is
- 588) IR: yeah
- 589) IG: the only two left that I haven't explained I have are rocks and forest so the rocks are between the swamp and the castle
- 590) IR: ok
- 591) IG: but not quite they are right in the middle but a little bit above the castle and a little bit below the swamp
- 592) IR: ok

- 593) IG: so kind of yeah if you were to do like tac-toe to with the swamp and the castle and the rocks being [a diagonal line-ish]
- 594) IR: [yeah I've drawn it]
- 595) IR: and then where's the forest again?
- 596) IG: and then... the forest is below the swamp um but offset to the right about one space
- 597) IR: ok so that's the same place of where the ca... cottage is so we got
- 598) IG: yeah
- 599) IG: I think <unclear words> is the sw.... is the cottage right below the swamp or is it to the right?
- 600) IR: um it's to the right
- 601) IG: it's to the right so I think it might be in the sameish place forest ok. What... what do you have that I don't have?
- 602) IR: um so underneath between ... um halfway between the mountains and the castle,
- 603) IG: mmhmm
- 604) IR: but offset to the left a little is a cactus
- 605) IG: a cactus, oh! Wow! that's strange
- 606) IR: **directly above the mushroom house there is a gold mine**
- 607) IG: above
- 608) IR: yeah
- 609) IG: a gold mine kind of next to the yellow house
- 610) IR: um yes a little um not... not really to be honest it's halfway between the mushroom house and the tree
- 611) IG: ok
- 612) IR: but it's off to the right a little
- 613) IG: to the right ok a gold mine
- 614) IR: great and then we've also got the uh cottage which is probably the same place to forest and the stone giant which is half way between where your forest is and where your hills are
- 615) IG: the stone giant is halfway between the forest and hills is it on the same plain the same is it right between the forest and hills or is it offset to the left?
- 616) IR: it's right between them, yeah

- 617) IG: it's right between them so oh ok, so now I have a stone giant, a cactus, a gold mine, more mountains, so anything else?
- 618) IR: um no that's it
- 619) IG: ok ok so now for figure out how to get from the start to the finish so aa do you have a start and a finish?
- 620) IR: I don't have a finish point
- 621) IG: ok the start is right above the gold mine, right
- 622) IR: yeah
- 623) IG: so you're gonna go... aa... draw a line between the old mine and the swamp
- 624) IR: ok
- 625) IG: and then you go to the right
- 626) IR: yeah
- 627) IG: and you are going to go between the rocks and the miner
- 628) IR: ok
- 629) IG: and then above the miner and around the mountains
- 630) IR: oh hang on I am not sure
- 631) IG: ok
- 632) IR: so um
- 633) IG: so there... there is a miner...
- 634) IR: when... when I go above the miner, do I pass to the right or to the left of the miner?
- 635) IG: to the right so you are going to go above and around the mountains.
- 636) IR: great
- 637) IG: and then you'll go down and you pass in between the castle and the cactus
- 638) IR: ok
- 639) IG: and then you'll go down and keep going and you pass under the rocks
- 640) IR: ok
- 641) IG: and then you'll go um up around the cottage and the forest between the swamp and the cottage and the forest
- 642) IR: ok
- 643) IG: and go around there and then you'll pass it looks like right directly through the stone giant
- 644) IR: ok
- 645) IG: maybe I guess maybe you want to go around it so go above it

- 646) IR: yeah
- 647) IG: I guess
- 648) IG: and then you'll be going down you will be going right across right above the yellow house
- 649) IR: ok
- 650) IG: to the right and then you... you go um under the tree,
- 651) IR: oh ok, um and above the gold mine
- 652) IG: yes, you are above the gold mine um and then so... so where is the gold mine in relation to the mushroom house?
- 653) IR: it's directly above it and offset to the right just a little bit
- 654) IG: ok so you're gonna go between the tree and the gold mine
- 655) IR: yeah
- 656) IG: and you're gonna go down beneath the gold mine around the mushroom house between the mushroom house and the mountains
- 657) IR: ok so I am going to pass in to the right of the gold mine to the right of the mushroom house then underneath the mushroom house
- 658) IG: yes, above the mountains. I think the only one I wasn't quite sure about is the relationship with the gold mine but anyway I think that worked and then um you go above the mountains around the duck pond above the duck pond,
- 659) IR: yeah
- 660) IG: and then around it and then beneath the farm,
- 661) IR: ok
- 662) IG: and then up a bit till you are almost back up to the hills but not quite and that's the finish
- 663) IR: great
- 664) IG: so now do want to see <unclear words> guide...
- 665) IR: yes <unclear words > um I think we're done
- 666) IG: yeah, I think so

The Dialogue of Group Five

- 667) IG: ok we start, right, do you want to um direct or be directed first?
- 668) IR: I think, you've to direct me because I have nothing on my map
[other than pictures]
- 669) IG: [oh, you said I have nothing on my map] ok then
- 670) IG: alright, um well, the lines on my map are sort of curvy and bendy but I think I can direct you using sort of straight lines as it were
- 671) IR: ok
- 672) IG: so I am starting at the ... **well, on mine, it's on the top left hand corner there is...i... an... old mine**
- 673) IR: yeah
- 674) IG: so you go down, and then you turn to the right, and sort of go diagonally up a bit and you should go back past a miner (long pause) do you have a miner? [to... to] the right of your old mine
- 675) IR: [no]
- 676) IR: I have an old mine and then I have mountains, on the right and then like swamp and cactus
- 677) IG: ah, ok so um, I guess I need to get you to the X at the bottom rather than... than... ok, alright, so you go... **next to the old ...old mine what have you got?**
- 678) IR: um, **to the right of the old mine I have mountains and below I have a swamp and diagonally I have a cactus**
- 679) IG: oh, ok so they're complete different layout ok so um right you go below the old mine, and then you go right, and we still on the sort of top line of the paper or picture as it were
- 680) IR: let me get a pencil
- 681) IG: ok
- 682) IR: ok so you start by the old mine and then kind of go right
- 683) IG: and you go right and
- 684) IR: above or below the old mine?
- 685) IG: um go right say you start slightly above the old mine
- 686) IR: yeah
- 687) IG: go down to the left of it and then go right underneath it
- 688) IR: yeah

- 689) IG: and go on a slight diagonal
- 690) IR: diagonal up or down?
- 691) IG: up
- 692) IR: ok
- 693) IG: two thirds or so across the paper
- 694) IR: ok
- 695) IG: and then you go up
- 696) IR: do you go up over the landmark on ... the right?
- 697) IG: um no
- 698) IR: ok
- 699) IG: not yet you go up sort of two third of the way across the paper and then round to the right and ... have you got a landmark on your right hand corner?
- 700) IR: yes
- 701) IG: so you go over that landmark
- 702) IR: over to the left or to the right?
- 703) IG: over to the right so you're kind a quite close to the right hand side of the paper
- 704) IR: ok
- 705) IG: and then you oh one, two....
- 706) IR: do you have a landmark immediately below the mountains? the landmark at the top right?
- 707) IG: no, do you?
- 708) IR: yes
- 709) IG: right, I think you're gonna have to draw through that because after that once you go that past the top right landmark
- 710) IR: yeah
- 711) IG: you then need to go diagonally left about four inches and you might be underneath another landmark or you might not
- 712) IR: yeah do you have one underneath the old mine?
- 713) IG: err no, I have one slightly to the left
- 714) IR: yeah
- 715) IG: but where you had what did you have to the right of your old mine?
- 716) IR: mountains
- 717) IG: so and have you got a landmark underneath the moun[tains]?

- 718) IR: [yes] a cactus
- 719) IG: ok so if you go underneath that
- 720) IR: under the ca... cactus
- 721) IG: yes
- 722) IR: ok
- 723) IG: and then go um almost about an inch and a half to the left but slightly up
- 724) IR: ok
- 725) IG: a slight diagonal and then a ... do you a.... do you have a landmark underneath that?
- 726) IR: underneath the cactus?
- 727) IG: underneath where you just got to
- 728) IR: um kind I'm ...I'm kind of in the middle of the page at the moment
- 729) IG: ok so you need to keep going into your sort of two thirds across
- 730) IR: kind of under the old mine
- 731) IG: yeah
- 732) IR: ok yeah I have one diagonal down just a little bit to the left of the old mine
- 733) IG: ok well if you go up over that
- 734) IR: ok
- 735) IG: you might have to draw through it because mine's uh mine' s... sort of almost directly underneath and then you just go down straight down about two inches
- 736) IR: do you have a landmark und.... to underneath almost the swamp to the old mine because I have a cottage underneath my swamp
- 737) IG: ah no my swamp is sort of floated about to the left of the page and it's not... it's obviously a different place than yours
- 738) IR: yeah mine is on the left but is like right under the old mine
- 739) IG: ah mine is a bit to the left so actually so that line you should've gone up should've been ...that's coming down the page should be underneath the swamp
- 740) IR: underneath the swamp
- 741) IG: yeah
- 742) IG: or slightly to the right but definitely under it
- 743) IR: so under swamp but slightly to the right ok
- 744) IG: and then you go down one, two, say three inches [straight down]
- 745) IR: [ok]

- 746) IG: but it's slight curve at the top and the bottom and then have you got any
[mar....]
- 747) IR: [yeah **so** **under my swamp** **I have a cottage a little like a little yeah**
cottage
- 748) IG: ok so you've gone over the cottage, have you? And under the swamp
- 749) IR: my swamp is above my cottage
- 750) IG: yeah
- 751) IR: yeah so I've gone down by the right of the swamp but I'm currently kind of
by the cottage.
- 752) IG: ok so you need to go past the cottage
- 753) IR: underneath it?
- 754) IG: to the left... to the... r... right or left.... left of it
- 755) IR: ok so I am going underneath into the.... ok yeah just to the left ok I am with
- 756) IG: and then if you've stopped there and looked to the right,
- 757) IR: yeah
- 758) IG: have you got any more landmarks?
- 759) IR: yeah, **slightly up from the cottage** **I have a castle** **and then slightly down**
from the cottage **I have a tree**
- 760) IG: ok well my castle is somewhere different so wherever you are, you now
need to go on a very slight gradient um diagonally one, two, three, four, five inches
- 761) IR: up?
- 762) IG: aa yeah very slight gradient up
- 763) IR: so kind of going by the line we drew under the second line mark on the right.
- 764) IG: yes
- 765) IR: ok so go round that landmark?
- 766) IG: um yeah well I 'd just draw the line straight, it might actually go through the
landmark cause I think they are in such positions that.... I don't know whether their
positions to be in the way. Anyway you get about fourth fifths across the page
- 767) IR: yeah
- 768) IG: on the right hand side and you should be oh just under half way down the
page, I guess-ish
- 769) IR: yeah I kind If I go down, I would be... be
- 770) IG: ok I think it's vaguely in the right place so then do you have any landmarks
<unclear words> where you've ended up, have you got any landmarks below you?

- 771) IR: I have a tree
- 772) IG: ok so you need to go I don't know how far across your tree is
[you'd need...]
- 773) IR: [it's almost directly underneath the landmark above it]
- 774) IG: [ah ok]
- 775) IR: [slightly to the left]
- 776) IG: alright so you need to go past that what you need to do is... go down on a
slight curve sort... sort of hugging the right hand side of the page.
- 777) IR: yeah
- 778) IG: four inches and then you should be about
- 779) IR: so go underneath that landmark
- 780) IG: yes
- 781) IR: ok four inches straight down and you should be about an inch or so from the
bottom of the page
- 782) IR: no
- 783) IG: oh where are you?
- 784) IR: about in the middle of the page
- 785) IG: oh ok um well if you back track to the line you've just drawn
- 786) IR: ok
- 787) IG: what... what was the last horizontal line you drew?
- 788) IR: horizontal like... **from the cottage to the castle it was horizontal up**
- 789) IG: ok
- 790) IR: like diagonally up
- 791) IG: yeah and then
- 792) IR: and then
- 793) IG: ok
- 794) IR: I went vertically down
- 795) IG: right I guess just go further down
- 796) IR: ok
- 797) IG: and then you need to go to the left
- 798) IR: so how far from the bottom are we?
- 799) IG: about an inch
- 800) IR: is... is like... do you have um a landmark at the very bottom of the page
- 801) IG: yeah, I've got one it's... it's not flash at the bottom; it's few cm up.

- 802) IR: yeah so do I go...
- 803) IG: go over that
- 804) IR: so on top of that one
- 805) IG: yeah
- 806) IR: ok
- 807) IG: and then um once you've sort of reached the peak of going over it you then
need to go diagonally down
- 808) IR: down
- 809) IG: yeah to the left
- 810) IR: so do you have a landmark at the very bottom of that column?
- 811) IG: yeah I do. I've got a farm
- 812) IR: I have a farm
- 813) IG: ah right so you go under the farm and loop up to the left about a cm or so
above the top of the farm and that's the end
- 814) IR: ok. So have... do you have a landmark ab... between... above the farm?
- 815) IG: I've got some hills
- 816) IR: yeah I've got some hills
- 817) IG: alright, it's the bottom
- 818) IR: so how close to the hills?
- 819) IG: at the ba... at about an inch to the left of the hills and at the base of the hills
- 820) IR: ok
- 821) IG: and you're there
- 822) IR: ok
- 823) IG: ok

The Dialogue of Group Six

- 824) IG: you want just to start
- 825) IR: yeah let's just get to work
- 826) IG: ok right so it starts just above the old mine
- 827) IR: yeah
- 828) IG: and goes between the old mine and the swamp
- 829) IR: ok, straight down or like curvy?
- 830) IG: um... s... s... slight curve
- 831) IR: ok like to the left
- 832) IG: Um, like slight curve around the outside of the old mine
- 833) IR: Ok
- 834) IG: oh and, my swamp, is like diagonally down and left from the old mine
- 835) IR: oh yeah the same
- 836) IG: ok, good
- 837) IR: right, I am underneath the old mine
- 838) IG: right um ... and then it goes up to the like the miner
- 839) IR: the min... I don't have a miner
- 840) IG: oh, I have got a miner that's to the right of the old mine
- 841) IR: I've got like a gap and then mountains
- 842) IG: yeah, it sort of... like ... the miner is like half way between the two
- 843) IR: Ok, I will just gonna ... like put him there and hope that's right, right ok, so where about?
- 844) IG: so it goes to the bottom in the miner and then to the... so if you imagine that the miner is basically in the same position as the old mine apart from maybe like a couple of millimetres up, [and like in the same...]
- 845) IR: [yeah]
- 846) IG: so if you imagine it occupying like the same amount of space on the page
- 847) IR: ok
- 848) IG: so it goes <unclear words> the bottom right corner and up to the top right corner
- 849) IR: so it goes around the miner
- 850) IG: yeah
- 851) IR: yeah

- 852) IG: and then goes across to the top of the mountains but like so to the far side
- 853) IR: yeah
- 854) IG: so all like [circle around the right] side of the mountains
- 855) IR: [yeah]
- 856) IR: yeah
- 857) IG: ok, um, do you have a castle below the mountains?
- 858) IR: n... yeah, I got a cactus in between though
- 859) IG: Oh (laugh)
- 860) IR: that's exiting
- 861) IG: Um, what's your cactus in line with?
- 862) IR: Um, like the very edge of the mountains and then the edge of the castle
- 863) IG: Is it in line with the swamp or the rocks going across?
- 864) IR: It's just above the swamp
- 865) IG: Just above the swamp, ok um... then my line looks like (laugh) is going through the cactus (laugh) [um]
- 866) IR: [through the cactus]
- 867) IG: well if I am right on where I think the cactus is (laugh)
- 868) IR: am I go [like...]
- 869) IG: [um]... so like ... my line basically goes kind of like in a smooth like gradual curve from the side of the mountain to under the rocks.
- 870) IR: I don't have any rocks
- 871) IG: the rocks are below the miner
- 872) IR: yeah
- 873) IG: and left of inside the <unclear words> from the castle
- 874) IR: that might be where my cactus is I might have cactus instead of rocks
- 875) IG: is your... inyour castle at the edge of the page? I am really confused
- 876) IR: yeah it's on the right
- 877) IG: yeah the rocks are like in the middle of the page
- 878) IR: oh ok so my cactus is a little bit more to the right of the <unclear words>
- 879) IG: yeah
- 880) IR: ok so to go above the rocks....
- 881) IG: ok so do you have a forest?
- 882) IR: no
- 883) IG: ok that seems (IR and IG: laugh)

- 884) IR: so does it go like around the rocks?
- 885) IG: yes, so it goes like diagonally down and left from the mountains
- 886) IR: [yeah]
- 887) IG: [and then] it stops sort of where the bottom of the castle is
- 888) IR: ok
- 889) IG: and the rocks are just above that
- 890) IR: I am confused (IG: laugh) I think I am lost... like I've gone around the mountains and then I've gone above my cactus and then I've drawn some rocks.
- 891) IG: ok so go below the rocks with your line
- 892) IR: what... so the...it doesn't go above the rocks
- 893) IG: it goes below the rocks
- 894) IR: aha ok [I'll cross it out ok]
- 895) IG: [(laugh)]
- 896) IR: yeah I've done that
- 897) IG: ok and then it curves slightly up and to the left until it's pretty much below like the old mine and almost near the starting point
- 898) IR: alright ok so yeah so near the swamp
- 899) IG: yeah
- 900) IR: ok I've done that
- 901) IG: um **and then sor... sort of below that there is the forest**
- 902) IR: oh I got a cottage beneath that
- 903) IG: may be the cottage is in the forest
- 904) IR: maybe <unclear words>
- 905) IG: um (laugh) so then the line continues like around the forest and the cottage
- 906) IR: yeah
- 907) IG: and, it comes out... do you have a tree and a yellow house?
- 908) IR: I've got.... yeah yeah
- 909) IG: um so it sort of stops like level with them but still on the left hand side of the page so like high twice, it's sort of between the tree and the yellow house
- 910) IR: yeah, [I've got that]
- 911) IG: [and then so...] it then goes across, so it... like straight across so it ends up just below the tree on the right pa... hand side of the page
- 912) IR: yeah, got that
- 913) IG: uh do you have a mushroom house?

- 914) IR: yeah
- 915) IG: ok so it goes down ... like pass ...
- 916) IR: I got a gold mine like in between the mushroom house and the tree, [so do I
need to go... does it go
- 917) IG: [oh]
- 918) IG: I assume it's going to the right [of the gold mine]
- 919) IR: [yeah it curves around that]
- 920) IG: yeah [um]
- 921) IR: [does it] go around mushroom house or is on top of the mushroom
house?
- 922) IG: it goes around the mushroom house. Um do you have a duck pond?
- 923) IR: no
- 924) IG: do you a farm?
- 925) IR: yes
- 926) IG: ok so the height of the line on the right hand side of the page is about the
middle of the farm
- 927) IR: so <unclear words> it dips right down
- 928) IG: yeah but not quite at the bottom in the farm but a little higher than that
- 929) IR: yeah
- 930) IG: but below the mushroom house um and then ... **so in line with the yellow
house on the bottom [of the page] there is duck pond**
- 931) IR: [yeah]
- 932) IR: yeah
- 933) IG: and so the line is sort of like heading in the direction in the farm but it has
to go up a little bit around the duck pond
- 934) IR: oh yeah so it goes up before the duck pond
- 935) IG: yeah so it just sort of follows the top of the duck pond
- 936) IR: um ok yeah
- 937) IG: and then goes below the farm
- 938) IR: oh yeah
- 939) IG: and then, it goes up around the left side of the farm to about level with the
bottom of the mushroom house
- 940) IR: yeah

- 941) IG: and that's the finish
- 942) IR: end, done it, I think um so have you got the stone giant?
- 943) IG: no
- 944) IR: he is beneath the cottage like... did not you have the cottage?
- 945) IG: your cottage was by my forest wasn't it?
- 946) IR: oh yeah yeah, **so then like directly beneath that I've got a stone giant**
- 947) IG: oh ok
- 948) IR: and then a bit further down from the stone giant like just past the yellow house, like there is um... straight down from the cottage, is the stone giant and to the right is the yellow house.
- 949) IG: yeah
- 950) IR: and then go back to underneath by the stone giant is some hills
- 951) IG: yeah I've got the hills
- 952) IR: you got them
- 953) IG: yeah
- 954) IR: yeah so that's where the stone giant is in line with those
- 955) IG: ok has your line gone below the stone giant
- 956) IR: yeah
- 957) IG: ok
- 958) IR: no has gone below the stone giant
- 959) IG: oh it should go below it
- 960) IR: do you think?
- 961) IG: if you ... wait is your stone giant in line with the yellow house?
- 962) IR: is just above the yellow house
- 963) IG: as in like in line with the tree
- 964) IR: just below the tree
- 965) IG: oh
- 966) IR: have you got the gold mine?
- 967) IG: no, [did you say that] it was above the mushroom house?
- 968) IR: [it's like...] is like in line with the gold mine. So now just my line need to be altered
- 969) IG: oh in case this line is like in line with like the gap between the tree and the yellow house
- 970) IR: mmmhmm confusing

- 971) IG: which sounds like (laugh) where your stone giant is
- 972) IR: <unclear words> the line allowed to go through the landmarks <unclear words>
- 973) IG: <unclear words> you won't be able to like go through the stone giant would you? So
- 974) IR: well <unclear words> to go through mmmhmm have you got the mountains at the bottom corner?
- 975) IG: no, I've only got mountains on the top corner
- 976) IR: oh I got them on the bottom corner. They are like just beneath the mushroom house
- 977) IG: oh ok
- 978) IR: um so, I am assuming that I go around the mushroom house but above the mountains [and then...]
- 979) IG: [but] are they like right below or is there like a gap and then that below?
- 980) IR: there is like little a bit like a two centimetres gap and then there is mountains
- 981) IG: ok they might all be above it then, it depends whether or not we know how long the two centimetres are
- 982) IG and IR: (laugh)
- 983) IR: I will get my ruler around um...well so it starts at the... you got the old mine
- 984) IG: yeah
- 985) IR: and then there was a miner
- 986) IG: yeah
- 987) IR: and then there is mountains
- 988) IG: yeah
- 989) IR: then I had a cactus
- 990) IG: yeah
- 991) IR: then there is rocks
- 992) IG: yeah
- 993) IR: then there is a swamp
- 994) IG: yeah
- 995) IR: then there is a cottage and a stone giant
- 996) IG: and a forest
- 997) IR: oh I need to draw the forest on. Would you say the forest was above the cottage?

- 998) IG: my... the top of my forest is in line with the bottom of my castle
- 999) IR: that's where my cottage is. Is it like underneath the swamp?
- 1000) IG: oh is underneath the old mine
- 1001) IR: that's where my cottage is, so there is a forest here too... right ok ... and then... there is a tree
- 1002) IG: oh! where is your tree? [Oh, on the other side] on the right side
- 1003) IR: [above the gold mine] I am following my <unclear word> that I have made
- 1004) IG: ok
- 1005) IR: and then I've got a tree and a gold mine and I go down a bit further and I got a mushroom house and a mountain... and then I've got a duck pond and a yellow house above it and I got some hills and a farm
- 1006) IG: yeah
- 1007) IR: is that everything?
- 1008) IG: yeah
- 1009) IR: and a castle which we didn't really go near it at all
- 1010) IG: yeah like a <unclear word> past it
- 1011) IR: yeah avoid that
- 1012) IG: yeah
- 1013) IR: I've drawn it all along
- 1014) IG: I've written the things
- 1015) IR: I've drawn [approximate circles] hopefully they are correct.
IG: [(laugh)]

The Dialogue of Group Seven

- 1016) IG: I am just looking at mine for the first time
- 1017) IR: ok and then you have [the actual]... and you have to tell me which way to go
ok
- 1018) IG: [I have the road yeah]
- 1019) IG: ok
- 1020) IG: do you have at the top of your paper the old mine?
- 1021) IR: yes
- 1022) IG: ok so just um above and to the left of that is where the road starts
- 1023) IR: above and to the left
- 1024) IG: yeah
- 1025) IR: ok
- 1026) IG: and then the road sweeps round down... down and underneath the old mine
- 1027) IR: ok got it
- 1028) IG: **and then, to the right of old mine do you have miner?**
- 1029) IR: no, I do not
- 1030) IG: ok um I have a picture of a miner that's to the right of old mine
- 1031) IR: ok
- 1032) IG: and um do you have the mountains?
- 1033) IR: I do the mountains are in like kind of top right [corner]
- 1034) IG: [yeah, yeah]
- 1035) IR: Is the miner is your miner [in the middle]
- 1036) IG: [the minor]
- 1037) IG: is kind of almost um directly in between the old mine and the mountains.
- 1038) IR: ok do you have a cactus?
- 1039) IG: no
- 1040) IR: ok
- 1041) IG: [um]
- 1042) IR: [I have]... I have the cactus which is just below the mountains on the right
and then below the cactus I have a castle
- 1043) IG: ok I have the castle but I don't have a cactus
- 1044) IR: ok

- 1045) IG: so the road goes underneath [the old mine] and then um kind of it's very curvy
- 1046) IR: [mmhmm]
- 1047) IR: ok
- 1048) IG: um and then slightly veers upwards until it's about three quarters of the way to the mountains
- 1049) IR: ok
- 1050) IG: and then it goes pretty much straight up
- 1051) IR: oh ok
- 1052) IG: and then right across to go around the mountains
- 1053) IR: so when you say around the mountains does it mean it goes above the mountains?
- 1054) IG: above and outside yeah the mountains
- 1055) IR: to all way to the right of the mountains
- 1056) IG: [yeah, that's] right
- 1057) IR: [I can do that] ok I can do that
- 1058) IG: and then it goes diagonally down through where your cactus is
- 1059) IR: ok so let's see I wonder should I go below the cactus and over the castle?
- 1060) IG: **over the castle I don't have a cactus**
- 1061) IR: ok, I am gonna go [over the cactus]
- 1062) IG: so do... [do you have rocks]
- 1063) IR: I have no rocks
- 1064) IG: oh ok
- 1065) IR: I have a swamp and a cottage on the far left
- 1066) IG: ok I have a swamp but no cottage
- 1067) IR: ok
- 1068) IG: the... the rocks are exactly half way in between the castle and the swamp
- 1069) IR: ok do I need to go below the swamp?
- 1070) IG: yeah well you need to go below the rocks
- 1071) IR: ok I have no rocks so
- 1072) IG: ok but they are halfway... in a straight line halfway between the castle and the swamp
- 1073) IR: ok
- 1074) IG: do you have forest?

1075) IR: no
1076) IG: ok
1077) IR: ok so... so we're going to go like I'm gonna go [below imaginary rocks] [for me] below the swamp.
1078) IG: [yeah] [yeah]
1079) IG: so that ...you're um kind of ... um you get to the same level as the bottom of the castle
1080) IR: ok and then
1081) IG: but in the middle of the page
1082) IR: in the middle of the page
1083) IG: yeah
1084) IR: so that would be below your rocks
1085) IG: yeah
1086) IR: ok I have a cottage which is I am going to say like if you look at your rocks which is kind of in the middle you said
1087) IG: mmhmm yeah
1088) IR: I am going to say that the... the... my cottage is at 8 o'clock if it was like [o'clock] it's like diagonally 8 o'clock [from the rocks] so
1089) IG: [ok] [ok]
1090) IG: well I have forest there
1091) IR: [ok ok] so where do I go in um pretend my cottage is [your forest] where do I go?
1092) IG: [yeah] [yeah]
1093) IG: above and then round to the left of the f... of... cottage.
1094) IR: ok so they go on so it starts above coming from the castle above the castle and then go back around go under the...
1095) IG: under the rocks
1096) IR: got it
1097) IG: and over the cottage and around to the left
1098) IR: ok ok got it
1099) IG: and then a big sweep down
1100) IR: ok
1101) IG: do you have a tree
1102) IR: I do have a tree

- 1103) IG: ok
- 1104) IR: ok good
- 1105) IG: yeah so then straight across the page to the bottom of the tree
- 1106) IR: straight across the page to the bottom of the tree. I got it. Is there a gold mine just below your tree?
- 1107) IG: no
- 1108) IR: ok. Is there a yellow house in the middle?
- 1109) IG: yes, there is
- 1110) IR: excellent
- 1111) IG: yeah so you've gone above the yellow a... house
- 1112) IR: I've gone above the yellow house and below the tree
- 1113) IG: yeah
- 1114) IR: ok
- 1115) IG: and then once you've gone past the tree, you go err um right to the right... right down to the um kind of the... the bottom of the page almost.
- 1116) IR: mmhmm
- 1117) IG: do you have a mushroom house?
- 1118) IR: I do have a mushroom house
- 1119) IG: yes, you have house, pass that down going down
- 1120) IR: do I go under the mushroom house or over the mushroom house?
- 1121) IG: under the mushroom house
- 1122) IR: ok wow ok under the mushroom house ok
- 1123) IG: do you have a duck pond?
- 1124) IR: no
- 1125) IG: ok
- 1126) IR: **so directly across [from the mushroom house] almost to the other side of the page but not quite, I have hills**
- 1127) IG: [aha]
- 1128) IG: yeah I have them too
- 1129) IR: ok good, **and then below the hills I have a farm**
- 1130) IG: yes, so do I. Um... **to the right of the farm, [I have a duck pond] on... on the same level**, you go over the duck pond but under the farm.
- 1131) IR: [mmhmm]
- 1132) IR: ok do you have mountains on the bottom right?

- 1133) IG: no
- 1134) IR: oh ok ok. Where is your duck pond?
- 1135) IG: below the yellow house and to the right of the farm
- 1136) IR: ok so you want me to go over the duck pond but under the farm
- 1137) IG: yeah
- 1138) IR: ok and then where am I going?
- 1139) IG: **and then um under the farm scoop up to the left** and finish just to the
bottom um um about an inch to the left of the hills
- 1140) IR: an inch to the left of the hills and then write finish [in here] and then must go
up and then put an X ok.
- 1141) IG: [yeah]
- 1142) IG: yeah
- 1143) IR: perfect
- 1144) IG: ok I think we're done.

The Dialogue of Group Eight

- 1145) IG: ok um so you're starting in the top left corner
- 1146) IR: ok
- 1147) IG: just above the old mine
- 1148) IR: yeah
- 1149) IG: um so go past the old mine towards the bottom of the map and turn left and then keep going straight past the miner.
- 1150) IR: what? What? How? ... Pass the old mine
- 1151) IG: yeah so you've kind of gone round two sides of the old mine
- 1152) IR: ok
- 1153) IG: does that make sense?
- 1154) IR: maybe
- 1155) IG: really hard to describe without... **and then to the right of the old mine there is a miner**
- 1156) IR: is there? I can't see one
- 1157) IG: are there some mountains to the right of the old mine?
- 1158) IR: ok I see the mountains
- 1159) IG: ok so turn left just before the mountains
- 1160) IR: <unclear words>
- 1161) IG: and then go round the top of the mountains and back down the other side
- 1162) IR: ok
- 1163) IG: um and then you should see some rocks below the mountains to the left of it
- 1164) IR: no
- 1165) IG: and a castle
- 1166) IR: a castle, I can see the castle
- 1167) IG: ok [so come down the map] to the right hand side of the castle towards the forest
- 1168) IR: [yeah]
- 1169) IR: ok may be
- 1170) IG: so when you get just above the forest
- 1171) IR: yeah
- 1172) IG: head towards the left hand side of the map and go down the left hand side of the forest

- 1173) IR: I don't have a forest though I have a tree
- 1174) IG: oh um maybe the tree is in the forest
- 1175) IR: ok so I am going.... Where am I going after the forest/ tree?
- 1176) IG: oh there is a tree further down on my map sorry I didn't notice that and so you go round the forest and head back to the other side of the page underneath the tree
- 1177) IR: underneath ok
- 1178) IG: and once you get just past the tree you turn right and go to.... Towards the bottom of the page again
- 1179) IR: right
- 1180) IG: and you should pass a mushroom house
- 1181) IR: yeah
- 1182) IG: and um so turn towards the left hand side of the page again
- 1183) IR: the left okay
- 1184) IG: pass the duck pond
- 1185) IR: um should I have a duck pond?
- 1186) IG: ok
- 1187) IR: I have a swamp, no
- 1188) IG: no, I don't have the swamp either
- 1189) IR: ok
- 1190) IG: ok so head towards the farm then
- 1191) IR: [the farm] towards the farm
- 1192) IG: [do you have the farm?]
- 1193) IG: and then circle underneath the farm
- 1194) IR: circle underneath the farm yeah
- 1195) IG: and back up the... left hand side [of the farm] to just below the hills
- 1196) IR: [yeah]
- 1197) IR: just below the hills ok
- 1198) IG: and then you finished
- 1199) IR: ok

The Dialogue of Group Nine

- 1200) IG: err so the starting point is in the top left by the er old mine and... directly above the swamp
- 1201) IR: uh ok yeah
- 1202) IG: I don't know which ones your gonna have and which ones you're not gonna have
- 1203) IR: no, that's fine, top left directly
- 1204) IG: yeah, so
- 1205) IR: there is nothing above it
- 1206) IG: nothing above it, no
- 1207) IR: ok
- 1208) IG: um and it's sort of... it's uh loops down underneath the old mine.
- 1209) IR: ok, where's the old mine [to you]?
- 1210) IG: [er]
- 1211) IG: ok so the old mine, have you got miner?
- 1212) IR: um, no mine is just an old mine which is like just below and to the right of start like very close to it
- 1213) IG: yeah yeah, that's ... it loops round underneath
- 1214) IR: ok
- 1215) IG: in sort of a ... loose 'L' shape curving underneath it
- 1216) IR: ok so [it goes down] and then like underneath
- 1217) IG: [yeah]
- 1218) IG: down and underneath yeah
- 1219) IR: mmhmm
- 1220) IG: in a fluid motion, have you got swamp on there?
- 1221) IR: yeah, it's sort of um to the bottom left of where the bend in the 'L' [is]
- 1222) IG: [yeah yeah]
- 1223) IG: perfect, I ...I ...I imagine it's gonna be... we've got the marks in the same place, but it's the case of some us... I'll be missing some that you have... and you'll be missing some that I have
- 1224) IR: ok, [sound like...] <unclear words>
- 1225) IG: [do you have mountains?]
- 1226) IR: I have mountains in the top right

- 1227) IG: and you don't have miner in between old miner and miner?
- 1228) IR: mmhmm old miner and mountains, no
- 1229) IG: ok so miner's er... roughly halfway between mountains and mine and the line continues all the way round and comes up the right side of miner until you 're above the point that the mountains are again
- 1230) IR: so goes up between the mine and the miner and then above the miner
- 1231) IG: uh no... no it goes... so it starts loops underneath the mine goes along...along... along underneath past miner
- 1232) IR: yeah
- 1233) IG: and then up the right side of miner
- 1234) IR: yeah
- 1235) IG: until you're up at a point again where you're above the mountains.
- 1236) IR: and does it go around the top of mountains?
- 1237) IG: yeah it comes round the mountains and then loops round quite sharply um
- 1238) IR: [mmhmm]
- 1239) IG: [um] **and then from there** <unclear words> **it comes straight across the mountains**, loops down and round up to start off a right angle and gonna comes down more diagonally, do you have rocks or castle?
- 1240) IR: I've got castle and cactus
- 1241) IG: castle and cactus, ok I don't have cactus (laugh)
- 1242) IR: I have... cactus is like just underneath mountains in between mountains and castle
- 1243) IG: yeah ok so is it to the left or to the right or is it?
- 1244) IR: it's like in between the two and slightly to the left
- 1245) IG: slightly to the left, ok then I think it's gonna be the line comes just underneath cactus then because just looking at mine, it seems come down directly through the middle of where everything is
- 1246) IR: ok
- 1247) IG: um and then I wouldn't send you through a cactus field um and then do you have forest or rocks?
- 1248) IR: no
- 1249) IG: you got none of them

- 1250) IR: I have like nothing kind of really in the middle, I have castle, um so my line is like to the top left of castle now just to the top left of castle **and then underneath castle I have tree**
- 1251) IG: yeah top left of the castle is <unclear words> I've got tree. Do you have anything underneath swamp? Directly or near about?
- 1252) IR: ok um I have cottage underneath swamp by about an inch and then about an inch to the right
- 1253) IG: ok I think that's going to be about there so you coming down... so ... and you don't have forest don't have rocks ok so you're at the point where you're diagonal left of castle continue that line [for two there inches] on that same trajectory
- 1254) IR: [ok]
- 1255) IR: yeah some kind of like in line with cottage now but about equal distance between cottage and castle
- 1256) IG: so if you bring it the line basically continue that diagonal line until you're in line with the word castle
- 1257) IR: ok
- 1258) IG: and your uh ... in sort of intersect if it was a triangle it will be the meeting point of old man and mountain.
- 1259) IR: um that of old man?
- 1260) IG: uh not a... old man rather sorry
- 1261) IR: that have oh...ok yeah yeah
- 1262) IG: sorry I said old man
- 1263) IR: yeah ok, I know what you mean
- 1264) IG: ok and then from there, it ... **from that position it curves up and around forest** which I think forest so it's gonna to go in between where my forest and uh cottage is for you
- 1265) IR: ok it goes... so it goes around to the ... on the left hand side of wherever your forest is
- 1266) IG: yeah
- 1267) IR: ok
- 1268) IG: so it comes it sweeps
- 1269) IR: upwards
- 1270) IG: down goes underneath

- 1271) IR: underneath where your forest is then up to the left
- 1272) IG: above where my forest is
- 1273) IR: mmhmm
- 1274) IG: and below where cottage is if I am thinking where cottage is correctly
- 1275) IR: err
- 1276) IG: so it's sort of intersects the two so [if you can picture it on there] forest...
for... forest
- 1277) IR: [yeah oh yeah yeah]
- 1278) IR: it goes between the two
- 1279) IG: [yeah yeah and loop... loops round] goes below cottage above forest loops
round and then goes directly down
- 1280) IR: [and is like go above cottage]
- 1281) IR: ok
- 1282) IG: and did you say you have tree?
- 1283) IR: yeah but it's to the... right [in the middle but to the right hand side] [yeah]
- 1284) IG: [yeah, far right] [below castle give or take]
- 1285) IG: so you come... once your past cottage, you come down directly until you're
about in line with the word 'tree' again
- 1286) IR: yeah
- 1287) IG: and if you stop there, do you have yellow house?
- 1288) IR: yeah right in the middle [about kind of two- third of the way down]
- 1289) IR: [yeah]
- 1290) IG: ok so if you take the line all the way across above yellow house up until
you're at the bottom... um just past tree.
- 1291) IR: so I go round to the ... so underneath cottage
- 1292) IG: you come straight down until you're in line with the word [tree and then you
come]
- 1293) IR: [tree]
- 1294) IR: and then go like directly to the right
- 1295) IG: yeah directly across above yellow house and below the word tree
- 1296) IR: ok do you have a gold mine
- 1297) IG: ah... nope
- 1298) IR: ok gold mine is like just below tree slightly to the right and just above house,
but much further to the right of house, cause house is in the middle

- 1299) IG: ok so you loop round gold mine by the looks of it then?
- 1300) IR: is like a... to the right I am going in between tree and yellow house but
round the top of gold mine
- 1301) IG: yeah
- 1302) IR: and then round and underneath gold mine
- 1303) IG: er not underneath no you then go directly down, do you have duck pond?
- 1304) IR: no, but I have mushroom house
- 1305) IG: mushroom house, ok go down until you're about an inch past mushroom
house
- 1306) IR: that's right near the bottom of the page is that right?
- 1307) IG: yeah yeah yeah
- 1308) IR: ok
- 1309) IG: ok and then what do you have between do you have hills or farm?
- 1310) IR: I've got hills and farm and I've got mountains underneath mushroom house
again
- 1311) IG: ok
- 1312) IR: sort of like ... mountains is like about the bottom inch of the page
- 1313) IG: is it below [farm]?
- 1314) IR: [in line with farm]
- 1315) IG: in line with
- 1316) IR: yeah, but to the right hand side underneath mushroom house
- 1317) IG: ok and you say you have hills
- 1318) IR: yeah which is equal to mushroom house [but kind of a third of the width
through the page]
- 1319) IG: [yeah equal with mushroom house]
- 1320) IG: yeah, I got that I am just trying look and see if whether or not it would go
above or below mountains, I mean by the looks of it go above mountains if you're
saying it's <unclear words>
- 1321) IR: it's quite near the bottom
- 1322) IG: yeah if it's in line with farm
- 1323) IR: yeah
- 1324) IG: um and so duck pond is in line with farm and mountains then but is directly
beneath the yellow house
- 1325) IR: yeah

- 1326) IG: um and the line from where you are now sort to the bottom right of mushroom house, you come along over mountains,
- 1327) IR: mmhmm
- 1328) IG: there is a little sort of like speed bump and then it loops underneath the farm
- 1329) IR: underneath farm ok
- 1330) IG: and then it sort comes
- 1331) IR: over the duck pond
- 1332) IG: over the duck pond
- 1333) IR: yeah and then underneath farm which is right near the bottom
- 1334) IG: yeah down underneath the farm and then it loops...loops sort up directly and the finish is pretty much in line with the word hills
- 1335) IR: ok
- 1336) IG: so it's yeah so it's still to the left of the farm and hills it sort of straight straight line on that [which is natural curve to it then]
- 1337) IR: [ok]
- 1338) IR: ok um... shall I just quickly like say what my line is
- 1339) IG: yeah <unclear words>
- 1340) IR: (laugh) so from ... **so from the start it goes right down under the mine** and then it goes to the right
- 1341) IG: mmhmm
- 1342) IR: ... up like to the left of mountains across top of mountains
- 1343) IG: mmhmm
- 1344) IR: then kind it goes down sort of diagonally into the middle
- 1345) IG: yeah
- 1346) IR: in between cottage and castle
- 1347) IG: yeah
- 1348) IR: then kind of goes up round cottage down along all the way across the page underneath the tree
- 1349) IG: mmhmm
- 1350) IR: and then all the way down underneath the mushroom house a little bump where you have duck pond, underneath farm and then finish at hills
- 1351) IG: [perfect] I mean it's... it's err about maybe an inch or two to the left of hills
- 1352) IR: [ok]
- 1353) IR: ok yeah

1354) IG: so... so once you're around farm it's pretty much straight up from where
you are in farm

1355) IR: yeah I am pretty sure yeah I've got that

1356) IG: ok perfect

1357) IR: done

1358) IG: done

The Dialogue of Group Ten

- 1359) IG: ok so the start point is just to the top um of the old mine just to the left hand side
- 1360) IR: yeah
- 1361) IG: and...and if you follow that down
- 1362) IR: straight down?
- 1363) IG: yeah in between the swamp and the old mine
- 1364) IR: yeah
- 1365) IG: um and then you start to curve off to the right hand side and you go up um see where the 'R' of the miner is you've... just go under that
- 1366) IR: of the what? Sorry
- 1367) IG: the 'R'... the last letter of miner
- 1368) IR: yeah
- 1369) IG: and um so so you follow that up and then turn left and just where the picture of the miner is um you follow that round [and then]
- 1370) IR: [I've not got a miner] [on mine]
- 1371) IG: [ah]
- 1372) IR: I've got the old mine
- 1373) IG: yeah
- 1374) IR: and then... the swamp **and then below that** (elided: I've got) the cottage
- 1375) IG: right, so where the old mine is,
- 1376) IR: [yeah]
- 1377) IG: [what picture is to the right of that?]
- 1378) IR: um there is a massive gap in the middle then, I've got a cactus and the mountains
- 1379) IG: ok so it will be the cactus then, so... if you... um Go to the right hand side of the cactus and then follow that up
- 1380) IR: ok
- 1381) IG: and then um turn right and then you follow that above just above the mountains
- 1382) IR: yeah
- 1383) IG: and then where the mountains end on the right hand side um drop down immediately
- 1384) IR: yeah

- 1385) IG: and then what picture do you have directly below the miner?
- 1386) IR: oh so I've got ... all on the right hand side, I've got mountains, cactus, castle and then tree
- 1387) IG: ok um if you come down um to the left of the castle
- 1388) IR: left of the castle
- 1389) IG: and then to the left of that um you go so have you got three pictures along the top and then kind of three [just below that] <unclear words>
- 1390) IR: [I've]
- 1391) IR: I've got like... imagine like three channels to the left hand side the middle and the right hand side
- 1392) IG: yeah
- 1393) IR: I've got only one thing in the middle
- 1394) IG: yeah that's quite near the bottom that's the yellow house
- 1395) IG: right
- 1396) IR: ah **on the left hand side**
- 1397) IG: yeah
- 1398) IR: **I've got the ma... the old mine, a swamp** the... there is a cottage, a stone giant
- 1399) IG: yeah
- 1400) IR: hills and a farm
- 1401) IG: ok
- 1402) IR: **and then on the right hand side, the mountains are in line with the old mine**, the castle is in line with the cottage, the tree is like between the cottage and the stone giant, the gold mine is like in line with the yellow house uh the mushroom house is in line with the hills and there are more mountains at the bottom
- 1403) IG: right ok um mine is a bit different to that so um is the old mine on the left hand side?
- 1404) IR: yeah the... the old mine is the fir... like [the starting point] pretty much
- 1405) IG: [cool]
- 1406) IG: that's the same with me so have you kind of gone
- 1407) IR: so I've gone
- 1408) IG: left to the right
- 1409) IR: yeah
- 1410) IG: cool

- 1411) IR: and then I've gone sort of right to the opposite side of the page and then drawn pretty much drawn a little loop round the mountains
- 1412) IG: yeah
- 1413) IR: and then I am about to go well yeah
- 1414) IG: so yeah do you... that sounds.... That sounds correct and then you go...if you're talking about the right hand channel
- 1415) IR: yeah
- 1416) IG: um you're moving from the right hand channel into the middle channel
- 1417) IR: yeah
- 1418) IG: kind of er.... in... er downwards diagonal
- 1419) IR: yeah
- 1420) IG: into the middle channel
- 1421) IR: mmhmm
- 1422) IG: and then um well mymy middle channel is the rocks uh kind of just below the top picture and then it goes left into the left hand channel and then I've got the forest but the picture in the left hand channel which is kind of below the old mine is kind of the third picture down on mine.
- 1423) IR: right ok so do I get under.... <unclear words> underneath that picture or above it?
- 1424) IG: you go above that picture
- 1425) IR: yeah
- 1426) IG: um left round that and then you drop down
- 1427) IR: straight down?
- 1428) IG: yeah and then it starts to curve into the middle channel
- 1429) IR: yeah
- 1430) IG: and then I've got a yellow house and it goes above that picture
- 1431) IR: yeah, I've got a yellow house as well
- 1432) IG: so it goes above the yellow house
- 1433) IR: yeah
- 1434) IG: and then I've got a tree in the right hand channel
- 1435) IR: yeah, I've got that as well
- 1436) IG: um it goes um beneath the tree
- 1437) IR: it's above the house beneath the tree
- 1438) IG: and it curves round um to the right um and then I've got [a mushroom house] on the right hand channel

- 1439) IR: [yeah]
- 1440) IR: I've got that too
- 1441) IG: it goes to the right of the mushroom house continuing down
- 1442) IR: yeah
- 1443) IG: **and then um just below that um it starts to curve left**
- 1444) IR: mmhmm
- 1445) IG: now I've got a duck pond in the middle channel
- 1446) IR: I've not got anything else in the middle channel
- 1447) IG: um so the picture imagine is just er like two centimetres above the bottom of
the page
- 1448) IR: mmhmm
- 1449) IG: um its... curves upwards in still in the middle channel um continuing going
left um... and then it starts to drop down um continuing into the left hand channel I
've got a farm at the end
- 1450) IR: yeah, I've got farm
- 1451) IG: yeah, in the left hand channel
- 1452) IR: yeah
- 1453) IG: so it goes under the farm
- 1454) IR: under the farm
- 1455) IG: yeah
- 1456) IR: yeah
- 1457) IG: and then have you got a picture of the hills in the left hand channel?
- 1458) IR: yeah
- 1459) IG: um the finish point is marked with an X it's just below or is almost in line
with the hills but a bit lower down
- 1460) IR: on the left
- 1461) IG: on the left hand side
- 1462) IR: ok
- 1463) IG: on the left hand side
- 1464) IR: ok
- 1465) IG: and that's the finish point
- 1466) IR: right, yeah
- 1467) IG: cool

The Dialogue of Group Eleven

- 1468) IG: ok um you need to start about a thumb height above the old mine um is the green sort of mountain with a truck coming out of it and some tracks
- 1469) IR: yeah
- 1470) IG: um is about like.... If the old mine is like level with the middle of your thumb, the start is where your thumb nail is
- 1471) IR: oh yeah, I have an X saying start
- 1472) IG: alright ok. you need to draw a line about a thumb width down just below the 'L' of the old
- 1473) IR: um so draw it to the...
- 1474) IG: yeah if you draw it yeah if you draw it from the start point, it's a curve line going from the like ... the start point on a like.... sort of <unclear words> right [does that make any sense] so?
- 1475) IR: [ok]
- 1476) IR: so like kind of like an 'L'
- 1477) IG: yeah underneath the 'L' yeah
- 1478) IR: ok
- 1479) IG: and then you want a a straight line so the um the line ends up quite close to the 'R' of the miner
- 1480) IR: um, miner!
- 1481) IG: Oh in...in old mine. No, there is um an actual guy mining and his name is miner um and you want the line [to sort of meet the 'R' of the...]
- 1482) IR: [oh, so I think some of the symbols are different]
- 1483) IG: **ok well, to the right of the old mine on my map** there is ...a....a guy **chiselling a way** and he is called miner um and he and the line continues up to sort of where the 'R' at the end of the word miner is
- 1484) IR: ok so <unclear words>... next... **so to the right of the old mine I have mountains and a cactus**
- 1485) IG: [aah alright]
- 1486) IR: [and] there is no miner anywhere on it
- 1487) IG: ok so I think where your cactus is, I have a miner so if you draw a line going from old mine to cactus
- 1488) IR: yeah, to underneath the word cactus

- 1489) IG: yeah
- 1490) IR: yeah
- 1491) IG: and then you wanna go quite sharply up
- 1492) IR: yeah
- 1493) IG: about an inch maybe
- 1494) IR: ok
- 1495) IG: and then you wanna do a straight line across so you're going over the mountains and then back under them
- 1496) IR: ok yeah
- 1497) IG: and then you want that to go quite far down the line is gonna get in between a symbol on my map that says rocks and a symbol that says castle
- 1498) IR: ok so I have a castle and then ... so castle is like just under cactus so your miner and then under castle is tree so maybe that's what the rocks is
- 1499) IG: uh ok no that sounds wrong
- 1500) IR: ok
- 1501) IG: if you go down from mountains on mine
- 1502) IR: yeah
- 1503) IG: the line goes in between castle which is in the far right of the page
- 1504) IR: yeah
- 1505) IG: and the rocks which is just like dead centre of the page
- 1506) IR: ok yeah so I have a cottage there right
- 1507) IG: so yeah so you wanna draw a line that goes under the mountains but on the side I think of your cactus and then under the cottage
- 1508) IR: ok so like in between cactus and castle [to the cottage]
- 1509) IG: [yeah] yeah I think so I think that's where we are going
- 1510) IR and IG: (laugh)
- 1511) IR: cool and we're about underneath the cottage or...
- 1512) IG: yeah it must be underneath
- 1513) IR: ok
- 1514) IG: um **and then on my map there is a... symbol just down and left of your cottage called forests**
- 1515) IR: **down and left I have a stone giant**
- 1516) IG: **ok with your stone giant I want you... need to make like a 'C' shape around it quite a big 'C' about two thumbs heights worth.**

- 1517) IR: ok
- 1518) IG: so go over your stone giant and then quite far down and then a 'C' shape
- 1519) IR: yeah
- 1520) IG: and then it quite a long line across the page it goes from quite far under your stone giant to what I have as under the tree
- 1521) IR: ok I see I have... so I have a tree but I am not... I don't know if it's slightly higher up maybe than yours
- 1522) IG: uh it's almost slightly down of middle of the page [of the far right hand side]
- 1523) IR: [ok]
- 1524) IR: yeah so that's the same so it's going
- 1525) IG: so it's going underneath the tree
- 1526) IR: ok
- 1527) IG: so the ... the line itself is literary underlining the word tree
- 1528) IR: yeah
- 1529) IG: uh and then you want to go on that sortish down again about two thumbs widths we're going down past what on my map is mushroom house
- 1530) IR: oh yeah I've got that um so I am going down the right hand side of the page.
- 1531) IG: yeah
- 1532) Have you got a gold mine under the tree and above the mushroom house?
- 1533) IG: I don... I have a yellow house slightly up
- 1534) IR: my yellow house is slightly to the left
- 1535) IG: yeah mine <unclear words> [is slightly to the left]
- 1536) IR: [in the centre]
- 1537) IR: ok so I am going right past the mushroom house
- 1538) IG: yeah
- 1539) IR: and then under it
- 1540) IG: and then under it yeah
- 1541) IR: ok
- 1542) IG: and then you wanna do about a thumb width to the left and near enough straight line
- 1543) IR: yeah
- 1544) IG: and then you wanna go over what on my page is a duck pond
- 1545) IR: ok is that slightly to the left and below the yellow house?
- 1546) IG: that's... **on mine it's directly below the yellow house**

1547) IR: ok I have nothing directly below then <unclear words>
1548) IG: ok so it's literary at the bottom of the page [in the middle]
1549) IR: [yeah]
1550) IR: ok yeah
1551) IG: so if you wanna do just like a little like pekay over... over the duck pond
1552) IR: ok yeah
1553) IG: uh and then there is a farm right at the very bottom of the page on mine
1554) IR: ok
1555) IG: you wanna go underneath the farm
1556) IR: ok yeah
1557) IG: and then once you've gone past the farm just underneath <unclear words>
you ... you gonna get thumb width up to the finish point
1558) IR: cool, shall I mark it as finish?
1559) IG: yeah, it should be slightly left of a symbol called hills on my map
1560) IR: yeah yeah is it um is it.... directly left or slightly below?
1561) IG: uh slightly below not lots
1562) IR: ok I make it slightly further up, cool and then just write finish
1563) IG: and that should be finished there yeah
1564) IR: awesome
1565) IG: that wasn't too bad
1566) IR: yeah done

The Dialogue of Group Twelve

- 1567) IG: **ok Tim at the very top left hand side [of your... of your map] is there something that says old mine?**
- 1568) IR: [yeah]
- 1569) IR: yeah
- 1570) IG: is like a green thing
- 1571) IR: [yeah]
- 1572) IG: [and that's] just to the left of miner really but to the north east of swamp.
- 1573) IR: yeah yeah
- 1574) IG: ok cool, will you see about... if you imagine there was o'clock exactly placed over that old mine
- 1575) IR: yeah
- 1576) IG: you see where it'd be um when the hand would be err... in between ten and eleven
- 1577) IR: ten and eleven yeah
- 1578) IG: <unclear words> just off le... you know North...
- 1579) IR: sort of North West, yeah
- 1580) IG: yeah north west exactly and about exactly two but just two and half to three cm North West [of that old mine]
- 1581) IR: [ok]
- 1582) IG: if you put an X there
- 1583) IR: right, yeah
- 1584) IG: aa...an X um you put an X there [ok]
- 1585) IR: [yeah]
- 1586) IG: so that's where it says start on my map, [so there's an X there]
- 1587) IR: [yeah]
- 1588) IG: **and from that out comes a blue not dotted line** but like...it's like a blue line where it has little small blue lines and each of them is about...yeah so the road is that... that's the way the road looks on my map. So it starts from there,
- 1589) IR: [yeah]
- 1590) IG: [and] what happens, it basically... it swoops down gently from that starting point with a motion that goes slightly to the left
- 1591) IR: ok

- 1592) IG: and then curves in underneath the old mine
- 1593) IR: [ok]
- 1594) IG: [but] it...it never is... well by the time it gets to underneath the old mine,
the road about one and half cm below the text where it says [old mine]
- 1595) IR: [right] yeah ok so it sort
goes around like a 'C' for the start around the old mine just above the... of... [the
swamp] sort of north east to swamp really
- 1596) IG: [yeah]
- 1597) IG: exactly it's not a really curvaceous 'C', it's... it's just a little bit of a swerve
around from the start underneath old mine and then it continues to go almost...
almost in a more or less straight line right across to underneath where it says miner.
- 1598) IR: ok
- 1599) IG: so which is about... the miner is about three cm to the four five cm to the
right of old mine on mine.
- 1600) IR: I've got mountains and a cactus.
- 1601) IG: ok well mine says miner is... is... what's to the right [of your mountains]?
- 1602) IR: [I've got]...to the right
of old mine, in a sort of top rightish area sort of parallel to the start line is mountains
and then just beneath that but slightly to the west is a cactus so,
- 1603) IG: ok right oh so... so here ...here is... here is what we'll do then um so where
your old mine... underneath old mine if you can... if the road continues easterly,
- 1604) IR: yes
- 1605) IG: with a slightly north east gradient on my map.
- 1606) IR: ok
- 1607) IG: your probably don't have this. I have a little picture of some... a man in a
mine
- 1608) IR: right
- 1609) IG: and it says miner underneath it
- 1610) IR: ok
- 1611) IG: you don't have that
- 1612) IR: no, but it seems to be as quite similar area to mountains so may be...
- 1613) IG: I have mountains on mine but it's more...
- 1614) IR: ok

- 1615) IG: but... but the mountains on my page is only about 3cm away from the right margin.
- 1616) IR: yeah yeah I think that's about right with mine as well, yeah.
- 1617) IG: ok so you.... I ...I just don't think you've got miner that's the only [difference... difference]
- 1618) IR: [no... no so mine is just the opposite]
- 1619) IG: ok so in that case so go... go the... the road goes in between old mine and mountains
- 1620) IR: right
- 1621) IG: more or less proximate you know height on the page to them... [to the..]
- 1622) IR: [so that yeah]
yeah so that's above where my cactus is I imagine so it's sort of...so that's nearly... nearly horizontal to the where you are going and just slightly up and keep going yeah under mountains.
- 1623) IG: yeah
- 1624) IR: and then in between [yeah so]
- 1625) IG: [yeah so] and then you... and then there is like a... the road goes ...I...tell you what
- 1626) IR: yeah
- 1627) IG: I am just trying to think of outside the box may may...maybe we could make... we could like section our pages.
- 1628) IR: ok give that a go
- 1629) IG: g g...give that a go.
- 1630) IR: there seems to be... might be there... there is a big punch of them on the right hand side vertically on mine. I have a lot of objects which sort of follow each other quite um... in almost the line going down and then everything else on the left seems to be spread about
- 1631) IG: yeah
- 1632) IR: there is one in the middle and then we have a few sort of in line with the old mine and that tends to be the general layout for lines so I think um...
- 1633) IG: I think I think your images and pictures are so different [to mine] that the almost is is... there is almost no value in using...
- 1634) IR: [yes]

- 1635) IR: I think if we... I think if we carry on for mountains and what's underneath mountains and see where we go from there so did some guessing is gonna go down at some point now, isn't it?
- 1636) IG: yeah yeah, it... it goes dramatically down with [um]
- 1637) IR: [right] because from what I have so far that puts me near just above castle so I don't know if you have a castle.
- 1638) IG: right ok yes yes I do have a castle on the... on the ... I tell... I tell you what shall...we just do this to give our...ourselves an extra dimension of [support].
- 1639) IR: [yeah yeah]
- 1640) IG: Can... can you fold your page in half
- 1641) IR: yeah ok
- 1642) IG: right so if we fold our page in half,
- 1643) IR: which way?
- 1644) IG: um so
- 1645) IR: sort of like horizontally yeah
- 1646) IG: yeah horizontally down yeah and then open it again. Should we...
- 1647) IR: ok my... my half line is right above the tree
- 1648) IG: yeah same here
- 1649) IR: ok that ... that helps
- 1650) IG: is your half line is... is that tree on the right more or less the right [side]
- 1651) IR: [yeah]
yeah yeah it's a bit in but is on the [right]
- 1652) IG: [yeah]
- 1653) IG: I ... I think your tree and mine are in the exactly same place
- 1654) IR: ok
- 1655) IG: ok
- 1656) IR: that's a good point to get to
- 1657) IG: that'd be a good point to get to um
- 1658) IR: so I'm guessing, uh well did you have castle?
- 1659) IG: yes
- 1660) IR: yeah so that's... that's obviously slightly to the right and quite <unclear words> three and half cm
- 1661) IG: yes, I think your castle and
- 1662) IR: that's... that's the same place then castle and tree

- 1663) IG: your castle and my tree are in the exact same place
- 1664) IR: **so at the moment the route I've got so far is just above the castle** coz you said dropped dram... dramatically down from mountains so I am in the area just above castle now
- 1665) IG: ok
- 1666) IR: directly above it.
- 1667) IG: ok um do you have rocks to the left of your castle [by about c...]
- 1668) IR: [no, I don't] no rocks.
- 1669) IG: ok so um that's cool so as the... the line as the road comes down from mountains it's.... it's sortly it...it's kind of... it's not going directly down the page Tim, it's sort of [going to the left]
- 1670) IR: [right] ok so in with the bit then
- 1671) IG: in with into the centre of the page more [or less].
- 1672) IR: [right] ok
- 1673) IG: but as it goes into to the centre it takes... do you have forest by any chance?
- 1674) IR: no
- 1675) IG: ok see <unclear words> forest is more for me is right on the crease.
- 1676) IR: right ok so straight so in the middle [it's quite] in the centre ok,
- 1677) IG: [it's in the middle]
- 1678) IR: shall I go there coz to the right... slightly to the left of that and up is a cottage, I don't know if you got a cottage.
- 1679) IR: IG: no, I don't
- 1680) IR: ok so so yeah we are near the tree aren't we are just to the left of the tree now by say four cm directly in the middle of the page were the crease is
- 1681) IG: yeah um then there is... so there is There is a big 'C' shaped bend?
- 1682) IR: yeah
- 1683) IG: and is... is exactly... is...is like a large 'C' and it's... swerves right under... it swerves itself right back in again underneath the tree.
- 1684) IR: ok right
- 1685) IG: that's not a very clear instruction I am giving you.
- 1686) IR: we're sort of near the edge of the page then I guess now if we're doing I will do like a sort of like a boat shape 'C' if you look at... if you to draw a boat and you do that arc in that way.
- 1687) IG: yeah

1688) IR: that under the tree if you see what I mean

1689) IG: yes, so

1690) IR: and then so it sort of near the edge of the page where of that is that works out or we're quite near the tree still where the 'C' ends 'd you know what I mean, so like...

1691) IG: yeah

1692) IR: where... where that loop goes underneath the tree where... where does the last point of that loop goes is it just... is it quite close to the tree

1693) IG: yeah

1694) IR: or is it quite close ... quite close to the edge of the page.

1695) IG: is your tree about six or seven cm from the right margins?

1696) IR: five may be [yeah]

1697) IG: [yeah]

1698) IR: maybe to six probably yeah so... so we're in that vicinity aren't we? The gap in between the tree and the margins I imagine now

1699) IG: yeah

1700) IR: from the point we've reached.

1701) IG: we'll... we'll put it this way

1702) IR: yeah

1703) IG: if you ... if you turn... if you turn your page so the start is that at your bottom left on your [desk].

1704) IR: [yeah yes]

1705) IG: So you're looking at the page almost... on the margins... on ... on the landscape [as a postal portrait.]

1706) IR: [yeah] right

1707) IG: the shape of this road is like a big 'm' that covers the entire page

1708) IR: ok I've sort of have it, little bit

1709) IG: so

1710) IR: because where we were from the old mine straight across around the cactus and then back in

1711) IG: yeah

1712) IR: I think I've gone right into the cent... right in the middle of the centre of the page

1713) IG: yeah

- 1714) IR: and it a loop in back underneath the tree so it sort of like looks like an 'n'
almost, more than an 'n' if I have it in that position you said.
- 1715) IG: yeah yeah
- 1716) IR: so it sort of has that... that shape a bit. Ok, cool.
- 1717) IG: so
- 1718) IR: I think I think ...**yeah I think from tree we can see where we go then**
- 1719) IG: I'm... I'm... I'm just going to fold my page almost again to make it now so
it will quartered
- 1720) IR: yeah yeah ok I will do that um in the same way ok. I will give that a go at
least.
- 1721) IG: yeah and then I've just got now I like four of the exact same shapes on my
page. I am looking at on it... um it's... it's interesting is just difficult I've got that
such that we... I've got different images.
- 1722) IR: yeah yeah well, I think we are on the right hand side now middle right hand
side I think
- 1723) IG: just below the tree
- 1724) IR: to try like... to try and take the images out of the equation that's the area we
are
- 1725) IG: oh yeah
- 1726) IR: are you just below the tree away?
- 1727) IG: I am just below the tree
- 1728) IR: ok i... in...in the bottom we should... right I think I know when you are
then cause I was going a bit further up which is I was getting confused of being
close to the margins
- 1729) IG: ok
- 1730) IR: so that makes some more sense if we were just around here and I've got a
gold mine underneath now
- 1731) IG: underneath the...
- 1732) IR: underneath where is sort of about
- 1733) IG: I don't have a gold... [gold mine] at all on my entire thing
- 1734) IR: [right]
- 1735) IR: let's see if we've got a yellow house
- 1736) IG: I've got a yellow house

- 1737) IR: **ok ok so from there** we're looking at sort of err one o'clock um area
from where we are to the yellow house
- 1738) IG: yes
- 1739) IR: yeah
- 1740) IG: yeah, that's co... that's correct [great]
- 1741) IR: [ok]
- 1742) IG: do you have a mushroom house directly underneath the tree by about ten
cm?
- 1743) IR: yeah yeah yeah got that
- 1744) IG: ok so the road goes more or less from underneath the tree and swerves down
all the way at round the mushroom house.
- 1745) IR: right ok on the ... on the right side yeah
- 1746) IG: on the right side of the mushroom house
- 1747) IR: ok
- 1748) and then curls back in so it um comes to what I have is called a duck pond but
basically even if you don't have the duck pond
- 1749) IR: the yellow house is pretty close by isn't it now to this now I imagine if we
are going back underneath the mushroom house.
- 1750) IG: but it doesn't go the road doesn't go back so [high up] because the yellow
house...
- 1751) IR: [ok yeah]
- 1752) IR: yeah ok I stopped it just sort of next to the mushroom house at the moment
- 1753) IG: yeah a...
- 1754) IR: to the left
- 1755) IG: to the left of the.... that's great and then if you have a slight if the road takes
a slight up turn up a little bit
- 1756) IR: yeah
- 1757) IG: and then then before you going anywhere else do you have a farm at the
bottom left
- 1758) IR: yes
- 1759) IG: bri.. and is it ah right ok do you have hills above the farm land
- 1760) IR: yeah
- 1761) IG: ok brilliant so basically see where you are now um just past the mushroom
house about three cm below the yellow house.

- 1762) IR: yeah
- 1763) IG: see if you just like it's like a line that just goes underneath the farm
- 1764) IR: yeah
- 1765) IG: and eventually rises itself back up again until it's about two or three cm to the left of hills
- 1766) IR: yeah got it
- 1767) IG: and then you see [there so] if you want to finish in the exact same place that I am,
- 1768) IR: [yeah]
- 1769) IR: yeah
- 1770) IG: if we consider that your farm is about five no about three cm below your hills just to the left a little bit.
- 1771) IR: yeah yeah yeah
- 1772) IG: ok so the finish... the finish sign
- 1773) IR: yeah
- 1774) IG: and you put an X there is about if you squeeze your I guess index finger ne..
- 1775) IR: yeah
- 1776) IG: next to the farm at like the ten between ten and eleven o'clock
- 1777) IR: right
- 1778) IG: it's about that width away [from the farm] and then there is fi... it says finish and it puts an x there
- 1779) IR: [ok]
- 1780) IR: right got it done I am very confident...
- 1781) IG: ok I am sure we finished it I'm... I'm confident that we finished in the [right place] and started in the right place but I'm not confident that our road is necessarily
- 1782) IR: [yeah]

Appendix L

The scripts of the two groups (thirteen and fourteen) in which marked Theme is not used in them

The Dialogue of Group Thirteen

- 1) IR: ok
- 2) IG: um you start um at the top left just above the old mine
- 3) IR: ok
- 4) IG: yeah and then go down towards the swamp but don't actually reach the swamp
- 5) IR: ok
- 6) IG: then go right straight sort of almost straight across past... in... a little bit between... go up next to ...about equal distance between the old mine and the mountains and by the miner
- 7) IR: up am I going up?
- 8) IG: yeah you go up yeah
- 9) IR: ok
- 10) IG: and then stop when you get to about the point where it says start but like further on the line? then go keep going right go around the mountains
- 11) IR: yeah
- 12) IG: so that the mountains are on your left
- 13) IR: yeah
- 14) IG: go down towards the castle um have you got rocks?
- 15) IR: no
- 16) IG: can you see rocks, no um
- 17) IR: I've got a c... I've got the mountains, a cactus which is just to the left and beneath and then a castle which is like directly beneath in the same line as the mountains
- 18) IG: ok um uh, you know what was it...you... for... <unclear words> what did you say you've got
- 19) IR: I've got cactus
- 20) IG: cactus is... where's your cactus is it in the middle of the
- 21) IR: yeah it's in the middle but just to the left of the mountains and the castle
- 22) IG: ok, have you got forest?

- 23) IR: no
- 24) IG: I'd say go....oh keep going sort of diagonally towards the centre of the page um
ignore sort of pass... yeah pass the cactus um
- 25) IR: what down
- 26) IG: downwards yeah
- 27) IR: diagonally?
- 28) IG: yeah until... just uh and then... at some point goes <unclear words> it goes
slightly up towards the swamp again you...
- 29) IR: you got...I have a swamp, yeah
- 30) IG: it's slightly up towards the swamp, but then stop and go downwards again and
have you got a yellow house?
- 31) IR: I've got a yellow house, yeah
- 32) IG: go down towards the yellow house from the swamp
- 33) IR: ok
- 34) IG: just yeah and when you get to the yellow house, have you got a tree?
- 35) IR: yeah
- 36) IG: ok well go from the yellow house towards the tree
- 37) IR: yeah
- 38) IG: and when you've got to the tree sort of go downwards again just straight down,
have you got a mushroom house?
- 39) IR: yeah
- 40) IG: go down past the mushroom house so it's on your left
- 41) IR: yeah
- 42) IG: and then uh have you got.... So you just' re literary <unclear words> inside the
mushroom house um have you got a duck pond?
- 43) IR: no
- 44) IG: ok <unclear words> keep... ok keep going downwards slightly and then go left
towards the farm, have you got a farm?
- 45) IR: yeah
- 46) IG: go left towards the farm it goes arching up slightly just towards the duck pond
about which is equally just... in... in the same line as the yellow house
- 47) IR: ok
- 48) IG: so if you arch around there and then go in like a curve underneath the farm
- 49) IR: yeah

50) IG: and have you got hills?

51) IR: yeah

52) IG: go upwards and to the left of the hills is your finish point

53) IR: ok done it

The Dialogue of Group Fourteen

- 1) IG: so am I just ...I just have to plot... I have... basically try and tell you which way to go
- 2) IR: yeah, I think so, yeah
- 3) IG: ok
- 4) IR: ok, ok so I've got a start on my map
- 5) IG: ok
- 6) IR: err like up in the top left, does [that sound]...is that right?
- 7) IG: [yeah]
- 8) IG: is it is anywhere near the old mine
- 9) IG: yeah just above the old mine
- 10) IR: yeah that's.... that's where it should be
- 11) IG: [ok]
- 12) IR: [ok]
- 13) IR: so it starts at the old mine
- 14) IG: yeah, you need to come kind of like downwards but it bends slightly to the left
- 15) IR: slightly to the left
- 16) IG: yeah and then come around the old mine so go underneath it
- 17) IR: underneath it [yeah]
- 18) IG: [yeah]
- 19) IR: is that above or below the swamp?
- 20) IG: it's above the swamp
- 21) IR: above the swamp ok
- 22) IG: and then you should be going past the miner on my one
- 23) IR: a miner aaaa
- 24) IG: do you have one?
- 25) IR: I do not have a miner, no
- 26) IG: ok, so um do you have mountains instead?
- 27) IR: yeah sort of near the top right
- 28) IG: yeah, so you wanna make kind of.... you wanna go kinda upwards towards those
- 29) IR: ok

- 30) IG: but just before you do kind of like loop around them a bit wider to the left
- 31) IR: ok so up up
- 32) IG: yeah and then loop around the mountains and go... like back down then on the right hand side
- 33) IR: so take a mountains on the right
- 34) IG: yes
- 35) IR: yeah
- 36) IG: ok and then you should be coming back downwards and is there a castle
- 37) IR: there is a castle yeah
- 38) IG: is that below the mountains?
- 39) IR: it is it's also below the cactus
- 40) IG: oh I don't have a cactus
- 41) IR: you don't have a cactus [ok] I have a cactus
- 42) IG: [ok]
- 43) IG: um you wanna go towards the castle
- 44) IR: yeah
- 45) IG: and then veer left at the same time
- 46) IR: ok so above the castle
- 47) IG: yeah above it goes like downwards and above it diagonally
- 48) IR: yeah
- 49) IG: um have you got rocks on yours?
- 50) IR: I do not have rocks, [no]
- 51) IG: [or] do you have. the... I've got a tree below the castle and a cottage on the other side of the page
- 52) IG: ok, do you have a forest, no?
- 53) IR: no no
- 54) IG: ok this... this is the tricky bit then
- 55) IR: this... is
- 56) IG: I have... how far off is your cottage?
- 57) IR: my cottage is on the left sort of in the middle
- 58) IG: on the left in the middle. Ok but how high up would you say on the page like?
- 59) IR: I would say about halfway
- 60) IG: halfway up ok your... your cottage is kind higher up than my house is <unclear words

- 61) IR: ok I have... I have [a yellow house and a mushroom house]
- 62) IG: [oh yeah I have] a yellow house and a mushroom house
- 63) IR: and the yellow house is near the bottom
- 64) IG: [yeah in the middle]
- 65) IR: [in the middle, yeah] ok
- 66) IG: so we like... but you're still by the castle on the left <unclear words>
- 67) IR: yeah, I am still going above the castle ok with the castle on my right
- 68) IG: you need to go basically to the left of the page and go down but because you haven't got that thing there, so you need to go about let's say almost all the way across the page
- 69) IR: ok
- 70) IG: and then go down probably four three inches maybe
- 71) IR: so all the way across [the page] and down about three inches
- 72) IG: [yeah]
- 73) IG: and then go back towards the tree completely just go straight back towards the tree
- 74) IR: straight back towards the tree
- 75) IG: [and then]
- 76) IR: [I am at the tree]
- 77) IG: yeah and then you're going below the tree
- 78) IR: I am going into the tree currently
- 79) IG: ok go a little bit like lower down <inaudible>
- 80) IR: down under the tree
- 81) IG: yeah and then do you need to go down towards your mushroom house and go around it
- 82) IR: ok do you have a gold mine?
- 83) IG: oh no
- 84) IR: under tree ok there is a gold mine in the way I am gonna...
- 85) IG: your gonna have to go straight through it I think
- 86) IR: I'm gonna go above the gold mine, so round the tree
- 87) IG: yeah
- 88) IR: sort of anti- clockwise
- 89) IG: or below... you're going below it, right
- 90) IR: below... below the tree

- 91) IG: sorry below the tree and down
- 92) IR: below the tree and down
- 93) IG: yeah
- 94) IR: and then round the mushroom house
- 95) IG: yeah
- 96) IR: turning left
- 97) IG: yeah
- 98) IR: yeah
- 99) IG: you go left at the bottom
- 100) IR: ok
- 101) IG: ah do you have duck pond?
- 102) IR: nope
- 103) IG: do a farm?
- 104) IR: yes, at the very bottom
- 105) IG: ok so you need to make a way towards the farm but before you do, do a little
like jump up on the way towards the farm that sounds a bit weird
- 106) IR: [ok I've... I've]
- 107) IG: [drop a little bit] and you need to go under the farm to the finish that should
be...
- 108) IR: um I don't actually have a finish
- 109) IG: [don't you]
- 110) IR: [on here]
- 111) IG: ok so you go under the farm and then go up a little like a tiny bit do you have
hills or not hills?
- 112) IR: I do yes
- 113) IG: go like kind of to the level where the hills are and just do... that's ...that's
your finish point
- 114) IR: that's...that's the finish
- 115) IG: yeah
- 116) IR: ok nice ok so I've got mine.... So you go under the old mine
- 117) IG: yeah
- 118) IR: over the mountains
- 119) IG: yeah
- 120) IR: above the castle

- 121) IG: yeah
- 122) IR: sort of into the middle [of the page] andd back again
- 123) IG: [yeah]
- 124) IG: yeah
- 125) IR: oh ... round under the tree
- 126) IG: yeah
- 127) IR: under the mushroom house
- 128) IG: yeah
- 129) IR: over an uninvisible duck pond
- 130) IG: yeah
- 131) IR: and then
- 132) IG: [under the farm]
- 133) IR: under the farm and then finish
- 134) IG: yeah that's it
- 135) IR: awesome,
- 136) IG: yeah, we did that quite quickly
- 137) IR: nice, did we win?
- 138) IG: (laugh)

Appendix M

The identification of the 59 marked Theme with relation to the 6 proposed marked Theme functions arrived at in the current study

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
Group One	IG1	54) so horizontally it's about half way up the caravan park	reintroducing information a (spatial detail; horizontally) to refocus on it to describe the curves of the route line that are introduced but not agreed on yet	F
	IG1	58) horizontally it's to the right just to the right of the abandoned cottage	reintroducing information a (spatial detail; horizontally) to refocus on it to describe the curves of the route line that are introduced but not agreed on yet	F
	IG1	123) ok so to the right of west lake probably one centimetre may be one and half there is a trig point	reintroducing information (landmark; west lake) to refocus on it and describe the location of another landmark (trig point) that is introduced in the discourse but its location is not yet agreed on or described.	F
	IR1	/		
Group Two	IG2	169) so on mine it's called an old mill	reintroducing information (on mine= instruction giver's map) to repair meaning by clarifying the name of the landmark (old mill) on the instruction giver's map	D
	IG2	177) on mine I have got a fenced meadow	reintroducing information (on mine= instruction	A

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
			giver's map) to introduce a new item (landmark; fenced meadow)	
	IG2	183) so on mine It goes uh I suppose in an easterly direction or to the left er to the right.	reintroducing information (on mine= instruction's giver's map) to describe route line by introducing new detail about its layout	B
	IG2	191) ok so on mine there is a fenced meadow	reintroducing information (on mine= instruction giver's map) to to refocus on it and describe the location of anther landmark (fenced meadow) that is introduced in the discourse but its location is not yet agreed on or described.	F
	IR2	198) next to west lake I have farmed land just to the right of west lake	reintroducing information (landmark: west lake) to repair meaning by clarifying what landmark is found instead (farmed land) on the instruction giver's map	D
	IG2	201) yeah, so in a sort of north er south direction of west lake there is a place called trig point here	reintroducing information (landmark; west lake) to refocus on it and describe the location of anther landmark (trig point) that is introduced in the discourse but its location is not yet agreed on or described	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
	IG2	235) so er on the map have you got a monument?	reintroducing information (the map) to check the availability of a new landmark (monument)	C
	IR2	284) well, just below the mill wheel the old mill mine is called the mill wheel, there is a picket fence to the um south west of the old mill	reintroducing information (landmark; mill wheel) to refocus on it to introduce a landmark (picket fence) that the instruction receiver knows that it is not found on the instruction giver's map	F
Group Three	IG3	347) so from the mountains we end up on the right you know <unclear word> the far side of the mountains to... to the left or nearer side of the castle	reintroducing information (landmark: mountains) to refocus on it to enable continuing the interaction	F
	IG3	356) so left of the castle what's on your map?	reintroducing information (landmark; castle) to check what landmark is available next to the reintroduced landmark (castle)	C
	IR3	409) ok so at that point I would be kind of middle of the page, I think	reintroducing information (current location of the route line) to check understanding in the sense that the instruction giver is able to follow instruction giver's instructions and her line is in the right location	E

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
	IR3	412) ok so for me that's kind of <unclear word> by the stone giant, I think	reintroducing information (reference to the instruction receiver's map; for me) to check understanding; whether the instruction giver's route line is in the right location	E
Group Four	IR4	471) so on the left column it goes start, old mine, swamp, cottage, stone giant, hills, farm	reintroducing information (a spatial detail; left column on the map) to introduce a new landmarks (old mine; swamp; cottage..)	A
	IG4	494) so on my map there is like the old mine and the swamp	Reintroducing information (the instruction giver's map) to refocus on it to introduce landmarks (old mine, swamp) that the instruction giver knows that it is found on the instruction receiver's map Therefore old mine and swamp are not new landmarks for the instruction receiver as he has them on his map	F
	IG4	496) but before the hills and the farm there is a forest	reintroducing information (landmark; hills; farm) to refocus on them and describe the location of another landmark (forest) that is introduced in the discourse but its location is not agreed on or described yet	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
	IG4	513) right under miner kind of almost parallel but little lower than the swamp, I have rocks	reintroducing information (landmark: miner and swamp) to refocus on them to clarify the location of the rocks	F
	IR4	606) directly above the mushroom house, there is a gold mine	reintroducing information (landmark; mushroom house) to refocus on it and introduce a new landmark (gold mine)	F
Group Five	IG5	672) well, on mine, it's on the top left hand corner there is an old mine	reintroducing information (on mine= instruction giver's map) to introduce a new landmark, old mine	A
	IG5	677) next to the old ...old mine what have you got?	reintroducing information (landmark; old mine) to repair meaning and resume the interaction	D
	IR5	678) (a) to the right of the old mine I have mountains (b) and below I have a swamp (c) and diagonally I have a cactus	(a), (b), (c) reintroducing information (landmark, old mine and spatial location, diagonally and below of the old mine) to refocus on it to clarify the location of the mountains, swamp and cactus that are already introduced but their location on the instruction receiver's map is not yet clearly described or agreed on. The three marked Themes likely denote also the repair meaning function	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
	IR5	747) so under my swamp I have a cottage a little like a little yeah cottage	reintroducing information (landmark; swamp) to introduce new information (landmark; cottage)	A
	IR5	759 (a) slightly up from the cottage, I have a castle, (b) and then slightly down from the cottage I have a tree.	(a), (b) reintroducing information (landmark; cottage) to introduce new information (landmarks: castle; tree)	A
	IR5	788) from the cottage to the castle, it was horizontal up	reintroducing information a (landmarks: cottage and castle) to locate route line by introducing new detail about its layout	B
Group Six	IG6	901) and then sor... sort of below that there is the forest	reintroducing information (landmark; swamp) to introduce new information (landmark: forest)	A
	IG6	930) so in line with the yellow house on the bottom of the page, there is duck pond	reintroducing information (landmark: yellow house) to refocus on it and describe the location of another landmark (duck pond) that is introduced in the discourse but its location is not agreed on or described yet.	F
	IR6	946) so then like directly beneath that, I've got a stone giant	reintroducing information (beneath the cottage) to refocus on it to clarify the location of a landmark (stone giant)	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
Group Seven	IG7	1028) and then to the right of the old mine do you have miner?	reintroducing information (landmark: old mine) to check the availability of a new landmark, miner.	C
	IR7	1042) and then below the cactus I have a castle	reintroducing information (landmark: cactus) to introduce new item (landmark: castle)	A
	IG7	1060) over the castle, I don't have a cactus	reintroducing information (landmark: castle) to repair meaning by clarifying that a landmark (cactus) is not over the castle on the instruction receiver's map.	D
	IR7	1126) so directly across from the mushroom house almost to...to the other side of the page but not quite, I have hills	reintroducing information (landmark: mushroom house) to repair meaning by clarifying what landmark is found instead (hills) on the instruction giver's map	D
	IR7	1129) and then below the hills I have a farm	reintroducing information (landmarks: hills) to introduce a new item (landmark: farm)	A
	IG7	1130) to the right of the farm, I have a duck pond	reintroducing information (landmark: farm) to refocus on it and describe the location of another landmark (duck pond) that is introduced in the discourse but its location is not agreed on or described yet.	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
	IG7	1139) and then um under the farm scoop up to the left	reintroducing information a (landmark: farm) to locate route line by introducing new detail about its layout (scoop up to the left)	B
Group Eight	IG8	1155) and then to the right of the old mine there is a miner	reintroducing information (landmark: old mine) to introduce a new item (landmark: miner)	A
	IR8	/	/	/
Group Nine	IG9	1239) and then from there <unclear words> it comes straight across the mountains	reintroducing information (a location on the map: from there) to describe route line by introducing new detail about its layout (it comes straight across the mountains)	B
	IR9	1250) and then underneath castle, I have tree	reintroducing information (landmark: castle) to introduce a new item (landmark: tree)	A
	IG9	1264) from that position, it curves up and around forest	reintroducing information (a location on the map: from that position) to locate route line by introducing new detail about its layout (it curves up and around forest)	B
	IR9	1340) so from the start it goes right down under the mine	reintroducing information (the start location on the map) to refocus on it to clarify the layout of the reproduced route on the instruction receiver's map.	F

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
Group Ten	IR10	1374) and then below that (elided: I've got) the cottage	reintroducing information (landmark: swamp) to introduce a new item (landmark: cottage)	A
	IR10	1396) on the left hand side I've got the ma... the old mine, a swamp the... there is a cottage, a stone giant	reintroducing information (a spatial detail: left hand side of the map) to introduce a new landmarks (cottage; stone giant)	A
	IR10	1402) and then on the right hand side, the mountains are in line with the old mine	reintroducing information (a spatial location: right hand side of the map) to introduce a new landmarks (mountains)	A
	IG10	1443)and then um just below that um it starts to curve left	reintroducing information (a landmark: mushroom house) on the map to describe route line by introducing new detail about its layout (it starts to curve left)	B
Group Eleven	IG11	1483) ok well, to the right of the old mine, on my map there is ...a....a guy chiselling away and he is called miner	reintroducing information (landmark: old mine) to repair meaning by clarifying the location of a landmark that is introduced in the discourse but its location is not agreed on yet.	D
	IR11	1484) so to the right of the old mine I have mountains and a cactus	reintroducing information (landmark: old mine) to introduce and clarify new landmarks (mountains and cactus) which the instruction giver has	D

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
			on the same location of the instruction giver's map	
	IG11	1514) and then on my map there is a... symbol just down and left of your cottage called forests	reintroducing information (landmark: my map= the instruction giver's map) to introduce a new item (landmark: forest)	A
	IR11	1515) down and left I have a stone giant	reintroducing information (spatial locations down and left) to repair meaning by clarifying the new landmark (stone giant) which the instruction receiver has on the same location of the instruction giver's map	D
	IG11	1516) ok with your stone giant, I want... you... need to make like a 'C' shape around it quite a big 'C' about two thumbs heights	reintroducing information (landmark: stone giant); to describe route line by introducing new detail about its layout	B
	IG11	1546) on mine it's directly below the yellow house	reintroducing information (on mine= instruction's receiver's map) to refocus on it to clarify the location of the route line; the information is already introduced (below the yellow house but it is not yet agreed on.	F
Group Twelve	IG12	1567) ok Tim at the very top left hand side of your of your map, is there something that says old mine?	reintroducing information (a location on the map: top left hand side of your of your map) to check the availability	C

Group No.	Speaker role	Marked theme and its number of occurrence in the map dialogue script	Function	Function category symbol
			of a landmark, old mine.	
	IG12	1588) and then from that out comes a blue not dotted line	reintroducing information (a location on the map: from that= start point) to describe route line by introducing new detail about its layout (out comes a blue not dotted line)	B
	IR12	1664) so at the moment the route I 've got so far is just above the castle coz you said dropped dram... dramatically down from mountains	reintroducing information (current location of the route line) to check understanding in the sense that the instruction giver is able to follow instruction giver's instructions and his line is in the right location	E
	IR12	1718) yeah I think from tree we can see where we go then	reintroducing information (landmark: tree) to refocus on it to continue the interaction from 'tree'	F
	IR12	1737) ok ok so from there we're looking at sort of err one o'clock um area from where we are to the yellow house	reintroducing information (landmark: yellow house) to describe the route layout by introducing new details about the route layout.	B

Appendix N

The intonation coding of the 59 marked Themes used in the 12 map task groups

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
Group One	IG1	54) \SO \horiZONtally it's about HALF way up the \CARavan park
	IG1	58) \horiZONtally IT'S to the right just to the RIGHT of the aBANDoned \COTtage
	IG1	123) -OK so to the RIGHT of WEST \LAKE PROBAbly one CENTimetre may be one and /HALF there is a TRIG \POINT
	IR1	/
Group Two	IG2	169) so on \MINE it's CALLED an OLD \MILL
	IG2	177) on MINE i have got a \FENCED meadow
	IG2	183) so on \MINE it \GOES -UH i suppose in an EASTerly \DIRECTION
	IG2	191) \OK so on \MINE there is a FENCED \MEADOW
	IR2	198) NEXT to \WEST lake i have FRAMED \LAND
	IG2	201) -YEAH \SO in a SORT of NORTH er south DIREction of WEST \LAKE there is a PLACE called TIRG POINT /\HERE
	IG2	235) \SO -ER ON the \MAP have you got a \MONument
	IR2	284) \WELL just beLOW the MILL \WHEEL the OLD MILL MINE is called the MILL \WHEEL there was a PICKet /\FENCE to the -UM SOUTH WEST of the OLD \MILL
Group Three	IG3	347) so FROM the \MOUNtains we end up on the RIGHT <unclear words> the FAR side of the \MOUNtains to... to the LEFT or nearer side of the \CASTle
	IG3	356) so LEFT of the \CASTle what's on YOUR \MAP
	IR3	409) \OK so at THAT \POINT i would be kind of the MIDDLE of the \PAGE I \THINK
	IR3	412) ok so for \ME that's KIND of by the STONE \GIANT i \THINK
Group Four	IR4	471) so on the LEFT \COLUMN it \GOES \START OLD \MINE \SWAMP \COTtage STONE \GIANT \HILLS \FARM

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
	IG4	494) so on MY \MAP there is like the OLD MINE and then the \SWAMP
	IG4	496) but before the HILLS and the \FARM there IS a \FORest
	IG4	513) RIGHT UNder \MINer kind of alMOST parallel but little lower than the \SWAMP i have \ROCKs
	IR4	606) directly above the MUSHroom /HOUSE there is a GOLD \MINE
Group Five	IG5	672) \WELL ON \MINE it's on the TOP LEFT HAND \CORner there IS an OLD \MINE
	IG5	677) NEXT to the OLD... OLD \MINE what have you /GOT
	IR5	678) (a) to the RIGHT of the OLD \MINE i have \MOUNtains (b) and be\LOW i have a \SWAMP (c) and \DIAGonally i have a \CACtus
	IR5	747) so UNder MY \SWAMP i have a \COTtage a little like \LITTLE yeah \COTtage
	IR5	759) (a) SLIGHTly up from the \COTtage i have a \CASTle (b) and then slightly DOWN from the \COTtage i have a \TREE
	IR5	788) from the COTtage to the \CASTle it was horiZONtal \UP
Group Six	IG6	901) and then sor... sort of beLOW \THAT there is the for\EST
	IG6	930) so in LINE with the YELLow \HOUSE on the BOTtom of the \PAGE there is DUKE \POND
	IR6	946) so then LIKE directly be\NEATH that i've got a STONE \GIant
Group Seven	IG7	1028) and \THEN to the RIGHT of OLD \MINE do you have a \MINer
	IR7	1042) and then beLOW the \CACtus i have a \CASTle
	IG7	1060) OVER the \CASTle i DON'T have a \CACtus
	IR7	1126) so diRECTly aCROSS from the MUSHroom \HOUSE ALmost to the other side of the page but not \QUITE i have /HILLS

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
	IR7	1129) and then beLOW the <u>HILLS</u> i have a <u>FARM</u>
	IG7	1130) to the RIGHT of the <u>FARM</u> i have a DUCK <u>POND</u>
	IG7	1139) and <u>THEN</u> <u>UM</u> UNDER the <u>FARM</u> SCOOP UP to the <u>LEFT</u>
Group Eight	IG8	1155) and then to the RIGHT of OLD <u>MINE</u> there is a <u>MINer</u>
	IR8	/
Group Nine	IG9	1239) and then FROM <u>THERE</u> <unclear word> it comes STRAIght across the <u>MOUNTains</u>
	IR9	1250) and then underNEATH <u>CASTle</u> i have a <u>TREE</u> 205
	IG9	1264) from THAT <u>POSItion</u> it CURVEs <u>UP</u> and aROUND <u>FORest</u>
	IR9	1340) so FROM the <u>START</u> it GOes RIGHT DOWN under the <u>MINE</u>
Group Ten	IR10	1374) and then beLOW <u>THAT</u> the <u>COTtage</u>
	IR10	1396) on the LEFT HAND <u>SIDE</u> i've got the ma... OLD <u>MINE</u> a <u>SWAMP</u> the...there is a <u>COTtage</u> a STONE GIANT <u>HILLS</u> and a <u>FARM</u>
	IR10	1402) and then on the RIGHT HAND <u>SIDE</u> the MOUNtains are in line with the OLD <u>MINE</u>
	IG10	1443) and <u>THEN</u> <u>UM</u> just beLOW <u>THAT</u> <u>UM</u> it starts to CURve <u>LEFT</u>
Group Eleven	IG11	1483) <u>OK</u> <u>WELL</u> to the RIGHT of OLD <u>MINE</u> on MY <u>MAP</u> there is...a..a GUY CHISELling a <u>WAY</u> and he is called <u>MINer</u>
	IR11	1484) so to the RIGHT of the OLD <u>MINE</u> i have MOUNtains and a <u>CACtus</u>
	IG11	1514) and then on MY <u>MAP</u> THERE IS a SYMBol just DOWN and LEFT of your COTTage CALLed for/ <u>EST</u>
	IR11	1515) DOWN and <u>LEFT</u> i have a STONE <u>GIant</u>
	IG11	1516) ok with your STONE <u>GIANT</u> i want < abandoned tone unit> you need to make a C SHAPE aROUND <u>IT</u> QUITE a BIG C aABOUT TWO THUMBs HEIGHTs <u>WORTH</u>
	IG11	1546) ON <u>MINE</u> it's DIRectly beLOW the YELLow <u>HOUSE</u>

Group Number	Speaker role	Marked theme and its number of occurrence in the map dialogue script
Group Twelve	IG12	1567) \OK \TIM at the VERY TOP left hand side of your of your \MAP IS there SOMthing that says OLD \MINE
	IG12	1588) and then FROM \THAT outCOMES a \BLUE NOT DOTted \LINE
	IR12	1664) so at the \MOMent the ROUTE i ‘ve got so far is just above the \CASTle
	IR12	1718) \YEAH i\THINK FROM 149 \TREE we 96 CAN see where we \GO then
	IR12	1737) ok ok so FROM \THERE we’re LOOKing at sort of -ERR ONE o’CLOCK UM \EREA FROM where we ARE to the YELLow \HOUSE

Appendix O

The identification of the 59 marked Themes into (15) simple and (44) multiple marked Themes

Group No.	Simple Theme	Multiple Theme
Group One		54) so horizontally it's about half way up the caravan park
	58) horizontally it's to the right just to the right of the abandoned cottage	
		123) ok so to the right of west lake probably one centimetre may be one and half there is a trig point
Group Two		169) so on mine it's called an old mill
	177) on mine I have got a fenced meadow	
		183) so on mine it goes uh I suppose in an easterly direction or to the left er to the right
		191) ok so on mine there is a fenced meadow
	198) next to west lake I have farmed land	
		201) yeah, so in a sort of north er south direction of west lake there is a place called trig point here
		235) so er on the map have you got a monument?
		284) well, just below the mill wheel the old mill mine is called the mill wheel there is a picket fence to the um south west of the old mill
Group Three		347) so from the mountains we end up on the right you know<unclear words> the far side of the mountains to... to the left or nearer side of the castle
		356) so left of the castle what's on your side map?
		409) ok, so at that point I would be kind of middle of the page, I think
		412) ok so for me that's kind of <unclear words> by the stone giant, I think

Group No.	Simple Theme	Multiple Theme
Group Four		471) so on the left column it goes start old mine, swamp, cottage, stone giant, hills, farm
		494) so on my map , there is like the old mine and the swamp
		496) but before the hills and the farm there is a forest
	513) right under miner kind of almost parallel but little lower than the swamp , I have rocks	
	606) directly above the mushroom house , there is a gold mine	
Group Five		672) well, on mine , it's on the top left hand corner there is... I... an... old mine
	677) next to the old ...old mine , what have you got?	
	678) (a) to the right of the old mine , I have mountains.	678) (b) and below I have a swamp (c) and diagonally I have a cactus
		747) so under my swamp , I have a cottage a little like a little yeah cottage
	759) (a) slightly up from the cottage , I have a castle,	759) (b) and then slightly down from the cottage I have a tree.
	788) from the cottage to the castle , it was horizontal	
Group Six		901) and then sor... sort of below that there is the forest
		930) so in line with the yellow house on the bottom of the page , there is duck pond
		946) so then like directly beneath that , I've got a stone giant
Group Seven		1028) and then to the right of old mine , do you have miner?
		1042) and then below the cactus , I have a castle
	1060) Over the castle I don't have a cactus	
		1126) so directly across from the mushroom house almost to the other

Group No.	Simple Theme	Multiple Theme
		side of the page but not quite, I have hills
		1129) and then below the hills I have a farm
	1130) to the right of the farm, I have a duck pond on... on the same level	
		1139) and then um under the farm scoop up to the left and finish
Group Eight		1155) and then to the right of the old mine there is a miner
Group Nine		1239) and then from there <unclear words> it comes straight across the mountains
		1250) and then underneath castle, I have tree
	1264) from that position, it curves up and around forest	
		1340) so from the start it goes right down under the mine
Group Ten		1374) and then below that (elided: I've got) the cottage
	1396) on the left hand side, I've got the ma... the old mine, a swamp the... there is a cottage, a stone giant	
		1402) and then on the right hand side, the mountains are in line with the old mine
		1443) and then um just below that um it starts to curve left
Group Eleven		1483) Ok, well to the right of the old mine, on my map there is ...a....a guy chiselling away and he is called miner
		1484) so to the right of the old mine I have mountains and a cactus
		1514) and then on my map there is a... symbol just down and left of your cottage called forests
	1515) down and left I have a stone giant	
		1516) ok with your stone giant, I want you... need to make like a 'C' shape

Group No.	Simple Theme	Multiple Theme
		around it quite a big 'C' about two thumbs heights
	1546) on mine it's directly below the yellow house	
Group Twelve		1567) Ok Tim at the very top left hand side of your... of your map, is there something that says old mine?
		1588) and then from that out comes a blue not dotted line
		1664) so at the moment the route I've got so far is just above the castle
		1718) Yeah I think from tree we can see where we go then
		1737) ok ok so from there we're looking at sort of err one o'clock um area from where we are to the yellow house

Appendix P

Tonality analysis of the 44 multiple marked Themes into 30 instances as one tone group as single Theme and the other 14 as more than one tone group

Group No.	Multiple Marked Theme in one tone group as a single Theme	Multiple Marked Theme in more than one tone group
Group One		54) \SO \horiZONtally it's about HALF way up the \CARavan park
		123 -OK so to the RIGHT of WEST \LAKE PROBAbly one CENTimetre may be one and /HALF there is a TRIG \POINT
Group Two	169) so on \MINE it's CALLEd an OLD \MILL	
	183 so on \MINE it \GOES -UH i suppose in an EASTerly \DIrection	
		191) \OK so on \MINE there is a FENCED \MEADOW
		201) -YEAH \SO in a SORT of NORTH er south DIREction of WEST \LAKE there is a PLACE called TIRG POINT /HERE
		235) \SO -ER ON the \MAP have you got a \MONument
		284) \WELL just beLOW the MILL \WHEEL the OLD MILL MINE is called the MILL \WHEEL there was a PICKet /FENCE to the -UM SOUTH WEST of the OLD \MILL
Group Three	347) so FROM the /MOUNtains we end up on the RIGHT the FAR side of the /MOUNtains to to the LEFT or nearer side of the \CASTle	
	356) so LEFT of the \CASTle WHAT'S ON YOUR \MAP	
		409) \OK so at THAT \POINT i would be kind of the MIDDLE of the \PAGE I \THINK
	412) ok so for \ME that's KIND of by the	

Group No.	Multiple Marked Theme in one tone group as a single Theme	Multiple Marked Theme in more than one tone group
	STONE \GIANT I \THINK	
Group Four	471) so on the LEFT \COLUMN it \GOES \START OLD \MINE \SWAMP \COTtage STONE \GIANT \HILLS \FARM	
	494) so on MY \MAP there is like the OLD MINE and the \SWAMP	
	496) but befORE the HILLs and the \FARM there IS a /FORest	
Group Five		672) \WELL ON \MINE it's on the TOP LEFT HAND \CORner there IS an OLD \MINE
	678 b) and be\LOW i have a \SWAMP	
	678 c) and \DIAGONally i have a \CACTus	
	747) so UNDER MY \SWAMP i have a \COTtage a little like \LITTLE yeah \COTtage	
	759 b) and then slightly DOWN from the \COTtage i have a \TREE	
Group Six	901) and then sor... sort of beLOW \THAT there is the \FORest	
	930) so in LINE with the YELLow \HOUSE on the BOTtom of the \PAGE there is DUKE \POND	
	946) so then LIKE directly beNEATH that i've got a STONE \Giant	

Group No.	Multiple Marked Theme in one tone group as a single Theme	Multiple Marked Theme in more than one tone group
Group Seven		1028) and \THEN to the RIGHT of OLD \MINE do you have a \MINer
	1042) and then beLOW the \CACtus i have a \CASTle	
	1126) so diRECTly aCROSS from the MUSHroom \HOUSE ALmost to the other side of the page but not \QUITE i have /HILLS	
	1129) and then beLOW the HILLS i have a \FARM	
		1139) and -THEN -UM UNDER the \FARM SCOOP UP to the \LEFT
Group Eight	1155) and then to the RIGHT of OLD \MINE there is a \MINer	
Group Nine		
	1239) and then FROM there it comes STRAIght across the \MOUNTains	
	1250) and then UNderneath \CASTle i have a \TREE 205	
	1340) so FROM the \START it GOes RIGHT DOWN under the \MINE	
Group Ten		
	1374) and then beLOW \THAT the \COTtage	
	1402) and then on the RIGHT HAND \SIDE the MOUNTains are in line with the OLD \MINE	
		1443) and -THEN -UM just beLOW \THAT \UM it starts to CURve \LEFT

Group No.	Multiple Marked Theme in one tone group as a single Theme	Multiple Marked Theme in more than one tone group
Group Eleven		1483) \OK \WELL to the RIGHT of OLD \MINE on MY \MAP THERE is a GUY CHISELling a \WAY and he is called \MINer
	1484) so to the RIGHT of the OLD \MINE i have MOUNtains and a \CACtus	
	1514) and then on MY /MAP THERE IS a SYMBol just DOWN and LEFT of your COTTage CALLed /FORest	
	1516) ok with your STONE \GIANT i want < abandoned tone unit> you need to make a C SHAPE aROUND /IT QUITE a BIG C aBOUT TWO THUMBs HEIGHTs \WORTH	
Group Twelve		1567) \OK \TIM at the VERY TOP left hand side of your of your \MAP IS there SOMthing that says OLD \MINE
	1588) and then FROM \THAT outCOMES a \BLUE NOT DOTted \LINE	
	1664) so at the \MOMment the ROUTE i ‘ve got so far is just above the \CASTle	
		1718) \YEAH i \THINK FROM 149 \TREE we 96 CAN see where we \GO then
	1737) ok ok so FROM \THERE we’re LOOKing at sort of err ONE o’CLOCK UM \EREA FROM where we ARE to the YELLow \HOUSE	

Appendix Q

Lexio- grammatical analysis of the conjunctive and the continuative textual Themes of the 44 multiple marked Themes

Group	Marked Theme instance	Linker and its type	Expansion	Type of the Expansion expressed/ function of the textual Theme
Group One	\SO \horiZONtally it's about HALF way up the \CARavan park	so: conjunctive	enhancement	enhancement/ causal: general. It has the meaning 'as a result'
	-OK so to the RIGHT of WEST \LAKE PROBAbly one CENTimetre may be one and /HALF there is a TRIG \POINT	ok: continuative	/	signal a move in discourse; functioning as a response which denotes an agreement
		so: conjunctive	enhancement	enhancement/ causal: general. It has the meaning 'as a result'
Group Two	so on \MINE it's CALLED an OLD \MILL	so: conjunctive	enhancement	causal- general. It has the meaning 'as a result'
	so on \MINE it \GOES -UH i suppose in an EASTerly \DIRECTION	so: conjunctive	enhancement	causal: general. It has the meaning 'as a result'
	\OK so on \MINE there is a FENCED \MEADOW	ok: continuative	/	signal a move in discourse; functioning as a response which denotes an agreement
		so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	-YEAH \SO in a SORT of NORTH er south DIREction of WEST \LAKE there is a PLACE called TIRG POINT /\HERE	yeah: continuative	/	signal a move in discourse; functioning as a response which denotes an agreement and continuity
		so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	\SO -ER ON the \MAP have you got a \MONument	so: conjunctive	enhancement	ausal- conditional: general. It has the meaning 'as a result'
	\ER \WELL just beLOW the MILL \WHEEL the OLD MILL MINE is called the MILL \WHEEL there was a PICKet	well: continuative	/	signal a move in discourse

Group	Marked Theme instance	Linker and its type	Expansion	Type of the Expansion expressed/ function of the textual Theme
	/FENCE to the -UM SOUTH WEST of the OLD \MILL			
	so FROM the /MOUNtains we end up on the RIGHT the FAR side of the /MOUNtains to to the LEFT or nearer side of the \CASTle	so	continuative causal	signal a move in discourse; as a result of moving from the mountains, the route end up on the right of the mountains
	so LEFT of the \CASTle WHAT'S ON YOUR \MAP	so	continuative	signal a move
	\OK so at THAT \POINT i would be kind of the MIDDLE of the \PAGE I \THINK	ok: continuative	/	signals a move in discourse; functioning as a response which denotes an agreement
		so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	ok so for \ME that's KIND of by the STONE \GIANT I \THINK	ok: continuative	/	signals a move in discourse; functioning as a response which denotes an agreement
		so: conjunctive	enhancement	causal- conditional: general. It has the meaning as a result'
Group Four	so on the LEFT \COLUMN it \GOES \START OLD \MINE \SWAMP \COTtage STONE \GIANT \HILLS \FARM	so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	so on MY \MAP there is like the OLD MINE and the \SWAMP	so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	but before the HILLS and the \FARM there IS a /FORest	but: conjunctive	extension	replacive relation: denoting the meaning of instead
Group Five	\WELL ON \MINE it's on the TOP LEFT HAND \CORner there IS an OLD \MINE	well: continuative	/	signal a move in discourse

Group	Marked Theme instance	Linker and its type	Expansion	Type of the Expansion expressed/ function of the textual Theme
	and be\LOW i have a \SWAMP	and: conjunctive	extension	adding new details
	and \DIAGONally i have a \CACtus	and: conjunctive	extension	adding new details
	so UNDER MY \SWAMP i have a \COTtage a little like \LITTLE yeah \COTtage	so: conjunctive	enhancement	causal: general. It has the meaning 'as a result'
	and then slightly DOWN from the \COTtage i have a \TREE	and then conjunctive	extension	following in a spatial sense (i.e. what is next)
Group Six	and then sor.. sort of beLOW \THAT there is the \FORest	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	so in LINE with the YELLow \HOUSE on the BOTtom of the \PAGE there is DUKE \POND	so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	so then LIKE directly beneath that i've got a STONE giant	so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
		then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and \THEN to the RIGHT of OLD \MINE do you have a \MINer	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and then beLOW the \CACtus i have a \CASTle	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	so diRECTly aCROSS from the MUSHroom \HOUSE ALmost to the other side of the page but not \QUITE i have /HILLS	so: conjunctive	enhancement	causal- conditional: general. It has the meaning 'as a result'
	and then beLOW the HILLS i have a \FARM	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and then \UM UNDER the \FARM	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)

Group	Marked Theme instance	Linker and its type	Expansion	Type of the Expansion expressed/ function of the textual Theme
	SCOOP UP to the \LEFT			
Group Eight	and then to the RIGHT of OLD \MINE there is a \MINer	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
Group Nine	and then FROM there< unclear word> it comes STRAight across the \MOUNTains	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and then UNderneath \CASTle i have a \TREE 205	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	so FROM the /START it GOes RIGHT DOWN under the \MINE	so: continuative	/	signal a move in discourse
Group Ten	and then beLOW \THAT the \COTage	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and then on the RIGHT HAND \SIDE the MOUNTains are in line with the OLD \MINE the CASTle is in line with the \COTage	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
	and then -UM just beLOW \THAT\UM it starts to CURve \LEFT	and then: conjunctive	extension	following in a spatial sense (i.e. what is next)
Group Eleven	\OK to the RIGHT of OLD \MINE on MY \MAP THERE is a GUY CHISELling a \WAY and he is called \MINer	ok: continuative	/	signal a move in discourse; functioning as a response which denotes an agreement
	\OK so to the RIGHT of the OLD \MINE i have MOUNTains and a \CACtus	ok: continuative	/	signal a move in discourse; functioning as a response which denotes an agreement
	and then UNder \CASTle there is \TREE	and then: conjunctive	additive	following in a spatial sense (i.e. what is next)

Group	Marked Theme instance	Linker and its type	Expansion	Type of the Expansion expressed/ function of the textual Theme
	\UM and then on MY /MAP THERE IS a SYMbol just DOWN and LEFT of your COTTage CALLed /FORest	and then: conjunctive	additive	following in a spatial sense (i.e. what is next)
	ok with your STONE \GIANT i want < abandoned tone unit> you need to make a C SHAPE aROUND /IT QUITE a BIG C aBOUT TWO THUMBs HEIGHTs \WORTH	ok continuative	/	signals a move in discourse; denotes continuity
Group Twelve	\OK \TIM at the VERY TOP left hand side of your of your \MAP IS there SOMthing that says OLD \MINE	ok: continuative	/	signals a move in discourse
	and then FROM \THAT outCOMES a \BLUE NOT DOTted \LINE	and then: conjunctive	additive	following in a spatial sense (i.e. what is next)
	SO at the \MOMment the ROUTE i 've got so far is just above the \CASTle	so: conjunctive	enhancement	causal- conditional: specific. It has the meaning of result i.e. 'as a result' or in consequence
	ok ok so FROM \THERE we're LOOKing at sort of err ONE o'CLOCK UM \EREA FROM where we ARE to the YELLow \HOUSE	ok ok: continuative	/	signals a move in discourse; denotes a agreement
		so:	enhancement	causal: General. It has the meaning 'as a result'

Appendix R

The coding of the key hertz value of the Themes of the map task dialogues

Hertz value coding of Themes' key/ Group One

- 1) IG: ||SO 104 M|| YOU 100 M should have||a MAP 103 M with you|| which IS 90 M|| ERE 85 M|| CARavan 106 M park ||OLD 90 M mill|| and ALL 84 M that thing|| [YEAH 107 M||]
- 2) IR:
[yeah]
- 3) IG: ||ok so the START 165 H point <abandoned tone unit>|| have you got a START 136 M point marked on yours||
- 4) IR: just above the caravan park
- 5) IG: ||YEAH 105 M|| that's RIGHT 104 M|| ok so it SNAKES 148 H left|| and then STOP 129 M when you get to the|| C 125 M of the caravan park at the bottom of that|| [yeah]
- 6) IR:
[yeah]
- 7) IG: || ok NOW 112 M||it COMES 162 H almost vertically down|| ER101 L ||STAYing 124 M about a centimetre or so away from the left edge|| to PRObably 132 M i guess|| TWO 131 M centimetres above the top edge|| above the BOTtom 124 M edge sorry||
- 8) IR: ok
- 9) IG: ||so now you SHOULD 115 M be in the bottom left corner|| YEAH 62 L||
- 10) IR: yeah
- 11) IG: ||ok now it COMES 148 H right|| till it's IN 116 M line|| or just SHORTer 137 M off|| the bottom of the OLD 104 M mill || so COME 122 M right until you are in the left edge of the old mill|| and then GO 95 M up||
- 12) IR: old mill
- 13) IG: ||do you not have OLD 109 M mill||
- 14) IR: no
- 15) IG: ||AH 87 L||
- 16) IG: ||ok so there is an OLD 169 H mill to the bottom right of the caravan park||
- 17) IR: ok

- 18) IG: ||so may be just put a CIRcle 117 **M** or something|| it's PRObably 139 **M**
 <abandoned tone unit>|| if you circle <abandoned tone unit>
- 19) IR: [ok yeah ok I have got a mill wheel], yeah
- 20) IG: [you got a mill wheel]
- 21) IR: yeah
- 22) IG: ||THAT's 112 **M** fine then||
- 23) IR: where I am going from the bottom left corner
- 24) IG: ||GO 132 **M** right|| until you come level with the MILL 100 **M** wheel|| to the
 LEFT 101 **M** edge of the mill wheel||
- 25) IR: ok
- 26) IG: || and now go UP 104 **M** until you come to top of the caravan park|| the K 121 **M**
 in the caravan park||
- 27) IR: k in caravan park, yeah
- 28) IG: ||and then just CURVE 133 **M** off those edges a bit|| because they AREN'T 100
M straight|| and 's gonna 133 **M** be the same for all the edges actually|| so we'll just
 do that at the END 87 **L**|| we'll just get YOU 83 **L**|| get you THERE 97 **L**|| do you
 HAVE 154 **H** abandoned cottage on yours||
- 29) IR: yes
- 30) IG: ||exCELlent 45 **L**|| so you SHOULD 179 **H** be at the top left of the mill wheel||
- 31) IR: yeah
- 32) IG: ||you need to GO 107 **M** diagonally|| so you are in LINE 113 **M** with the
 abandoned cottage|| and then the diaGONal 120 **M** stops|| at aBOUT 104 **M** half
 way to the height of the caravan park|| does that make SESNE 149 **H**||
- 33) IR: half way to the height of the caravan park
- 34) IG: ||YEAH 103 **M**|| SO 115 **M**|| CARavan 140 **H** park is|| SOME 115 **M** amount
 high||
- 35) IR: so it's only about... it's only a short distance then
- 36) IG: ||so it's QUITE 177 **H** long|| BUT 103 **M** it's quite sho... like SHORT 131 **M**||
 high TWICE 135 **M**||
- 37) IR: yeah
- 38) IG: ||YEAH 112 **M**|| have you GOT 132 **M** that||
- 39) IR: half way to the top of the caravan park
- 40) IG: ||YEAH 111 **M**|| unTIL 133 **M** you come to the right of the abandoned cottage||
- 41) IR: ok

- 42) IG: ||so you should HAVE 113 **M** a diagonal line that goes till about three quarters way across the page||
- 43) IR: so I am going to all way towards the abandoned cottage
- 44) IG: ||NO 140 **H** ok|| so IF 128 **M** you get your pen||
- 45) IR: yeah
- 46) IG: || and DO 135 **M** a dot|| HALF 130 **M** way to the height of the caravan park|| and to the EDGE 99 **L** of the cottage|| so if you SQUIRE 116 **M** it off like that||
- 47) IR: yeah
- 48) IG: ||and then just JOIN 117 **M** the... old... bottom left corner of the old mill ||AND 94 **L** that dot together|| and you will have a DIAGONal 92**L** line||
- 49) IR: start again i am on, i'm on line the k of the caravan park, i 'm on, i'm at the top right of the mill wheel of the old mill
- 50) IG: yeah
- 51) IR: yeah
- 52) IG: ||and what we want is a DIAGONal 128 **M** line|| that goes FROM 140 **H** there|| to SOMEwhere 119 **M** in the right|| which i am going to TELL 112 **M** you where it ends||
- 53) IR: yeah
- 54) IG: ||SO 122 **M**|| horiZONtally 141 **H**|| it's about HALF 127 **M** way up the caravan park||
- 55) IR: horizontally
- 56) IG: vertically
- 57) IR: yeah
- 58) IG: ||horiZONtally 148 **H**|| IT 113's **M** to the right just to the right of the abandoned cottage||
- 59) IR: ok
- 60) IG: ||and then you should just JOIN 120 **M** the diagonal|| and it should BE 105 **M** quite shallow|| BUT 94 **M** quite long||
- 61) IR: yeah
- 62) IG: ||GREAT 86 **L**|| ok so NOW 108 **M** we are at the right there|| and you want come up till you're at the top of the abandoned cottage so just it is basically a straight line that curves a little bit
- 63) IG: so if you just take, take your pen and go to the corner that you've just done and just curve it in a natural way till you're at the top of the cottage

- 64) IR: yeah
- 65) IG: and now you are at the top of the cottage about midway through the page
- 66) IR: yeah
- 67) IG: great so now it curves again, in a do you have a fenced meadow
- 68) IR: yes
- 69) IG: great, and it's just to the left of the abandoned cottage
- 70) IR: no
- 71) IG: ah brilliant, so but, so your caravan park is on the bottom left your abandoned cottage is in the middle and your old little mill wheel is bottom right of the caravan park yeah
- 72) IR: yeah
- 73) IG: great and the fenced meadow is where
- 74) IR: bottom right
- 75) IG: oh i have got two ok so i've also got a fenced meadow diagonally left from the abandoned cottage so it's probably two centimetres across and two centimetres down and it is the same size as the one in the bottom right
- 76) IR: yeah ok
- 77) IG: so if you got two centimetres across and two centimetres down
- 78) IR: yeah so where i am going from the abandoned cottage then
- 79) IG: you want go to the bottom right corner of the fenced meadow
- 80) IR: i am going round the top of the
- 81) IG: yeah so you are going round the top of the abandoned cottage to where my fenced meadow is which I will [try to explain to you]
- 82) IR: [ok]
- 83) IR: ok
- 84) IG: so have you got a circle for fenced meadow on yours?
- 85) IR: I've drawn one, yeah
- 86) IG: yeah great, ok so you're at the bottom right... the top right corner of the fenced meadow
- 87) IR: yeah
- 88) IG: great, now snake it left and up slightly ever so slightly until you are about three quarters of the way to the left... of the left of the fenced meadow
- 89) IG: so you are about a quarter of the way into the fenced meadow
- 90) IR: ok

- 91) IG: yeah
- 92) IR: yeah
- 93) IG: ok now do you have a west lake?
- 94) IR: in the top left
- 95) IG: top left yeah, ok so you see how... there is like a pointy bit on the left corner
- 96) IR: top left corner
- 97) IG: bottom left corner
- 98) IR: yeah
- 99) IG: and then it sort of comes circularly and does a little jutting bit in
- 100) IR: it's got like a w, that was three is three, yes, it's fine I see
- 101) IG: yeah ok, so come to the top of that jutting bit... come to the bottom, so there is a little jutting bit at the bottom of the west lake
- 102) IR: um
- 103) IG: where it meets at the right come up
- 104) IR: it's jutting bit at the bottom of the west lake
- 105) IG: yeah
- 106) IR: ok
- 107) IG: is your west lake a different picture to mine?
- 108) IR: no, it is... no... fine
- 109) IG: mine is like a v
- 110) IR: it is fine, keep going
- 111) IG: ok, and then just come round the west lake
- 112) IR: round the left hand side
- 113) IG: right hand side, sorry
- 114) IR: right hand side yeah, how far
- 115) IG: so does yours eventually... it goes kind of flat on the right hand side
- 116) IR: yeah
- 117) IG: quite high up and then it goes diagonally left
- 118) IR: yeah
- 119) IG: comes before just it starts going flat on the right hand side
- 120) IR: yeah
- 121) IG: do you have a thing called trig point?
- 122) IR: no

- 123) IG: ||OK 128 M ||so to the RIGHT 149 H of west lake|| PROBABly 145 H one centimetre may be one and half|| there is a TRIG 127 M point||
- 124) IR: ok [is it diagonally right]
- 125) IG: [it's] sorry
- 126) IR: is it diagonally right?
- 127) IG: no, it's... it's in line with the bottom of
- 128) IR: ok
- 129) IG: so if you circle there,
- 130) IR: yeah
- 131) IG: and then come cir... come round... curve it round again around the top of that circle for about I guess a centimetre and half across
- 132) IR: yes
- 133) IG: then, do you have a monument?
- 134) IR: um, my monument by the abandoned cottage
- 135) IG: yeah to the top right of it yeah
- 136) IG: yeah yeah
- 137) IR: yeah
- 138) IG: ok so now you just draw a diagonal about a half centimetre to a centimetre from the bottom of the monument to the point we were just at (cough), sorry
- 139) IR: yeah
- 140) IG: ok now curve it round the monument until you get to the t in the word monument
- 141) IR: yeah
- 142) IG: and do you have a nuclear test site?
- 143) IR: no
- 144) IG: ok so above the monument
- 145) IR: yep
- 146) IG: up and right it's probably two centimetres up and it starts where the t in monument finishes
- 147) IR: ok
- 148) IG: just put a circle there
- 149) IR: yeah
- 150) IG: and you want come left around that circle and then up to the west lake up to the east lake, sorry

- 151) IR: to the bottom right corner of the east lake
- 152) IG: till not to the bottom right hand corner but about half way down
- 153) IR: ok ok
- 154) IG: ok and then just come around the bottom of the easts lake just follow it
round until you are about a centimetre away from that bottom left corner
- 155) IR: yeah
- 156) IG: and put a cross that is the finish, aft... actually do you have farmed land?
- 157) IR: yes
- 158) IG: ok so it is only the two things that are different three things trig point nuclear
site
- 159) IR: do you have anything <unclear words> have we finished that?
- 160) IG: yes, we have finished that's it I think that... that's it.

Hertz value coding of Themes' key/ Group Two

- 161) IG: ||ok so ASHtar 151.4 **M** || do you have the START 166.8 **M** point and finish point at least||
- 162) IR: ||AH 212.3 **M**|| i have the START 243 **H**|| but i DO N'T 242.5 **H** have the finish||
- 163) IG: ||ok SO 136.7 **M** er|| so the START 165.5 **H** is somewhere near the bottom left... well may be a third up|| on the LEFT 121.4 **M**|| RIGHT 136.4 **M**||
- 164) IR: ||ER 203 **M**|| i DON'T 232 **M** know what further up the on the left would be|| [I 194 **M** got <abandoned tone unit>||]
- 165) IG: [NO 162.8 **M** about third of the way up||]
- 166) IR: ||a THIRD 161.8 **M** of the way up|| well I 262.8 **H**'ve just got|| that the STARTing 246.4 **M** point is a caravan park||
- 167) IG: ||OK 154.3 **M**|| SO 155.9 **M** yeah|| so THAT's 142.8 **M** about right yeah|| um OK 120.9 **M**|| SO 160 **M** || do you HAVE 170.5 **M**|| the OLD 148 **M** mill|| which is er... just beLOW 140 **M** the caravan park and to the right||
- 168) IR: ||ER 205 **M**|| YEAH 230 **M**|| MILL 237 **M** wheel|| [is that right]
- 169) IG: [ok] || YEAH 141.5 **M** || so on MINE 145 **M**|| it's CALLED 135 **M** an old mill||
- 170) IR: ||OK 139 **M**||
- 171) IG: ||SO 157 **M**|| the ROUTE 158 **M** i have starts|| just aBOVE 178 **H** where it's got caravan park|| and it LOOPS 160 **M**|| to THE 156 left **M**|| AND 113.6 **M** down||
- 172) IR: ||OK 296 **H**||
- 173) IG: ||and then it COMES 176 **M** <abandoned tone unit>|| it GOES 135 **M** all the way <abandoned tone unit> it GOES 156 **M** down most of the page|| then LOOPS 147 **M** up|| aROUND 140 **M** the old mill|| with the OLD 139 **M** MILL below the route|| did that make SENSE 180 **H**||
- 174) IR: ||UM 224 **M**|| SORT 260 **H** of|| SO 247 **M** it loops to the left and down|| and it goes aROUND 233 **M** the old mill||
- 175) IG: ||YEAH 137 **M**|| with the OLD 139 **M** mill below the route||
- 176) IR: ||OLD 203 **M** mill below the rout|| OK 210 **M**||
- 177) IG: ||OK 157 **M** so|| ER 136 **M**|| on the BOTtom 181 **H** right... of the... of the sheet there should be er <abandoned tone unit> ||on MINE 139 **M**|| i have got a FENCED 136 **M** meadow|| have you got ANYthing 168 **M** in this [area]

- 178) IR: [yeah] ||I 220 M have fenced meadow too||
- 179) IG: || OK 127 M|| UM 128 M|| do you SEE 170 M abandoned cottage on your map||
- 180) IR: ||i DO 237 M yeah||
- 181) IG:|| ER127 M|| is that about in the CENTER 168 M of the map||
- 182) IR: ||IT 232 M is|| YEAH 218 M||
- 183) IG: || YEAH 138 M|| ok SO 157 M|| where you so... let's SAY 204 H that your route is at the top of the old mill at the start|| uh... at this POINT 110 M|| so on MINE 147 M|| it GOES 125 M|| UH 311 H || I suppose in an EASTerly 151 M direction or to the left er to the RIGHT 113 M||
- 184) IR: ||OK 211 M||
- 185) IG: ||AND 115 M|| it goes to just aBOVE 153 M the fenced meadow|| and then it goes UP 140 M past the abandoned cottage|| on the RIGHT 134 M of the abandoned cottage||
- 186) IR: ||SO223 M|| UP 270 H... towards the abandoned cottage on the right|| [yeah]
- 187) IG: [on the right] ||and then it goes OVER 212 H the abandoned cottage and down again|| a LITTLE 140 M bit just a little bit||
- 188) IR: ||OK 220 M||
- 189) IG: ||and then there should BE 300 H <abandoned tone unit> || IS 154 M there another fenced meadow there for you||
- 190) IR: ||NO 211 M there isn't||
- 191) IG: || OK 132 M|| so on MINE 166 M|| there is a FENCed 167 M meadow|| it's aBOU 141 M say halfway up the page on the left hand side||
- 192) IR: ||OK 215 M||
- 193) IG:|| and... the ROUTE 174 M goes above the fenced meadow|| so it... so ir... goes aBOVE 172 M the abandoned cottage|| DOWN 157 M a little bit and then it comes back up||
- 194) IR: || OK 321 H||
- 195) IG: ||OK 134.5 M|| so do you have the WEST 163 M lake||
- 196) IR: || I 262 H do || that's aBOVE 215 M now||
- 197) IG: ||YEAH 132 M|| do you HAVE 156 M|| TRIG 168 M point||
- 198) IR: ||NO 204 M|| NEXT 241 M to WEST lake|| i have FARMed 226 M land||[which is to the right of west lake]

- 199) IG: [ERR] ||to the WEST 145 M of er <abandoned tone unit> ||oh er sort of aBOVE 173 H <abandoned tone unit>|| [so sort of the north east direction of west lake]
- 200) IR: [yeah, that's right]
- 201) IG: ||YEAH 123 M|| SO 164 M|| in a SORT 196 H of north er south direction of west lake|| there is a PLACE 128 M called trig point here||
- 202) IR: [ok]
- 203) IG: [so]... may be just put like a mark there to indicate because the... the route till now go it will hit the shore line of west lake, it's... sort of southerly points
- 204) IR: ||OK 206M||
- 205) IG: and then it will go... follow the coast line round but avoiding this trig point
- 206) IR: ||OK 259 H||
- 207) IG: and then it goes above trig point and it heads in in... a south easterly direction do you want me to repeat that.
- 208) IR: ||YEAH 209M|| ONE 205 M second||
- 209) IG: ok
- 210) IR: ||SO 236 M|| it HITS 269 H the southern past part of...of west lake||
- 211) IG: [follow the coast line]
- 212) IR: [follow the coast line]
- 213) IG: it follows the coastline I mean just around so where so... I indicate this trig point it... just sort to the the... south east
- 214) IR: ||OK 243M||
- 215) IG: and it goes around this trig point
- 216) IR: ok
- 217) IG: uh then it goes in a in... a south easterly direction around trip point
- 218) IR: ||so IS <abandoned tone unit>... where this farm land where is trig point in regards [to that then].
- 219) IG: [it]... it's directly south of the... farmed land
- 220) IR: er right ok <unclear words>
- 221) IG: oh sorry
- 222) IR: that's ok so trig point is south of that you said
- 223) IG: yeah so it's it's... south of the farmed land and it's east of the west lake, but sort of more south east

- 224) IR: ok ok so then ...so say it again, so we follow the coastline, we go past trig point
- 225) IG: yeah, so above trig point
- 226) IR: above trig point
- 227) IG: and then and then the route goes very much in a straight line in a... south easterly direction
- 228) IR: er
- 229) IG: ok is... does that... make sense?
- 230) IR: hold on, so we've gone pa we've gone... do we go all the way up around the coast line?
- 231) IG: not all the way up, it just sort of goes past trig point, and then it turns around there
- 232) IR: ok so we turn around trig point and where do we head?
- 233) IG: south east
- 234) IR: south east ||and WHAT 228 M we are heading toWARDS 251 H||
- 235) IG: || SO 160 M|| ER 135 M|| on the MAP 175 H|| have you got a MONument 168 M||
- 236) IR: I have, yeah
- 237) IG: yeah, so is that sort of in the middle of the page on the right?
- 238) IG: er it is the furthers thing I have on the page on the right
- 239) IG: er er
- 240) IR: and it is... it is in the middle yeah, because I have east lake and the golf course above it
- 241) IG: ok I haven't got a golf course on mine, where's the golf course?
- 242) IR: it's just below east lake
- 243) IG: er sss... in the sou...south of east lake
- 244) IR: yes, kind of a little bit to the west, but still south of east lake slightly to the west
- 245) IG: ok, so because I've got a nuclear test site on mine
- 246) IR: and where is that?
- 247) IG: that is south of east lake again but it's more to the south east
- 248) IR: ok
- 249) IG: so er... so er you got monument, haven't you?
- 250) IR: yeah

- 251) IG: its north of the monument but to the east of it slightly
- 252) IR: ok I have got you, ok
- 253) IG: ok so the route goes south east, and it goes around the monument and below
the monument
- 254) IR: ok
- 255) IG: and then it comes up, and if you've indicated where the nuclear test site is,
the route now comes around the monument but by passes the nuclear test site on the
left
- 256) IR: ok
- 257) IG: and I assume it goes around your golf course er following up to the coast of
east lake
- 258) IR: so the nuclear test site should be on my left as it past it, is that right?
- 259) IG: no no sorry, should be on the right sorry, my left and right is not very good
- 260) IR: that's ok, so that the nuclear test site will be on my right and past the golf
course you said
- 261) IG: yeah, the golf course I assume then will be on the left and then it hits... it
hits the east lake co... er coast line
- 262) IR: yeah
- 263) IG: and then the finish point er is just sort of to the west of the east lake coast so
if your... if your route hits the coast line
- 264) IR: yeah
- 265) IG: and then you go west from there
- 266) IR: yeah
- 267) IG: if you've just er instead of following the coast line round when it turns to go
north
- 268) IR: yeah
- 269) IG: if you just go straight maybe a centimetre er er you finish
- 270) IR: right so just before, did you have farmed land?
- 271) IG: so it... it... it's... er it's to the south east of the farmed land
- 272) IR: ok, that's fine
- 273) IG: and... and that's it, so shall we talk that through once more before
[finalizing it]
- 274) IR:
[yeah]

- 275) IG: so let's go back to the start, so the caravan park's to the south of the start point
- 276) IR: yeah
- 277) IG: and then the route goes around the caravan park a bit and down south, and then it loops around the old mill
- 278) IR: yeah
- 279) IG: er going above the old mill it then goes in aa... an easterly ss...direction
- 280) IR: yeah
- 281) IG: and then it goes up past the abandoned cottage
- 282) IR: ok
- 283) IG: ||where there ANY 165 **H** landmarks there|| that i might er <abandoned tone unit> ||that weren't on my MAP 135 **M**|| sORry 115**M**|| I 117 **M** never ASKed 115 **M**||
- 284) IR: ||ER 252 **H**|| WELL266 **H**|| just beLOW 163 **M** the mill wheel|| the OLD 240 **H** mill mine is called the mill wheel|| there was a PICKet 230 **M** fence|| to the UM 192 **M**|| SOUTH 228 **M** WEST of the OLD mill||
- 285) IG: to the south
- 286) IR: west but we didn't go anywhere near that on our route
- 287) IG: to the south west
- 288) IR: yeah
- 289) IG: oh, it well it might have done because mine I... I... I probably didn't mention that the route goes quite a bit south, so it probably loops around your er what did you call it, picket fence?
- 290) IR: yeah, because it went above the old mill, didn't it? and then easterly towards where the fenced meadow is
- 291) IG: it went straight up yeah, then went straight up and around the top of the abandoned cottage
- 292) IR: that's right
- 293) IG: then it avoided the next is there...was there a fenced meadow to the... the east of the abandoned cottage?
- 294) IR: mine didn't have one, but I wrote it down
- 295) IG: and then it went above the fenced meadow there
- 296) IR: towards the west lake
- 297) IG: and then... then it went north towards the west lake

- 298) IR: mmhmm
- 299) IG: and then it followed the coast line around this trig point that I indicated
- 300) IR: yeah, that's right
- 301) IG: er avoiding the farmed land and then it went down to the south east around
this monument
- 302) IR: yeah
- 303) IG: and then I avoided the nuclear test site and...and the golf course and went in
between them
- 304) IR: and then it was on the left you just... just follow the east lake round, and it
was between er east lake and farmed land
- 305) IG: yeah, so it is closer to the east lake than the farmed land but yes
- 306) IR: ok yeah, that's fine, I think I got the same point on the map
- 307) IG: ok, I think that's it

Hertz value coding of Themes' key/ Group Three

- 308) IG: ||SO 118 **M**|| we're at the START 89 **M**||
- 309) IR: ||YEAH 204 **M**||
- 310) IG: ||UM 83 **M**|| and beLOW 95 **M** the start is the old mine||
- 311) IR: ||YEAH 107 **L**||
- 312) IG: ||and we go aROUND 98 **M** the old mine||and then we meet the MINer 86 **M**||
- 313) IR: ||do you say there is a MINer 250 **H**||
- 314) IG: ||there is MINer 96 **M**|| [err]
- 315) IR: [I don't have a miner] that is the only issue|| i am MISSing 210 **M** things ||
- 316) IG: ||so there is a MINer 118 **M** in between the old mine and the mountains ||
- 317) IR: ||OK 190 **M**||
- 318) IG: ||and we go in BETWEEN 105 **M** the miner and the mountains|| to go aBOVE 91 **M** the mountains||
- 319) IR: ||ok 263 **H**|| IS 243 **M** the miner kind of right in the middle|| OR 280 **H** is it?
- 320) IG: ||YEAH 105 **M**|| he is RIGHT 96 **M** [in the middle||
- 321) IR: [yeah]
- 322) IG: ||betWEEN 81**M** the old mine and the mountains|| and we go to the RIGHT 86 **M** of him|| so we go PAST 92 **M** the old miner|| and then UP 82 **M** above the mountains||
- 323) IR: ||YEAH 220 **M**|| OK 141 **M**|| i got THAT 200 **M**||
- 324) IG: ||and then beLOW 96 **M** the mountains|| IS 90 a castle **M**|| do you have a CASTLE 92 **M** on yours||
- 325) IR: ||YES 224**M**|| I 176 **M** do||
- 326) IG: ||OK 80 **M**|| and on... on the LEFT 107**M** of the castle|| are some ROCKS 92**M**||
- 327) IR: ||DOn't 191 **M** have that|| [(laugh)]
- 328) IG: [ok]
- 329) IR: ||i got the COTtage 323 **H**|| ||and a SWAMP 200 **M**|| just aBOVE196 **M** it||
- 330) IG: [I] ||i don't HAVE 98 **M** a cottage|| [um]
- 331) IR: [yeah]
- 332) ||i THINK 93 **M**|| where YOUR 104 **M** cottage is|| must be NEAR 86 **M** where my ROCKs 94 **M** are||

- 333) IR: ||OK 217 M||
- 334) IG: ||UM 81 M|| DO 100 M you have a forest||
- 335) [IR: ||NO 178 M|| [(laugh)
- 336) IG: [ok]||SO 90 M|| we kind of may be go DOWN 110 M|| UM78 L|| DOWN96
M diagonally left from the mountains||
- 337) IR: || so we go ROUND 227 M the mountains|| then we go DOWN 188 L
diagonally left||
- 338) IG: ||YEAH 101 M yeah||.
- 339) IR: ||do you HAVE 247 M a cactus||
- 340) IG: ||i do NOT 102M have a cactus|| i have a TREE 81||
- 341) IR: ||IS 285 H is like between the mountains and the castle|| almost in the
middle|| ||but just KIND 256 M of little bit to the left||
- 342) IG: [yes, so you kind of]
- 343) IG: [ok]
- 344) IR: [that's... that's what I... so you]
- 345) IG: ||OK 91M||
- 346) IR: ||i was TRYing 261 H to work out how i should|| go aROUND190 M the
cactus|| if i... IF 293 H i ... SHOULD like|| go betWEEN199 M it or not||
- 347) IG: ||so... so FROM 114 H the mountains|| we end up on the RIGHT 96 M
<unclear words> the far side of the mountains|| [to... to the LEFT 92 M or nearer
side of the castle]|| and then you SAY111 M you have the swamp||
- 348) IR: [yeah]
- 349) IR: ||YES 213 M||
- 350) IG: ||UM 84 M|| so we GO 94 M pretty much close to the swamp|| but
underNEATH 96 M it|| if the SWAMP 102 M is just below the old mine on your
map||
- 351) IR: || is not diRECTly 297 H below|| but is kind of just under the LINE 235 M||
- 352) IG: ||YEAH 106 M||...[yeah ok]
- 353) IR: [|| and a] LITTLE 331 H bit to the left as well|| SO 101 L||
- 354) IG: ||so that's the SAME 82 M place really || so what we are trying to do is
trying to go DOWN 97 M|| diAGonally 91 M left to the castle || UM 79 L|| near
what is on my map is the ROCKS 99 M || UM 74 L|| but you don't have THAT 102
M||
- 355) IR: ||NO 163 M||

- 356) IG: ||um ||so.... so LEFT 122 **H** of the castle|| what's on YOUR 91 **M** map|| so the CASTle 100 **M** is on the far side||
- 357) IR: ||yeah the CASTLE 278 **H** 's on the right||
- 358) IG: ||yeah||
- 359) IR: ||then on the FAR 263 **H** side|| like on the LEFT 187 **M**|| is the SWAMP 190 **M**|| and then beLOW 221 **M** that and slightly to the right is the cottage||
- 360) IG: ok
- 361) IR: I don't have any rocks
- 362) IG: right
- 363) IR: so
- 364) IG: so I think the cottage must be in between the swamp and the rocks on mine and then there is a forest underneath the cottage I imagine.
- 365) IR: || i've got a STONE 233 **M** giant||
- 366) IR and IG: (laugh)
- 367) IR: ||RIGHT 177 **M**|| let's... let's go BACK 382 **H** to the mountains|| where are we going from the MOUNtains 249 **M**||.
- 368) IG: so if we go um down and diagonally left from the mountains,
- 369) IR: yeah
- 370) IG: so we end up on the other side of the castle, and then we so... so we end up pretty much below the castle,
- 371) IR: <unclear words>
- 372) IG: but only kind of just below what it says castle
- 373) IR: ok alright, let's ok, hold on, I am about to do some scribbling out there, we are
- 374) IG: and then we come back around what is the rocks in mine up towards the swamp, but still below the swamp never go round the swamp
- 375) IR: ok I will go like around the cottage then above the cottage, but like around <unclear words> the swamp
- 376) IG: it might be below the cottage
- 377) IR: um I don't not <unclear words> oh, it's so hard to do, but like if I am going under the cottage then I feel like do a really weird a loop to stay under the swamp and then go down again [to get to the end] so I don't know if I should get above it or not.
- 378) IG: [ok... ok yeah so]

- 379) IG: you said it would do a weird loop if you go above it
- 380) IR: yeah
- 381) IG: I'd [say...]
- 382) IR: [no, if I go if I go below it] and still wanna go kind go up to the swamp
- 383) IG: ok so... so stay... stay above it then
- 384) IR: ok
- 385) IG: um
- 386) IR: ||so yeah i am at the SWAMP 211 M now||
- 387) IG: ||RIGHT 86 M|| so so so WHAT¹⁹⁴ H things do you have on your map|| that will be an INteresting 80 L one||
- 388) IR: ||UM 226 M|| I 248 M will do it like desending||
- 389) IG: ok
- 390) IR: ||a COTtage 300 H kind of on the left||
- 391) IG: yeah
- 392) IR: ||then a TREE 240M on the right||
- 393) IG: ok
- 394) IR: ||then STONE 279 H giant|| GOLD 251 H mine|| YELLow 224 M house|| HILLS 215 M|| MUSHroom 242 M house|| FARM 226 M|| and then more MOUNtains 165 M||
- 395) IG: ||OK 131 M|| so I 111 M have the tree || i have the YELlow 90 M house|| i have the MUSHroom 86 M house|| i have the HILLs 86 M|| UM 79 L|| i have a FARM 109 M|| UM 84 L|| so... so where we are at the MOMent 132 H we just come|| we are by the swamp 91 M||.
- 396) IR: mmhmm
- 397) IG: ||so if we go|| DOWN 111 M from the swamp||
- 398) IR: [yeah]
- 399) IG: [to the point where] we kind of PARallel 97 M to the tree||
- 400) IR: ||OK 238 M||
- 401) IG: ||so that we are underNEATH 90 M the tree||
- 402) IR: ||HOW 280 H far like|| INto²⁹⁹ H the middle is this|| [is it still quite far at the left?]
- 403) IG: [um]
- 404) IG: ||KIND 106 M of|| JUST 114 M on the right side of the swamp|| is where it goes DOWN 80 M on my map||

- 405) IR: ||OK 257 H|| that's COOL 255 H|| SO 206 M|| I've gone down||
- 406) IG: yeah
- 407) ||so you say we are kind of PARAllel 226 M to the tree||
- 408) IG: yeah, in between the tree and the yellow house kind of that way.
- 409) IR: ||OK 251 M|| so at THAT 218 M point|| i would be kind [of MIDdle 197 M of the page||] I 188 M think||
- 410) IG:[ok]
- 411) IG: ok so... so the idea is to be going down on the left side at the moment so
- 412) IR: ||ok so for ME 270 H|| that's KIND 229 M of by the stone giant|| i THINK 150 M||
- 413) IG: [ok]
- 414) IG: and then it goes across right on this map to the middle of well, to in between the yellow house and the tree right to the other side of the map
- 415) IR: ok so that's kind of by my gold mine
- 416) IG: right, so that's kind of a straight line there
- 417) IR: ok
- 418) IG: from... from the um from where was parallel to the tree [to the other side of the tree]
- 419) IR: [yeah]
- 420) IR: mmhmm
- 421) IG: in between the yellow house and the tree
- 422) IR: yeah
- 423) IG: and then, there's well... and then it goes straight down past the mushroom house after it goes to the trees
- 424) IR: ok
- 425) IG: so it goes on the right side of the mushroom house.
- 426) IR: by the right side of the mushroom house, ok and after that
- 427) IG: after that it turns left underneath the mushroom house um but there is a duck pond on this map which isn't on your map
- 428) IR: ok where is that in relation to the farm?
- 429) IG: it's directly right of the farm
- 430) IR: ok and is it directly under the mushroom house or d' you reckon it's between my farm and mountains?
- 431) IG: it's kind of... it's... is parallel well it's um is in line with the yellow house

- 432) IR: yeah
- 433) IG: and is directly right of the farm
- 434) IR: ok [ok] not a... my mountains are underneath the mushroom house so I think, it's probably between the farm and the mountains, am I going underneath the duck pond?
- 435) IG: [so is kind of where these two meet]
- 436) IG: you go above the duck pond,
- 437) IR: oh, above the duck pond
- 438) IG: but then underneath the farm.
- 439) IR: ok
- 440) IG: so in between the duck pond and the farm and then to the finish you basically go underneath the farm and to the finish on the...on the left there.
- 441) IR: ok I don't have a finish
- 442) IG: you don't have a finish point
- 443) IR: sign sadly but um
- 444) IG: ok so um... I so... the finish point is um basically if you were to draw a diagonal line down from the hills and up from the farm um to... to the left of each
- 445) IR: yeah
- 446) IG: so if you were to draw um... to draw a line diagonally up and left from the farm and down and left from the hills it's basically where these two would meet or also kind of a um... there's probably an easier way to explain that actually um but it's... it's diagonally up from the farm if you were to follow that that line on the gate of the farm up.
- 447) IR: yeah
- 448) IG: so... so you know you it's already on a diagonal line there
- 449) IR: ok
- 450) IG: maybe if you'd follow the diagonal line from the top of the house that's so... so you've got of... the roof of the house.
- 451) IR: ok
- 452) IG: has a diagonal line on it
- 453) IR: yeah
- 454) IG: if you were to follow that up where it meets um the.... the text for the mushroom house and the hills if you were to draw a straight line from there that's where the finish is basically.

- 455) IR: oh, ok that helps, right I just draw a little line <unclear words> so I can get it
um I think I've got it
- 456) IG: that's good, I think that's it then
- 457) IR: yeah, I hope so

Hertz value coding of Themes' key/ Group Four

- 458) IG: ||SO 267 **H**|| UM 191 **M**|| what do YOU 314 **H** have|| at the TOP 193 **M** of your map||
- 459) IR: ||UM 136 **M**|| i got on the LEFT 142 **M**|| a START 129 **M** location|| and then on the RIGHT 120 **M**|| some MOUNtains 111 **M**||
- 460) IG: ||OK 198 **M**|| some MOUNtains 184 **M**|| ERR 194 **M**||IS 197 **M** there anything else|| UM 187 **M**|| on the LEFT 170 **M** of the mountains||
- 461) IR: ||UM135 **M**|| NO 138 **M**|| there is... there is an OLD 140 **M** mine|| just beLOW118 **M** the start location||
- 462) IG: ||OK 237 **M**||OK 179 **M**|| is there ANYthing 209 **M** between the old mine and the MOUNtains||
- 463) IR: no || NOT 132 **M** here no||
- 464) IG: ||OK ||because I 188 **M** have a miner between the old <abandoned tone unit>|| RIGHT 188 **M** in the middle|| betWEEN 189 **M** the old mine and the mountains|| BUT 169 **M**|| ERR 159 **M**|| a LITTLE 187 **M** bit closer to the mine|| [than the MOUNtains 79 **L**||]
- 465) IR: [||OK 175|| **H**]
- 466) IG: [UM 174 **M**|| < ||and then <abandoned tone unit>||]
- 467) IR: [ok i am DRAWing it on]
- 468) IG: ||YEAH 188 **M**||
- 469) IR: ||OK 177 **H**||
- 470) IG: ||and THEN 172 **M**|| UM 181 **M**|| SO 185 **M** ||WHAT 198 **M** do you have|| beLOW 161 **M**|| kind of on the NEXT 160 **M**||
- 471) IR: ||well i got KIND 170 **H**of two columns|| a LEFT 182 **H** and a right column|| and THEN 106 **M** < abandoned tone unit>|| so on the LEFT 123 **M** column|| it GOES 113 **M**|| START 118 **M**|| OLD 120 **M** mine|| SWAMP 135 **M**|| COTtage 115 **M**|| STONE 122 giant **M**|| HILLS 122 **M** farm||
- 472) IG: ||OK 200 **M**||
- 473) IR: ||OK133 **M**||
- 474) IG: ||SO 207 **M** i don't have < abandoned tone unit>|| I 192 **M** have a swamp|| i don't have COTtage 155 **M** || and i DON'T 191 **M** have <abandoned tone unit> || what was the OTHER 185 **M** one||?
- 475) IR: || a STONE 127 **M** giant||

- 476) IG: ||a STONE 183 M giant|| i DON'T 195 M have [that]
- 477) IR: [||HILLS 120 M farm||]
- 478) IG: ||i DON'T 175 M have hills or farm||
- 479) IR: ||they are UM 130 M|| DIStributed 130 M|| PREtTy 116 M much evenly || SO 106 M||
- 480) IG: ||aCROSS 203 M|| sort of UNder 183 M<abandoned tone unit>|| SO 195 M|| the SWAMP 178 M|| IS 190 M on the|| LEFT 182 M side||
- 481) IR: ||yeah ||well UM 118 M|| they've <abandoned tone unit>|| they're diREctly 132 M underneath the old mine||
- 482) IG: ||OK 222 M|| so they just they just go DOWN 156 M||
- 483) IR: yeh
- 484) IG: ||so SWAMP 177 M|| and THEN 177 M a...a... ||and THEN 154 M|| what's up BEneath 173 M swamp||
- 485) IR: ||COTtage 135 M||
- 486) IG: ||COTtage 167 M||
- 487) IR: ||and then STONE 142 H giant||
- 488) IG: ||COTtage 240 M|| and THEN 177 M stone giant|| and then beneath THAT 167 M||
- 489) IR: ||UM 117 M ||HILLS 136 M|| and a FARM 52 L||.
- 490) IG: || OK 202 M|| i SEE 171 M|| OK 189 M ||i actually DO 234 H have the hills and a farm || but i wasn't LOOKing 192 M that far down|| [||ok GREAT 158 M||]
- 491) IR: [ok, that's GOOD]
- 492) IG: ||do you have a FOrest 169 M|| NEAR 192 M the stone giant||
- 493) IR: ||NO 140 M||
- 494) IG: ||OK 196 M ||so BEtween 204 M|| OK 187 M||let's see i'm TRYing 237 M to think|| what's the BEST 207 M way to do this|| UM 204 M|| so Between 200 M the <abandoned tone group>|| SWAMP 189 M <abandoned tone unit>||OK 196 M...|| so on MY 221 M map|| there is like the OLD 179 M mine ||and then the SWAMP 163 M||
- 495) IR: [ok]
- 496) IG: [||and then] i DON'T 186 M have the cottage|| but i WROTE 163 M that in there|| and i don't HAVE 192 M the stone giant|| but beFORE 204 H the hills and the farm|| there IS 156 M a forest|| but it's a BIT 193 M more to the right|| like diREctly 187 M under the old mine|| BUT 177 M [to the right of the swamp||]

- 497) IR: [ok]
- 498) IR: ||so that's <abandoned tone unit>||... THAT's 145 **M**|| PREty 154 **M** much the same location as the cottage is|| i THINK 127 **M**||.
- 499) IG: ok
- 500) IR: ||UM 120 **M**|| so it's HARD 141 **M** to tell whether|| the COTtage 128 **M** or the forest comes first|| like in TERMS 154 **M** of the um page|| if you DIVided 145 **M** it in half||
- 501) IG: yeah
- 502) IR: then the cottage would sit just on the top of that half way line
- 503) IG: ok
- 504) IR: so where does the forest sit?
- 505) IG: the forest is definitely on the left side
- 506) IR: yeah
- 507) IG: a... just on the left side of the half way line
- 508) IR: but in terms of how far up it is
- 509) IG: um it's... so do you have rocks?
- 510) IR: no, I don't have rocks too
- 511) IG: I have rocks right under miner, so miner would be kind of in the middle of the page, right
- 512) IR: ||yeah YEAH 117 **M**||
- 513) IG: ||RIGHT 194 **M** under miner|| kind of alMOST 202 **M** parallel but little lower than the swamp|| i have ROCKs 154 **M**||
- 514) IR: ok
- 515) IG: is that right above the cottage that would be nearer the cottage should be probably because point it's [coz right in the halfway]
- 516) IR: [yes, let's just...]
- 517) IR: let's just <unclear words> up and right of the cottage
- 518) IG: do you have yellow house?
- 519) IR: yeah yeah
- 520) IG: ok so the cottage is above the yellow house
- 521) IR: yes, quite a long way of the yellow house
- 522) IG: ok so the forest is probably...
- 523) IR: I am just wondering whether the... we got... we got some shared locations
- 524) IG: yeah maybe we should figure out all the things that we share

- 525) IR: and also I am assuming that they are in the same place, but that's not necessary true
- 526) IG: that's true
- 527) IR: ok um
- 528) IG: ok so we can talk about the... the relationship between the ones that we share then... so you have old mine
- 529) IR: yeah yeah
- 530) IG: you have a miner
- 531) IR: well, I have drawn a miner now, yeah
- 532) IG: oh so ok mountains... do you have, mountains?
- 533) IR: yeah.
- 534) IG: do you have... do you have a swamp?
- 535) IR: yeah
- 536) IG: you don't have rocks
- 537) IR: I don't
- 538) IG: do you have a castle?
- 539) IR: yes
- 540) IG: do you have... you don't have a forest
- 541) IR: no
- 542) IG: do you have a tree?
- 543) IR: I do have a tree
- 544) IG: you do, do you have a yellow house?
- 545) IR: yeah
- 546) IG: do you have a mushroom house?
- 547) IR: yes
- 548) IG: do you have hills?
- 549) IR: yes
- 550) IG: do y... you have a farm
- 551) IR: yes
- 552) IG: and you have a duck pond
- 553) IR: I don't have a duck pond
- 554) IG: ok ok so um may be if you've explained the relationship between all the ones that you have that I have the ones I just listed to make sure that they are in the same places

- 555) IR: ok so starting from the bottom of the page farm is in the bottom um sitting to the left
- 556) IG: ok mmmhmm that's the same as me
- 557) IR: hills directly above it
- 558) IG: ok yeah
- 559) IR: and then mushroom house is on the same line um, I can't never remember which one is longitude and which one is latitude like you know what I mean
- 560) IG: yeah, but... but it's...
- 561) IR: is like is like I am saying line
- 562) IG: aha
- 563) IR: but on the right hand side
- 564) IG: ok so it's on the right that's the same as me what's called that latitude
- 565) IR: ok
- 566) IG: I don't know if that's right or not
- 567) IR: and then
- 568) IG: that's <unclear words> I've got yellow house half way in between them and sit above them
- 569) IG: ok yeah, it's the same for me
- 570) IR: and there is I guess a bit of a break and then tree is kind of above mushroom house but offset to the left just slightly
- 571) IG: yes, same for me
- 572) IR: and about half way down the page, then castle is above that and offset to the right
- 573) IG: castle is above that to the right, yeah
- 574) IR: and then we've already talked about that old mine and the swamp which are underneath the start
- 575) IG: yeah and the swamp is offset to the left
- 576) IR: yeah, yeah ok <unclear words>
- 577) IG: ok so it's exactly the same... the thing that I have done you have... you have mountains
- 578) IR: I got one set of mountains at the top right and then one set of the mountains at the bottom right underneath the mushroom house
- 579) IG: oh underneath the mushroom house, my mountains... ok...
- 580) IR: ok what else you've got the... the pond where is the... at?

- 581) IG: ok so the duck pond is to the right of the farm on the same level as the farm between hills and mushroom house.
- 582) IR: ok
- 583) IG: does that make sense?
- 584) IR: yes
- 585) IG: ok and then um so I am... I am guessing the mountains would be on that same sort of level as the farm.
- 586) IR: ok
- 587) IG: ok what... ok and then you have hills, you have mushroom house, tree so the next one to so there's two, so you know where the miner is
- 588) IR: yeah
- 589) IG: the only two left that I haven't explained I have are rocks and forest so the rocks are between the swamp and the castle
- 590) IR: ok
- 591) IG: but not quite they are right in the middle but a little bit above the castle and a little bit below the swamp
- 592) IR: ok
- 593) IG: so kind of yeah if you were to do like tac-toe to with the swamp and the castle and the rocks being [a diagonal line-ish]
- 594) IR: [yeah I've drawn it]
- 595) IR: and then where's the forest again?
- 596) IG: and then... the forest is below the swamp um but offset to the right about one space
- 597) IR: ok so that's the same place of where the ca... cottage is so we got
- 598) IG: yeah
- 599) IG: I think <unclear words> is the sw.... is the cottage right below the swamp or is it to the right?
- 600) IR: um it's to the right
- 601) IG: it's to the right so I think it might be in the sameish place forest ok. What... what do you have that I don't have?
- 602) IR: ||UM 123 M|| so underneath between ... um halfway between the mountains and the CASTle 110 M||
- 603) IG: mmhmm
- 604) IR: ||BUT 194 H offset to the left a little|| IS 107 M a cactus||

- 605) IG: ||a CACTUS 190 M|| OH 285 H wow|| that's strANGE 219 M||
- 606) IR: ||directly above the MUSHroom 131 M house|| there is a GOLD 120 M mine||
- 607) IG: above
- 608) IR: yeah
- 609) IG: a gold mine kind of next to the yellow house
- 610) IR: um yes a little um not... not really to be honest it's halfway between the mushroom house and the tree
- 611) IG: ok
- 612) IR: but it's off to the right a little
- 613) IG: to the right ok a gold mine
- 614) IR: great and then we've also got the uh cottage which is probably the same place to forest and the stone giant which is half way between where your forest is and where your hills are
- 615) IG: the stone giant is halfway between the forest and hills is it on the same plain the same is it right between the forest and hills or is it offset to the left?
- 616) IR: it's right between them, yeah
- 617) IG: it's right between them so oh ok, so now I have a stone giant, a cactus, a gold mine, more mountains, so anything else?
- 618) IR: um no that's it
- 619) IG: ok ok so now for figure out how to get from the start to the finish so aa do you have a start and a finish?
- 620) IR: I don't have a finish point
- 621) IG: ok the start is right above the gold mine, right
- 622) IR: yeah
- 623) IG: so you're gonna go... aa... draw a line between the old mine and the swamp
- 624) IR: ok
- 625) IG: and then you go to the right
- 626) IR: yeah
- 627) IG: and you are going to go between the rocks and the miner
- 628) IR: ok
- 629) IG: and then above the miner and around the mountains
- 630) IR: oh hang on I am not sure
- 631) IG: ok

- 632) IR: so um
- 633) IG: so there... there is a miner...
- 634) IR: when... when I go above the miner, do I pass to the right or to the left of the miner?
- 635) IG: to the right so you are going to go above and around the mountains.
- 636) IR: great
- 637) IG: and then you'll go down and you pass in between the castle and the cactus
- 638) IR: ok
- 639) IG: and then you'll go down and keep going and you pass under the rocks
- 640) IR: ok
- 641) IG: and then you'll go um up around the cottage and the forest between the swamp and the cottage and the forest
- 642) IR: ok
- 643) IG: and go around there and then you'll pass it looks like right directly through the stone giant
- 644) IR: ok
- 645) IG: maybe I guess maybe you want to go around it so go above it
- 646) IR: yeah
- 647) IG: I guess
- 648) IG: and then you'll be going down you will be going right across right above the yellow house
- 649) IR: ok
- 650) IG: to the right and then you... you go um under the tree,
- 651) IR: oh ok, um and above the gold mine
- 652) IG: yes you are above the gold mine um and then so... so where is the gold mine in relation to the mushroom house?
- 653) IR: it's directly above it and offset to the right just a little bit
- 654) IG: ok so you're gonna go between the tree and the gold mine
- 655) IR: yeah
- 656) IG: and you're gonna go down beneath the gold mine around the mushroom house between the mushroom house and the mountains
- 657) IR: ok so I am going to pass in to the right of the gold mine to the right of the mushroom house then underneath the mushroom house

- 658) IG: yes, above the mountains. I think the only one I wasn't quite sure about is the relationship with the gold mine but anyway I think that worked and then um you go above the mountains around the duck pond above the duck pond,
- 659) IR: yeah
- 660) IG: and then around it and then beneath the farm,
- 661) IR: ok
- 662) IG: and then up a bit till you are almost back up to the hills but not quite and that's the finish
- 663) IR: great
- 664) IG: so now do want to see <unclear words> guide...
- 665) IR: yes <unclear words > um I think we're done
- 666) IG: yeah, I think so

Hertz value coding of Themes' key/ Group Five

- 667) IG: ||OK 249 M|| WE 333 H start|| RIGHT L 103|| do you WANT 268 M to || diRECT235 M|| or BE 231 M directed first||
- 668) IR: ||I 243 M think|| YOU 218 M've to direct me|| because i have NOTHing 204 M on my map|| [other than pictures]
- 669) IG: [oh you said I have nothing on my map] ok then
- 670) IG: ||aRIGHT 182 M|| UM 197 M|| well the LINEs 310 H on my map|| are SORT 210 M of|| CURVY263 H and bendy|| but i THINK 257 H i can|| diRECT212 M you|| using SORT 413 H of ||STRAIGHT 196 M lines|| as it WERE 158 L||
- 671) IR: ||OK 200 M||
- 672) IG: ||SO 209 M|| I 224 M am starting at the <abandoned tone unit>|| WELL 229 M|| ON 223 M mine|| it's on the TOP 247 M left hand corner|| there is... i... an... OLD 221 M mine||.
- 673) IR: ||YEAH 218 M||
- 674) IG: ||SO 204 M|| YOU 105 L go down|| and THEN M 203|| you TURN 204 M to the right|| and sort of go DIAGONally 203 M up a bit|| and you should go back PAST 202 M a miner|| do you have a MINer 219 M [to... to] the right of your old mine
- 675) IR: [no]
- 676) IR: ||i have an OLD 234 M mine|| and then i have MOUNtains 199 M|| ON 219 M the right|| and then like SWAMP 188 M and cactus||
- 677) IG: ||AH 205 M|| OK 199 M|| SO 255 M|| UM 198 L ||i GUESS 245 M|| I 204 M need to get you to the|| X 239 M at the bottom|| RATHER 196 M than... than < abandoned tone unit> ||OK 213 M|| aRIGHT 190 M|| SO 219 M you go <abandoned tone unit>|| NEXT 292 H to the old ...old mine|| what have you GOT 288 H||
- 678) IR: ||UM 218 M|| to the RIGHT 226 M of the old mine|| i have MOUNtains 197 M|| and beLOW 193 M|| i have a SWANP 188 M|| and DIAGONally 178 M|| i have a CACTus 120 M||
- 679) IG: ||OH 180 M ok|| so they 're comPLETe205 M different layout|| OK 208 M so|| UM 189 M ||RIGHT 170 M|| YOU 232 M go below the old mine|| and then YOU 194 M go 196 M right|| and we STILL 231 M on the sort of top line of the paper|| or PICTure 221 M as it were||

- 680) IR: let me get a pencil
- 681) IG: ok
- 682) IR: ||ok so you START 239 **M** by the old mine|| and then kind of go RIGHT 201 **M** ||
- 683) IG: ||and you go RIGHT 184 **M**|| AND 191 **M**||
- 684) IR:|| aBOVE248 **M** or below the old mine||
- 685) IG: ||UM 171 **M**|| GO 233 **M** right|| SO 216 **M** you|| START 261 **M** slightly above|| the OLD 188 **M** mine||
- 686) IR: ||yeah 213 **M**||
- 687) IG: ||GO 236 **M**|| DOWN 217 **M** to the|| LEFT 202 **M** of it|| and then go RIGHT 228 **M** underneath it||
- 688) IR: ||YEAH 214 **M**||
- 689) IG: ||AND 189 **M**|| GO 215 **M** on a slight diagonal||
- 690) IR: ||diAGonal 223 **M** up or down||
- 691) IG: ||UP 185 **M**||
- 692) IR: ||OK 217 **M**||
- 693) IG: ||TWO 229 **M** thirds or so|| aCROSS 181 **M** the paper||
- 694) IR: || OK 241 **H**||
- 695) IG: ||and THEN 208 **M**|| YOU 206 **M** go ||UP 234 **M**||
- 696) IR: ||do you GO 231 **M** up over the landmark on ... the right||?
- 697) IG: ||UM 202 **M**|| NO 209 **M**||
- 698) IR: ||OK 165 **L**||
- 699) IG: ||NOT 186 yet **M**|| you go UP 233 **M**|| sort of TWO 266 **H** third of the way across the paper|| and THEN 190 **M**|| ROUND 230 **M** to the right|| and ... HAVE 239 **M** you got a landmark on your right hand corner||
- 700) IR: ||YES 89 **L**||
- 701) IG: ||so you go OVER 229 **M** that landmark||
- 702) IR: ||OVER 246 **M** to the left or to the right||
- 703) IG: over to the right so you're kind a quite close to the right hand side of the paper
- 704) IR: ||OK 206 **M**||
- 705) IG: and then you oh one, two....
- 706) IR: ||DO 285 **H** you have a landmark immediately below the mount the landmark at the top right||?

- 707) IG: no, do you?
- 708) IR: ||YES 231M||
- 709) IG: right, I think you're gonna have to draw through that because after that once you go that past the top right landmark
- 710) IR: || YEAH 236 M||
- 711) IG: you then need to go diagonally left about four inches and you might be underneath another landmark or you might not
- 712) IR: ||YEAH 120 M|| do you have ONE 248 H underneath the old mine?||
- 713) IG: err no, I have one slightly to the left
- 714) IR:|| YEAH 246 M||
- 715) IG: but where you had what did you have to the right of your old mine?
- 716) IR: ||MOUNtains 241 M||
- 717) IG: so and have you got a landmark underneath the moun [tains]?
- 718) IR: [yes] ||a CACtus 221 M||
- 719) IG: ok so if you go underneath that
- 720) IR: ||UNder 239 M the ca... cactus||
- 721) IG: yes
- 722) IR: ||OK 93 L||
- 723) IG: and then go um almost about an inch and a half to the left but slightly up
- 724) IR: ok
- 725) IG: a slight diagonal and then a ... do you a.... do you have a landmark underneath that?
- 726) IR: underneath the cactus?
- 727) IG: underneath where you just got to
- 728) IR: um kind I'm ...I'm kind of in the middle of the page at the moment
- 729) IG: ok so you need to keep going into your sort of two thirds across
- 730) IR: kind of under the old mine
- 731) IG: yeah
- 732) IR: ok yeah I have one diagonal down just a little bit to the left of the old mine
- 733) IG: ok well if you go up over that
- 734) IR: ok
- 735) IG: you might have to draw through it because mine's uh mine' s... sort of almost directly underneath and then you just go down straight down about two inches

- 736) IR: do you have a landmark und.... to underneath almost the swamp to the old mine because I have a cottage underneath my swamp.
- 737) IG: ah no my swamp is sort of floated about to the left of the page and it's not... it's obviously a different place than yours
- 738) IR: yeah mine is on the left but is like right under the old mine
- 739) IG: ah mine is a bit to the left so actually so that line you should've gone up should've been ...that's coming down the page should be underneath the swamp
- 740) IR: underneath the swamp
- 741) IG: yeah
- 742) IG: or slightly to the right but definitely under it
- 743) IR: so under swamp but slightly to the right ok
- 744) IG: and then you go down one, two, say three inches [straight down]
- 745) IR: [ok]
- 746) IG: but it's slight curve at the top and the bottom and then have you got any [mar....]
- 747) IR: ||yeah so] UNDER 265 **H** my swamp|| i have a COTtage 207 **M**|| a little like LITTLE 207 **M**|| yeah COTtage 206 **M**||
- 748) IG: ok so you've gone over the cottage, have you? and under the swamp
- 749) IR: my swamp is above my cottage
- 750) IG: yeah
- 751) IR: yeah so I've gone down by the right of the swamp but I'm currently kind of by the cottage.
- 752) IG: ok so you need to go past the cottage
- 753) IR: underneath it?
- 754) IG: to the left... to the... r... right or left.... left of it.
- 755) IR: ok so I am going underneath into the.... ok yeah just to the left ok I am with
- 756) IG: and then if you've stopped there and looked to the right
- 757) IR: yeah
- 758) ||have you got any more landmarks 158 **M**||
- 759) IR: ||YEAH 239 **M**|| sLIGHTly 253 **H**|| UP 231 **M**|| FROM 225 **M** the cottage|| i have a CASTLE 232 **M**|| and then slightly DOWN 200 **M** from the cottage|| i have a TREE 185 **M**||.
- 760) IG: ok well my castle is somewhere different so wherever you are, you now need to go on a very slight gradient um diagonally one, two, three, four, five inches

- 761) IR: up?
- 762) IG: aa yeah very slight gradient up
- 763) IR: so kind of going by the line we drew under the second line mark on the right.
- 764) IG: yes
- 765) IR: ok so go round that landmark?
- 766) IG: um yeah well I 'd just draw the line straight, it might actually go through the landmark cause I think they are in such positions that.... I don't know whether their positions to be in the way. Anyway you get about fourth fifths across the page
- 767) IR: yeah
- 768) IG: on the right hand side and you should be oh just under half way down the page, I guess-ish
- 769) IR: yeah I kind If I go down, I would be... be
- 770) IG: ok I think it's vaguely in the right place so then do you have any landmarks <unclear words> where you've ended up, have you got any landmarks below you?
- 771) IR: I have a tree
- 772) IG: ok so you need to go I don't know how far across your tree is
[you'd need...]
- 773) IR: [it's almost directly underneath the landmark above it]
- 774) IG: [ah ok]
- 775) IR: [slightly to the left]
- 776) IG: alright so you need to go past that what you need to do is... go down on a slight curve sort... sort of hugging the right hand side of the page.
- 777) IR: yeah
- 778) IG: four inches and then you should be about
- 779) IR: so go underneath that landmark
- 780) IG: yes
- 781) IR: ok four inches straight down and you should be about an inch or so from the bottom of the page
- 782) IR: no
- 783) IG: oh where are you?
- 784) IR: about in the middle of the page
- 785) IG: oh ok um well if you back track to the line you've just drawn
- 786) IR: ok
- 787) IG: what... what was the last horizontal line you drew?

- 788) IR: ||horizontal LIKE 199 M <abandoned tone unit> ||from the COTtage235 M
to the castle|| it was horizontal UP 236 M ||
- 789) IG: ok
- 790) IR: like diagonally up
- 791) IG: yeah and then
- 792) IR: and then
- 793) IG: ok
- 794) IR: I went vertically down
- 795) IG: right I guess just go further down
- 796) IR: ok
- 797) IG: and then you need to go to the left
- 798) IR: so how far from the bottom are we?
- 799) IG: about an inch
- 800) IR: is... is like... do you have um a landmark at the very bottom of the page
- 801) IG: yeah, I've got one it's... it's not flash at the bottom; it's few cm up.
- 802) IR: yeah so do I go...
- 803) IG: go over that
- 804) IR: so on top of that one
- 805) IG: yeah
- 806) IR: ok
- 807) IG: and then um once you've sort of reached the peak of going over it you then
need to go diagonally down
- 808) IR: down
- 809) IG: yeah to the left
- 810) IR: so do you have a landmark at the very bottom of that column?
- 811) IG: yeah I do. I've got a farm
- 812) IR: I have a farm
- 813) IG: ah right so you go under the farm and loop up to the left about a cm or so
above the top of the farm and that's the end
- 814) IR: ok. So have... do you have a landmark ab... between... above the farm?
- 815) IG: I've got some hills
- 816) IR: yeah I've got some hills
- 817) IG: alright, it's the bottom
- 818) IR: so how close to the hills?

- 819) IG: at the ba... at about an inch to the left of the hills and at the base of the hills
- 820) IR: ok
- 821) IG: and you're there
- 822) IR: ok
- 823) IG: ok

Hertz value coding of Themes' key/ Group Six

- 824) IG: ||you want JUST 281 **H** to start||
- 825) IR: ||yeah let's just GET 300 **H** to work||
- 826) IG: ||OK 256 **H**|| RIGHT 220 **M**|| so it STARTs 221 **M** just above the old mine||
- 827) IR: ||YEAH 238 **M**||
- 828) IG: ||and GOES 215 **M** between the old mine and the swamp||
- 829) IR: ||OK 259 **H**|| STRAIGHT 226 **M** down or like curvy||
- 830) IG: ||UM 225 **M**||... s... s... SLIGHT 224 **M** curve||
- 831) IR: ||OK277 **H**|| like to the LEFT 219 **M**||
- 832) IG: ||UM 223 **M**|| like SLIGHT 257 **H** curve around the outside of the old mine||
- 833) IR: ||OK 288 **H**||
- 834) IG: ||oh AND 219 **M**|| MY 226 **M** swamp||IS 182 **M** like diagonally down and left from the old mine||
- 835) IR: ||oh yeah the SAME 98 **L**||
- 836) IG: ||OK 226 **M** good||
- 837) IR: right|| i am UNderneath 207 **M** the old mine||
- 838) IG: ||RIGHT 192 **M**|| UM 188 **M**|| and then it GOES 201 **M** up to the like the miner||
- 839) IR: ||the min... i don't have a MINer 209 **M**||
- 840) IG: oh || i have got a MINer 214 **M**|| that IS 199 **M** to the right of the old mine||
- 841) IR: ||I 235 **M**'ve got like a gap and then mountains||
- 842) IG: ||YEAH 208 **M**|| it SORT 265 **H** of <abandoned tone unit>|| like ... the MINER 240 **M** is like half way between the two||
- 843) IR: ||OK 348 **H**|| i will just GONNA 95 **L** like put him there|| and HOPE 203 **M** that's right|| right ok so where aBOUT 237 **M**||
- 844) IG: ||so it GOES 223 **M** to the bottom in the the miner|| and then to the <abandoned tone unit > ||so if YOU 263 **H** imagine that the miner is basically in the same position as the old mine|| apart from maybe like a couple of MILlimetres 192 **M** up|| [and like in the same] <abandoned tone unit>||
- 845) IR: [yeah]
- 846) IG: ||so IF 231 **M** you imagine it occupying like the same amount of space on the page||
- 847) IR: ||OK 282 **H**||

- 848) IG: || so it GOES 218 **M** < unclear words > the bottom right corner || and UP 199
M to the top right corner ||
- 849) IR: || so it goes aROUND 186 **M** the miner ||
- 850) IG: || YEAH 254 **H** ||
- 851) IR: || YEAH 257 **H** ||
- 852) IG: || and then GOES 198 **M** across to the top of the mountains || but like so to the
FAR 207 **M** side ||
- 853) IR: || YEAH 208 **M** ||
- 854) IG: || so all like [CIRCLE 208 **M** around the right] side of the mountains ||
- 855) IR: yeah
- 856) IR: || YEAH 213 **M** ||
- 857) IG: || OK 211 **M** || UM 222 **M** || do you HAVE 214 **M** a castle below the
mountains ||
- 858) IR: n... || yeah i got a CACTus 228 **M** in between through ||
- 859) IG: || OH 241 **M** || (laugh)
- 860) IR: || that's eXCITing 143 **L** ||
- 861) IG: || UM 223 **M** || what's your CACTus 282 **H** in line with ||
- 862) IR: || UM 249 **M** || LIKE 213 **M** the very edge of the mountains || and then the
EDGE 185 **M** of the castle ||
- 863) IG: || IS 231 **M** it in line with the swamp or the rocks going across ||
- 864) IR: || it's just aBOVE 230 **M** the swamp ||
- 865) IG: || just above the SWAMP 123 **M** || OK 104 **L** || UM 236 **M** || THEN 218 **M** ||
MY 237 **M** line looks like is going through the cactus || [um] ...
- 866) IR: [through the cactus]
- 867) IG: || WELL 265 **H** || IF 259 **H** i am right on where I think the cactus is ||
- 868) IR: || AM 237 **M** i go [like] < abandoned tone unit > ||
- 869) IG: [um] ... so like ... my line basically goes kind of like in a smooth like
gradual curve from the side of the mountain to under the rocks
- 870) IR: || i don't have any ROCKS 213 **M** ||
- 871) IG: the rocks are below the miner
- 872) IR: || YEAH 229 **M** ||
- 873) IG: and left of inside the < unclear words > from the castle
- 874) IR: || THAT 259 **H** might be where my cactus is || i might have cactus instead of
ROCKS 196 **M** ||

- 875) IG: is your... in your castle at the edge of the page? I am really confused
- 876) IR: ||yeah it's on the RIGHT **M** 230||
- 877) IG: yeah the rocks are like in the middle of the page
- 878) IR: oh ok so my cactus is a little bit more to the right of the <unclear words>
- 879) IG: yeah
- 880) IR: ok so to go above the rocks....
- 881) IG: ok so do you have a forest?
- 882) IR: no
- 883) IG: ok that seems IR and IG: laugh
- 884) IR: ||so does it go like aROUND 230 **M** the rocks||
- 885) IG: yes, so it goes like diagonally down and left from the mountains
- 886) IR: [yeah]
- 887) IG: [and then] it stops sort of where the bottom of the castle is
- 888) IR: ||OK 240 **M**||
- 889) IG: and the rocks are just above that
- 890) IR: || i am confUSED 212 **M** ||i think i am LOST 177|| like i've gone aROUND
233 **M** the mountains|| and then i 've gone aBOVE 218 **M** my cactus|| and then i've
drawn some ROCKS 199 **M** ||
- 891) IG: ok so go below the rocks with your line
- 892) IR: ||WHAT 230 **M**... so the...it doesn't go above the rocks||
- 893) IG: it goes below the rocks
- 894) IR:|| AHA 218 **M**|| [ok i'll CROSS 207 **M** it out|| OK 279 **H**||]
- 895) IG: [(laugh)]
- 896) IR: ||YEAH 239 **M**|| i've done THAT 188 **M**||
- 897) IG: ok and then it curves slightly up and to the left until it's pretty much below
like the old mine and almost near the starting point
- 898) IR: ||ALright 221**M**|| OK 223 **M** so|| YEAH 252 **H**|| so near the SWAMP 235
M||
- 899) IG: yeah
- 900) IR: ok I've done that
- 901) IG: ||UM 229 **M**|| and THEN **M** 226 ||so.. sort of beLOW 208 **M** that|| there is
the forEST 124 **L**||
- 902) IR: oh I got a cottage beneath that
- 903) IG: may be the cottage is in the forest

- 904) IR: maybe <unclear words>
- 905) IG: um (laugh) so then the line continues like around the forest and the cottage
- 906) IR: yeah
- 907) IG: and, it comes out... do you have a tree and a yellow house?
- 908) IR: I've got.... yeah yeah
- 909) IG: um so it sort of stops like level with them but still on the left hand side of the page so like high twice, it's sort of between the tree and the yellow house
- 910) IR: yeah, [I've got that]
- 911) IG: [and then so...] it then goes across, so it... like straight across so it ends up just below the tree on the right pa... hand side of the page
- 912) IR: yeah, got that
- 913) IG: uh do you have a mushroom house?
- 914) IR: yeah
- 915) IG: ok so it goes down ... like pass ...
- 916) IR: I got a gold mine like in between the mushroom house and the tree, [so do I need to go... does it go
- 917) IG: [oh]
- 918) IG: I assume it's going to the right [of the gold mine]
- 919) IR: [yeah it curves around that]
- 920) IG: yeah [um]
- 921) IR: [does it] go around mushroom house or is on top of the mushroom house?
- 922) IG: it goes around the mushroom house. Um do you have a duck pond?
- 923) IR: no
- 924) IG: do you a farm?
- 925) IR: yes
- 926) IG: ok so the height of the line on the right hand side of the page is about the middle of the farm
- 927) IR: so <unclear words> it dips right down
- 928) IG: yeah but not quite at the bottom in the farm but a little higher than that
- 929) IR: yeah

- 930) IG: but below the mushroom house ||UM 218 M|| and THEN 207 M ||so in LINE 230 M with the yellow house|| on the BOTtom 205 M [of the page]||there is DUCK 209 M pond||
- 931) IR: [yeah]
- 932) IR|| YEAH 228 M||
- 933) IG: and so the line is sort of like heading in the direction in the farm but it has to go up a little bit around the duck pond
- 934) IR: oh yeah so it goes up before the duck pond
- 935) IG: yeah so it just sort of follows the top of the duck pond
- 936) IR: um ok yeah
- 937) IG: and then goes below the farm
- 938) IR: oh yeah
- 939) IG: and then, it goes up around the left side of the farm to about level with the bottom of the mushroom house
- 940) IR: yeah
- 941) IG: and that's the finish
- 942) IR: end, done it, I think um so have you got the stone giant?
- 943) IG: no
- 944) IR: he is beneath the cottage like... did not you have the cottage?
- 945) IG: your cottage was by my forest wasn't it?
- 946) IR: ||oh yeah yeah so then LIKE 231 M directly beneath that || i've got a STONE 195 M giant||
- 947) IG: oh ok
- 948) IR: ||and then a BIT 231 M further down from the stone giant ||LIKE 216 M just past the yellow house|| like there is 222 M UM<abandoned tone unit>|| STRAIGHT 254 H down from the cottage|| IS 199 M the stone giant|| and to the RIGHT 196 M|| IS 160 L the yellow house||
- 949) IG: yeah
- 950) IR: and then go back to underneath by the stone giant is some hills
- 951) IG: yeah I've got the hills
- 952) IR: you got them
- 953) IG: yeah
- 954) IR: yeah so that's where the stone giant is in line with those
- 955) IG: ok has your line gone below the stone giant

- 956) IR: yeah
- 957) IG: ok
- 958) IR: no has gone below the stone giant
- 959) IG: oh it should go below it
- 960) IR: do you think?
- 961) IG: if you ... wait is your stone giant in line with the yellow house?
- 962) IR: is just above the yellow house
- 963) IG: as in like in line with the tree
- 964) IR: just below the tree
- 965) IG: oh
- 966) IR: have you got the gold mine?
- 967) IG: no, [did you say that] it was above the mushroom house?
- 968) IR: [it's like...] is like in line with the gold mine. So now just my line need to be altered
- 969) IG: oh in case this line is like in line with like the gap between the tree and the yellow house
- 970) IR: mmmhmm confusing
- 971) IG: which sounds like (laugh) where your stone giant is
- 972) IR: <unclear words> the line allowed to go through the landmarks <unclear words>
- 973) IG: <unclear words> you won't be able to like go through the stone giant would you? So
- 974) IR: well <unclear words> to go through mmmhmm have you got the mountains at the bottom corner?
- 975) IG: no, I've only got mountains on the top corner
- 976) IR: oh I got them on the bottom corner. They are like just beneath the mushroom house
- 977) IG: oh ok
- 978) IR: um so, I am assuming that I go around the mushroom house but above the mountains [and then...]
- 979) IG: [but] are they like right below or is there like a gap and then that below?
- 980) IR: there is like little a bit like a two centimetres gap and then there is mountains
- 981) IG: ok they might all be above it then, it depends whether or not we know how long the two centimetres are

- 982) IG and IR: (laugh)
- 983) IR: I will get my ruler around um...well so it starts at the... you got the old mine
- 984) IG: yeah
- 985) IR: and then there was a miner
- 986) IG: yeah
- 987) IR: and then there is mountains
- 988) IG: yeah
- 989) IR: then I had a cactus
- 990) IG: yeah
- 991) IR: then there is rocks
- 992) IG: yeah
- 993) IR: then there is a swamp
- 994) IG: yeah
- 995) IR: then there is a cottage and a stone giant
- 996) IG: and a forest
- 997) IR: oh I need to draw the forest on. Would you say the forest was above the
cottage?
- 998) IG: my... the top of my forest is in line with the bottom of my castle
- 999) IR: that's where my cottage is. Is it like underneath the swamp?
- 1000) IG: oh is underneath the old mine
- 1001) IR: that's where my cottage is, so there is a forest here too... right ok ... and
then... there is a tree
- 1002) IG: oh! where is your tree? [Oh, on the other side] on the right side
- 1003) IR: [above the gold mine] I am following my <unclear
word> that I have made
- 1004) IG: ok
- 1005) IR: and then I've got a tree and a gold mine and I go down a bit further and I got
a mushroom house and a mountain... and then I've got a duck pond and a yellow
house above it and I got some hills and a farm
- 1006) IG: yeah
- 1007) IR: is that everything?
- 1008) IG: yeah
- 1009) IR: and a castle which we didn't really go near it at all
- 1010) IG: yeah like a <unclear word> past it

1011) IR: yeah avoid that

1012) IG: yeah

1013) IR: I've drawn it all along

1014) IG: I've written the things

1015) IR: I've drawn [approximate circles] hopefully they are correct.

IG: [(laugh)]

Hertz value coding of Themes' key/ Group Seven

- 1016) IG: ||i am just LOOKing M at mine for the first time||
- 1017) IR: ||OK 198 M|| and then YOU 240 H have|| [the ACTual 166 L] road and you have to TELL 198 M me|| which WAY 174 M to go||
- 1018) IG: ||I 181 have the road|| YEAH 326||
- 1019) IG: ok
- 1020) IG: ||DO 260 H you have|| at the TOP 204 M of your paper|| the OLD 94 L mine?
- 1021) IR: ||YES 176 M||
- 1022) IG: ||OK 170 M|| so just UM 227 M|| aBOVE 243 M and to the left of that|| IS 170 M where the road starts||
- 1023) IR: ||aBOVE187 M and to the left||
- 1024) IG: ||YEAH 162 M||
- 1025) IR: ||OK 183 M||
- 1026) IG: ||and THEN 191 M|| the ROAD 186 M sweeps round|| DOWN 190 M< abandoned tone unit>|| DOWN 201 M ||and underNEATH 187 M the old mine||
- 1027) IR: ||OK 175 M|| got IT 164 M||
- 1028) IG: ||and THEN 216 M|| [a very short pause] to the RIGHT 255 H of old mine|| do you have a MINer 96 L|| ?
- 1029) IR: ||NO 290 H|| I 213 M do not ||
- 1030) IG: ||OK 189 M|| UM 179 M|| i HAVE 262 H a picture of a miner|| that's to the RIGHT 82 L of old mine||
- 1031) IR: ||OK 163 M||
- 1032) IG: ||AND 173 M||UM 183 M|| do you HAVE 259 H the mountains||
- 1033) IR: ||I 227 M do|| the MOUNtains 258 H are in like kind of top right [corner||]
- 1034) IG: [yeah, yeah]
- 1035) IR: ||IS 202 M the miner <abandoned tone unit|| IS 234 M your miner [in the middle||]
- 1036) IG: [the miner]
- 1037) IG: ||is kind of almost ||UM 199 M|| DIReCtly 181 M in between the old mine and the mountains||
- 1038) IR: ||ok do you have a CACTUS 198 M||
- 1039) IG: ||NO 169 M||

- 1040) IR: ||OK 180 M||
- 1041) IG: [||UM ||]
- 1042) IR: [I have]<abandoned tone unit>... ||I 189 M have the cactus ||WHICH 180 M is|| just M beLOW 203 M the mountains || on the RIGHT 164 M|| and then beLOW 179 M the cactus|| i have a CASTLE 162 M||
- 1043) IG: || ok i have the CASTLE 224 M|| but I DON'T 199 M have a cactus||
- 1044) IR: ||OK 367 H||
- 1045) IG: ||so the ROAD 225 M goes|| underNEATH 264 M [the old mine] ||and then UM 183 M|| kind of it's very CURvy 211 H||
- 1046) IR: [mmhmm]
- 1047) IR: ||OK 177 M||
- 1048) IG: ||UM 181 M ||and then SLIGHTly 205 M veers upwards|| unTIL 186 M|| IT's 180 M|| aBOUT 171 M|| THREE 201 M quarters of the way to the mountains||
- 1049) IR: ||OK 175 M||
- 1050) IG: ||and then it GOES 181 M pretty much straight up||
- 1051) IR: ||OH 160 M|| OK 144 M||
- 1052) IG: and then right across to go around the mountains
- 1053) IR: ||so when you SAY 232 M around the mountains|| does it mean it goes aBOVE183 M the mountains||
- 1054) IG: above and outside yeah the mountains
- 1055) IR: to all way to the right of the mountains
- 1056) IG: [yeah, that's] right
- 1057) IR: [I can do that] ok I can do that
- 1058) IG: and then it goes diagonally down through where your cactus is
- 1059) IR: ||OK 175 M|| so let's SEE 160 M|| I 172 M wonder|| SHOULD 184 M I go|| beLOW 181 M the CACTus 205 M|| and OVER 177 M the castle||
- 1060) IG: ||OVER 215 M the castle|| i DON'T 204 M have a cactus||
- 1061) IR: ||OK 173 M|| i am gonna GO 176 M|| [over the cactus]||
- 1062) IG: so do... [do you have rocks]
- 1063) IR: ||I 281 H have no rocks||
- 1064) IG: ||oh OK 168 M||
- 1065) IR: ||i have a SWAMP 285 H|| and a COTtage 210 M|| on the FAR 179 M left||
- 1066) IG: ok I have a swamp but no cottage
- 1067) IR: ok

- 1068) IG: the... the rocks are exactly half way in between the castle and the swamp
- 1069) IR: ||OK 181 M|| DO 208 M i need to go|| beLOW 187 M the swamp||
- 1070) IG: ||YEAH 203 M|| well you need to go beLOW 218 M the rocks||
- 1071) IR: ||OK 190 M|| i have NO 225 M rocks|| SO 253 M||
- 1072) IG: ok but they are halfway... they are in a straight line halfway between the
castle and the swamp
- 1073) IR: ok
- 1074) IG: do you have forest?
- 1075) IR: no
- 1076) IG: ok
- 1077) IR: ok so... so we 're going to go like I'm gonna go [below imaginary rocks]
[for me] below the swamp.
- 1078) [Yeah] [yeah]
- 1079) IG: so that ...you 're um kind of ... um you get to the same level as the bottom
of the castle
- 1080) IR: ok and then
- 1081) IG: but in the middle of the page
- 1082) IR: in the middle of the page
- 1083) IG: yeah
- 1084) IR: ||so that would be beLOW 187 M your rocks||
- 1085) IG: yeah
- 1086) IR: ||ok i HAVE 288 H a cattage|| WHICH is 213 M|| i am gonna say LIKE 197
M|| if you LOOK 208 M at your rocks ||which is kind of in the MIDDLE 180 M||
you SAID 223 M||
- 1087) IG: mmhmm yeah
- 1088) IR: I am going to say that the... the... my cottage is at 8 o'clock if it was like
[o'clock] it's like diagonally 8 o'clock [from the rocks] so
- 1089) IG: [ok] [ok]
- 1090) IG: well I have forest there
- 1091) IR: [ok ok] so where do I go in um pretend my cottage is [your forest] where do
I go?
- 1092) IG: [yeah] [yeah]
- 1093) IG: above and then round to the left of the f... of... cottage.

- 1094) IR: ok so they go on so it starts above coming from the castle above the castle
and then go back around go under the...
- 1095) IG: under the rocks
- 1096) IR: got it
- 1097) IG: and over the cottage and around to the left
- 1098) IR: ok ok got it
- 1099) IG: and then a big sweep down
- 1100) IR: ok
- 1101) IG: do you have a tree
- 1102) IR: I do have a tree
- 1103) IG: ok
- 1104) IR: ok good
- 1105) IG: yeah so then straight across the page to the bottom of the tree
- 1106) IR: straight across the page to the bottom of the tree. I got it. Is there a gold mine
just below your tree?
- 1107) IG: no
- 1108) IR: ok. Is there a yellow house in the middle?
- 1109) IG: yes, there is
- 1110) IR: excellent
- 1111) IG: yeah so you've gone above the yellow a... house
- 1112) IR: I've gone above the yellow house and below the tree
- 1113) IG: yeah
- 1114) IR: ok
- 1115) IG: and then once you've gone past the tree, you go err um right to the right...
right down to the um kind of the... the bottom of the page almost.
- 1116) IR: mmhmm
- 1117) IG: do you have a mushroom house?
- 1118) IR: I do have a mushroom house
- 1119) IG: yes you've house. Pass that down going down
- 1120) IR: do I go under the mushroom house or over the mushroom house?
- 1121) IG: under the mushroom house
- 1122) IR: ok wow ok under the mushroom house ok
- 1123) IG: do you have a duck pond?
- 1124) IR: no

1125) IG: ok

1126) IR: ||so diRECTly 330 H across [from the mushroom house||] ALmost 226 M to
the otherside of the page but not quite|| i have HILLs 218 M||]

1127) IG: [aha]

1128) IG: yeah I have them too

1129) IR: ||ok GOOD 200 M ||and then beLOW 228 M the hills|| i have a FARM 187
M||

1130) IG: ||YES 199 M|| so do I 240 H ||UM 186 M ||to the RIGHT 260 H of the farm
[I have a DUCK 226 M pond||]on... on the SAME 248 H level|| you GO 207 M
over the duck pond||but UNDer 179 M the farm||

1131) IR: [mmhmm]

1132) IR: ok do you have mountains on the bottom right?

1133) IG: no

1134) IR: oh ok ok. Where is your duck pond?

1135) IG: below the yellow house and to the right of the farm

1136) IR: ok so you want me to go over the duck pond but under the farm

1137) IG: yeah

1138) IR: ok and then where am I going?

1139) IG: ||and THEN 220|| UM 200 || UNDer 214 M the farm|| SCOOP 214 M up to
the left|| and FINISH 209 M just to the bottom um|| um about an inch to the LEFT
179 M of the hills||

1140) IR: an inch to the left of the hills and then write finish [in here] and then must go
up and then put an X ok

1141) IG: [yeah]

1142) IG: yeah

1143) IR: perfect

1144) IG: ok I think we're done.

Hertz value coding of Themes' key/ Group Eight

- 1145) IG: ||OK 214 M|| UM 191M|| so you're STARTing 223 M in the top left corner||
- 1146) IR: ok
- 1147) IG: ||just aBOVE 215 M the old mine||
- 1148) IR: yeah
- 1149) IG: ||UM 220 M|| so go PAST 240 M the old mine towards the bottom of the map|| and TURN 220 left M|| and then KEEP 227 M going straight past the miner||
- 1150) IR: what? What? How? ... Pass the old mine
- 1151) IG: ||YEAH 210 M|| so you've kind of gone ROUND 204 M two sides of the old mine||
- 1152) IR: ok
- 1153) IG: ||does that make SENSE 198 M||
- 1154) IR: maybe
- 1155) IG: ||REALly 276 H hard to describe without <abandoned tone unit>||... and then to the RIGHT 217 M of the old mine|| there is a MINer 185 M||
- 1156) IR: is there? I can't see one
- 1157) IG: ||are there some MOUNTains 212 M to the right of the old mine?||
- 1158) IR: ok I see the mountains
- 1159) IG: ||ok so TURN 235 M left just before the mountains||
- 1160) IR: <unclear words>
- 1161) IG: ||and then go ROUND 197 M the top of the mountains and back down the other side||
- 1162) IR: ok
- 1163) IG: ||UM 199 M|| and then you should see some ROCKs 229 M below the mountains|| to the LEFT 207 M of it||
- 1164) IR: no
- 1165) IG: ||and a castle 228 M||
- 1166) IR: a castle, I can see the castle
- 1167) IG: ||OK 229 M|| [so COME 220 M down the map||] to the RIGHT 207 M hand side of the castle towards the forest||
- 1168) IR: [yeah]
- 1169) IR: ok may be
- 1170) IG: ||so when you get just aBOVE 235 M the forest||

- 1171) IR: yeah
- 1172) IG: ||head towards the LEFT 203 **M** hand side of the map|| and go DOWN 195 **M** the left hand side of the forest||
- 1173) IR: I don't have a forest though I have a tree
- 1174) IG: ||OH 215 **M**|| UM 204 **M**|| maybe the TREE 235 **M** is in the forest||
- 1175) IR: ok so I am going.... Where am I going after the forest/ tree?
- 1176) IG: ||oh there IS 239 **M** a tree further down on my map|| sorry i didn't NOTICE 230 **M** that|| and so you go ROUND 249 **M** the forest|| and head BACK 208 **M** to the other side of the page|| UNDerneath 203 **M** the tree||
- 1177) IR: underneath ok
- 1178) IG:|| and once you get just PAST 217 M the tree|| TURN right and go to.... Towards the bottom of the page again
- 1179) IR: right
- 1180) IG: and you should pass a mushroom house
- 1181) IR: yeah
- 1182) IG: and um so turn towards the left hand side of the page again
- 1183) IR: the left okay
- 1184) IG: pass the duck pond
- 1185) IR: um should I have a duck pond
- 1186) IG: ok
- 1187) IR: I have a swamp, no
- 1188) IG: no, I don't have the swamp either
- 1189) IR: ok
- 1190) IG: ok so head towards the farm then
- 1191) IR: [the farm] towards the farm
- 1192) IG: [do you have the farm?]
- 1193) IG: and then circle underneath the farm
- 1194) IR: circle underneath the farm yeah
- 1195) IG: and back up the... left hand side [of the farm] to just below the hills
- 1196) IR: [yeah]
- 1197) IR: just below the hills ok
- 1198) IG: and then you finished
- 1199) IR: ok

Hertz value coding of Themes' key/ Group Nine

- 1200) IG: ||ERR 97 M||so the STARTing 113 M point is in the top left by the err old mine ||and diRECTly 90 M above the swamp||
- 1201) IR: ||UH 213 M|| OK 223 M yeah||
- 1202) IG: ||i DON'T 97 M know which ones your gonna have|| and which ones you're NOT 91 M gonna have||
- 1203) IR: ||NO 104 L that's fine ||TOP 243 M left directly||
- 1204) IG: ||YEAH 93 M|| so
- 1205) IR: ||there is NOTHing 107 L above it||
- 1206) IG: ||noTHING 110 M above it|| NO 58 L||
- 1207) IR: ||OK 214 M||
- 1208) IG: ||UM 91 M|| and it's SORT 117 M of <abandoned tone unit>|| it's uh LOOPS 107 M down|| underNEATH 91 M the old mine||
- 1209) IR: ||ok WHERE's 237 M the old mine [to you||]
- 1210) IG: [er]
- 1211) IG: ||ok so the OLD 115 M mine||have you got MINER 107 M||
- 1212) IR: ||UM 241 M|| NO 210 M|| MINE 229 M is just an old mine|| which is LIKE 197 M|| just beLOW 210 M and to the right of start|| like VERY 190 M close to it||
- 1213) IG: ||YEAH 108 M yeah|| THAT's 98 M <abandoned tone unit>|| yeah it LOOPS 109 M round underneath it||
- 1214) IR: ||OK 217 M||
- 1215) IG: || in sort of a...a LOOSE 94 M 'L' shape|| CURVing 85 M underneath it||
- 1216) IR: ||OK 210 M|| so [it goes DOWN 205 M]|| |and then like UNDERneath 198 M||
- 1217) IG: [yeah]
- 1218) IG: ||DOWN 97 M and underneath|| YEAH 74 L||
- 1219) IR: mmhmm
- 1220) IG: ||in a FLUID 85 L motion || have you got SWAMP 107 M on there||
- 1221) IR: ||YEAH 222 M|| it's SORT 226 M of um to the bottom left of where the bend in the 'L' [is]
- 1222) IG: [yeah yeah]
- 1223) IG: || PERFect 86 L|| I ...I ...I iMAGine 107 M it's gonna be <abandoned tone unit>|| we've got the MARKs 102 M in the same place|| but it's the case of some US

- 87 **L** <abandoned tone unit>|| i 90 **L** 'll be missing some that you have|| and you'll be
MISSing 83 **L** some that i have||
- 1224) IR: ||OK 216 **M**|| [SOUND 214 **M** like...] <unclear words>
- 1225) IG: [|do you HAVE 99 **M** mountains||]
- 1226) IR: ||i have MOUNTAINS 248 **H** in the top right||
- 1227) IG: ||and you DON'T 93 **M** have miner in between old mine and miner||
- 1228) IR: ||mmhmm OLD 209 **M** miner and mountains no||
- 1229) IG: ||OK 94 **M** so|| MINer 105 **M** 's er|| ROUGHly 95 **M** halfway between
mountains and mine|| and the line CONTINues 94 **M** all the way round and comes
up|| to the right side of MINRE 89 **M**|| until you 're ABOVE 86 **M** the point that the
mountains are again||
- 1230) IR: ||so GOES 212 **M** up between the mine and the miner|| and then ABOVE 204
M the miner||
- 1231) IG: ||uh NO 100 **M** no|| so it goes <abandoned tone unit> ||so it STARTs 112 **M**||
LOOPS 109 **M** underneath the mine|| goes aLONG 99 **M** along along underneath
past miner||
- 1232) IR: yeah
- 1233) IG: ||and then UP 90 **L** the right side of miner||
- 1234) IR: ||YEAH 116 **M**||
- 1235) IG: ||until you're UP 79 **L** at a point again|| where you're ABOVE 85 **L** the
mountains||
- 1236) IR: ||and does it go aROUND 211 **M** the top of mountains||
- 1237) IG: ||YEAH 103 **M**|| it COMEs 118 **M** round the mountains|| and then LOOPS 95
M round quite sharply|| UM 79 **L**||
- 1238) IR: mmhmm
- 1239) IG: [um] ||and then FROM 102 **M** there so <unclear words>|| it comes
STRAIGHT 104 **M** across the mountains|| LOOPS 106 **M** down and round up|| to
START 88 **L** off a right angle and gonna comes down MORE 84 **L** diagonally|| do
you HAVE 93 **L** rocks or castle||
- 1240) IR: ||i've got CASTle 243 **H** and cactus||
- 1241) IG: ||CASTle 96 **M** and cactus ok|| i DON'T 93 **M** have cactus|| (laugh)
- 1242) IR: ||I 234 **M** have <abandoned tone unit> ||CACtus 280 **H** is like just
underneath mountains|| and in BETween 195 **M** mountains and castle||

- 1243) IG: ||YEAH 90 L|| OK 84 L so|| IS 105 M it to the left or to the right|| or IS 88 L
it <abandoned tone unit>||
- 1244) IR: ||it's like in betWEEN 284 H the two|| and SLIGHTly 218 M to the left||
- 1245) IG: slightly to the left, ok then I think it's gonna be the line comes just
underneath cactus then because just looking at mine, it seems come down directly
through the middle of where everything is
- 1246) IR: ||OK 209 M||
- 1247) IG: um and then I wouldn't send you through a cactus field um and then do you
have forest or rocks?
- 1248) IR: ||NO 227 M||
- 1249) IG: you got none of them
- 1250) IR: ||i have like NOTHING 232 M kind of really in the middle|| i have CASTle
246 M|| and so MY 231 M line is like to the top left of castle now|| just to the TOP
203 M left of castle|| and then underNEATH 206 M castle|| i have a TREE 207 M||
- 1251) IG: yeah top left of the castle is <unclear words> I've got tree. Do you have
anything underneath swamp? Directly or near about?
- 1252) IR: ||OK 224 M|| UM 205 M|| I 220 have cottage underneath swamp|| by about
an INCH 210 M || and then about an inch to the RIGHT||
- 1253) IG: ok I think that's going to be about there so you coming down... so ... and
you don't have forest don't have rocks ok so you're at the point where you're
diagonal left of castle continue that line [for two there inches] on that same
trajectory
- 1254) IR: [ok]
- 1255) IR: yeah some kind of like in line with cottage now but about equal distance
between cottage and castle
- 1256) IG: so if you bring it the line basically continue that diagonal line until you're in
line with the word castle
- 1257) IR: ok
- 1258) IG: and your uh ... in sort of intersect if it was a triangle it will be the meeting
point of old man and mountain
- 1259) IR: um that of old man
- 1260) IG: uh not a... old man rather sorry
- 1261) IR: that have oh...ok yeah yeah
- 1262) IG: sorry I said old man

- 1263) IR: yeah ok, I know what you mean
- 1264) IG: ||and then FROM 109 M there|| IT 90 M <abandoned tone unit> from THAT 98 M position|| it CURVEs 106 M up|| and aROUND102 M forest which i think forest|| so it's gonna to go in BETWEEN 90 M where my forest and uh cottage is for you||
- 1265) IR: ok it goes... so it goes around to the ... on the left hand side of wherever your forest is
- 1266) IG: yeah
- 1267) IR: ok
- 1268) IG: so it comes it sweeps
- 1269) IR: upwards
- 1270) IG: down goes underneath
- 1271) IR: underneath where your forest is then up to the left
- 1272) IG: above where my forest is
- 1273) IR: mmhmm
- 1274) IG: and below where cottage is if I am thinking where cottage is correctly
- 1275) IR: err
- 1276) IG: so it's sort of intersects the two so[if you can picture it on there] forest... for... forest
- 1277) IR: [yeah oh yeah yeah]
- 1278) IR: it goes between the two
- 1279) IG: [yeah yeah and loop... loops round] goes below cottage above forest loops round and then goes directly down
- 1280) IR: [and is like go above cottage]
- 1281) IR: ok
- 1282) IG: and did you say you have tree?
- 1283) IR: yeah but it's to the... right [in the middle but to the right hand side] [yeah]
- 1284) IG: [yeah, far right] [below castle give or take]
- 1285) IG: so you come... once your past cottage, you come down directly until you're about in line with the word 'tree' again
- 1286) IR: yeah
- 1287) IG: and if you stop there, do you have yellow house?
- 1288) IR: yeah right in the middle [about kind of two- third of the way down]
- 1289) IR: [yeah]

- 1290) IG: ok so if you take the line all the way across above yellow house up until you're at the bottom... um just past tree.
- 1291) IR: so I go round to the ... so underneath cottage
- 1292) IG: you come straight down until you're in line with the word [tree and then you come]
- 1293) IR: [tree]
- 1294) IR: and then go like directly to the right
- 1295) IG: yeah directly across above yellow house and below the word tree
- 1296) IR: ok do you have a gold mine
- 1297) IG: ah... nope
- 1298) IR: ok gold mine is like just below tree slightly to the right and just above house, but much further to the right of house, cause house is in the middle
- 1299) IG: ok so you loop round gold mine by the looks of it then?
- 1300) IR: is like a... to the right I am going in between tree and yellow house but round the top of gold mine
- 1301) IG: yeah
- 1302) IR: and then round and underneath gold mine
- 1303) IG: er not underneath no you then go directly down, do you have duck pond?
- 1304) IR: no, but I have mushroom house
- 1305) IG: mushroom house, ok go down until you're about an inch past mushroom house
- 1306) IR: that's right near the bottom of the page is that right?
- 1307) IG: yeah yeah yeah
- 1308) IR: ok
- 1309) IG: ok and then what do you have between do you have hills or farm?
- 1310) IR: I've got hills and farm and I've got mountains underneath mushroom house again
- 1311) IG: ok
- 1312) IR: sort of like ... mountains is like about the bottom inch of the page
- 1313) IG: is it below [farm]?
- 1314) IR: [in line with farm]
- 1315) IG: in line with.
- 1316) IR: yeah, but to the right hand side underneath mushroom house
- 1317) IG: ok and you say you have hills

- 1318) IR: yeah which is equal to mushroom house [but kind of a third of the width through the page]
- 1319) IG: [yeah equal with mushroom house]
- 1320) IG: yeah, I got that I am just trying look and see if whether or not it would go above or below mountains, I mean by the looks of it go above mountains if you're saying it's <unclear words>
- 1321) IR: it's quite near the bottom
- 1322) IG: yeah if it's in line with farm
- 1323) IR: yeah
- 1324) IG: um and so duck pond is in line with farm and mountains then but is directly beneath the yellow house
- 1325) IR: yeah
- 1326) IG: um and the line from where you are now sort to the bottom right of mushroom house, you come along over mountains,
- 1327) IR: mmhmm
- 1328) IG: there is a little sort of like speed bump and then it loops underneath the farm
- 1329) IR: underneath farm ok
- 1330) IG: and then it sort comes
- 1331) IR: over the duck pond
- 1332) IG: over the duck pond
- 1333) IR: yeah and then underneath farm which is right near the bottom
- 1334) IG: yeah down underneath the farm and then it loops...loops sort up directly and the finish is pretty much in line with the word hills
- 1335) IR: ok
- 1336) IG: so it's yeah so it's still to the left of the farm and hills it sort of straight straight line on that [which is natural curve to it then]
- 1337) IR: [ok]
- 1338) IR: ok um... shall I just quickly like say what my line is
- 1339) IG: yeah <unclear words>
- 1340) IR: (laugh) ||so FROM 340 **H** the start|| it GOes 224 **M** right down under the mine|| and then it goes to the RIGHT 182 **M**||
- 1341) IG: mmhmm
- 1342) IR: ... up like to the left of mountains across top of mountains
- 1343) IG: mmhmm

- 1344) IR: then kind it goes down sort of diagonally into the middle
- 1345) IG: yeah
- 1346) IR: in between cottage and castle
- 1347) IG: yeah
- 1348) IR: then kind of goes up round cottage down along all the way across the page
underneath the tree
- 1349) IG: mmhmm
- 1350) IR: and then all the way down underneath the mushroom house a little bump
where you have duck pond, underneath farm and then finish at hills
- 1351) IG: [perfect] I mean it's... it's err about maybe an inch or two to the left of hills
- 1352) IR: [ok]
- 1353) IR: ok yeah
- 1354) IG: so... so once you're around farm it's pretty much straight up from where
you are in farm
- 1355) IR: yeah I am pretty sure yeah I've got that
- 1356) IG: ok perfect
- 1357) IR: done
- 1358) IG: done

Hertz value coding of Themes' key/ Group Ten

- 1359) IG: ||ok so the START 126 M point is just to the top um of the old mine|| just to the LEFT 95 M hand side ||
- 1360) IR: ||YEAH 128 M||
- 1361) IG: ||AND 95 M||...and if you FOLlow 109 M that down||
- 1362) IR: ||straight DOWN 103 M||
- 1363) IG: ||YEAH 95 M|| in betWEEN 112 M the swamp and the old mine||
- 1364) IR: ||YEAH102 M||
- 1365) IG: ||UM 91 M|| and then you START 100 M to curve off|| to the RIGHT 101 M hand side || and you go UP 101M|| UM 93 M|| see where the R 104 M of the miner is|| you've... just go Under 98 M that||
- 1366) IR: ||of the WHAT 117 M sorry||
- 1367) IG: ||the R 125 M <abandoned tone unit>|| the LAST 108 M letter of miner||
- 1368) IR: ||YEAH108 M||
- 1369) IG: ||and UM 80 L|| so you FOLlow 101M that up|| and then TURN 100 M left|| and JUST 125 M where the picture of the miner is|| UM 84 L|| you FOLlow 95 M that round|| [and then]
- 1370) IR: [||i'VE NOT got a miner 122 M||] [on MINE 97 M||]
- 1371) IG: [ah]
- 1372) IR: ||i've got the OLD 116 M mine||
- 1373) IG: ||YEAH 107 M||
- 1374) IR: ||and then the SWAMP 106 M|| and then beLOW 104 M that the cottage||
- 1375) IG: ||RIGHT 98 M|| so WHERE 108 M the old mine is||
- 1376) IR: [yeah]
- 1377) IG: [what picture is to the right of that?]
- 1378) IR: ||UM 103 M|| there is a MASsive 117 M gap in the middle|| then i've got a CACTus 125 M and the mountains||
- 1379) IG: ||OK 94 M so|| it will be the CACTus 112 M then|| so IF 103 M you um go to the right hand side of the cactus|| and then FOLlow 92 M that up||
- 1380) IR: ||OK 105 M||
- 1381) IG: ||and then um TRUN 96 M right|| and then you FOLlow 98 L that above just above the mountains||
- 1382) IR: ||YEAH 104 M||

- 1383) IG: ||and then where the MOUNTains 104 M end on the right hand side||UM 113 M|| DROP 98 M down immediately||
- 1384) IR: ||YEAH 127 M||
- 1385) IG: ||and then what PICTure 125 M do you have directly below the miner||?
- 1386) IR: ||AH 116 M so i've got <abandoned tone unit>|| ALL 112 M on the right hand side || i've got MOUNTains 111M|| CACTus 111 M|| CASTle 105 M|| and then TREE 100 M||
- 1387) IG: ||OK109M || um 99 M|| IF 110 M you come down|| um 96 M|| to the LEFT 112 M of the castle||
- 1388) IR: ||LEFT 100 M of the castle||
- 1389) IG: ||and then to the LEFT 105 M of that|| UM 104 M|| you GO 105 M <abandoned tone unit>|| so have you GOT 111 M three pictures along the top|| and then kind of THREE 99 M [just below that||]
- 1390) IR: I've
- 1391) IR: || I 116 M've got like <abandoned tone unit>|| imagine like THREE 99 M channels|| the LEFT 99 M hand side the middle and the right hand side||
- 1392) IG: ||yeah 97 M||
- 1393) IR: ||i've GOT 99 M only one thing in the middle||
- 1394) IG: ||YEAH 115 M || that's quite near the BOTtom 100 M|| that's the YELlow 103 M house||
- 1395) IG: ||RIGHT 100 M||
- 1396) IR: ||ah on the LEFT 113 M hand side||
- 1397) IG: ||YEAH 102 M||
- 1398) IR: ||i've got the ma... the OLD 111 M mine|| a SWAMP 111 M|| the... there is a COTtage 123 M|| a STONE 117 M giant||
- 1399) IG: ||YEAH 106 M||
- 1400) IR: ||HILLS 105 M|| and a FARM 102 M||
- 1401) IG: ||OK 111 M||
- 1402) IR: ||and then on the RIGHT 104 M hand side|| the MOUNTains 115 M are in line with the old mine|| the CASTle 125 M is in line with the cottage|| the TREE 103 M is like between the cottage and the stone giant|| the GOLD 110 M mine is like in line with the yellow house|| uh the MUSHroom 109 M house is in line with the hills|| and there are more MOUNTains 101 M at the bottom||

- 1403) IG: right ok um mine is a bit different to that so um is the old mine on the left hand side?
- 1404) IR: yeah the... the old mine is the fir... like [the starting point] pretty much
- 1405) IG: [cool]
- 1406) IG: that's the same with me so have you kind of gone
- 1407) IR: so I've gone
- 1408) IG: left to the right
- 1409) IR: yeah
- 1410) IG: cool
- 1411) IR: and then I've gone sort of right to the opposite side of the page and then drawn pretty much drawn a little loop round the mountains
- 1412) IG: yeah
- 1413) IR: and then I am about to go well yeah
- 1414) IG: so yeah do you... that sounds.... That sounds correct and then you go...if you're talking about the right hand channel
- 1415) IR: yeah
- 1416) IG: um you're moving from the right hand channel into the middle channel
- 1417) IR: yeah
- 1418) IG: kind of er.... in... er downwards diagonal
- 1419) IR: yeah
- 1420) IG: into the middle channel
- 1421) IR: mmhmm
- 1422) IG: and then um well mymy middle channel is the rocks uh kind of just below the top picture and then it goes left into the left hand channel and then I've got the forest but the picture in the left hand channel which is kind of below the old mine is kind of the third picture down on mine.
- 1423) IR: right ok so do I get under.... <unclear words> underneath that picture or above it?
- 1424) IG: you go above that picture
- 1425) IR: yeah
- 1426) IG: um left round that and then you drop down
- 1427) IR: straight down?
- 1428) IG: yeah and then it starts to curve into the middle channel
- 1429) IR: yeah

- 1430) IG: and then I've got a yellow house and it goes above that picture
- 1431) IR: yeah, I've got a yellow house as well
- 1432) IG: so it goes above the yellow house
- 1433) IR: yeah
- 1434) IG: and then I've got a tree in the right hand channel
- 1435) IR: yeah, I've got that as well
- 1436) IG: um it goes um beneath the tree
- 1437) IR: it's above the house beneath the tree
- 1438) IG: and it curves round um to the right um and then I've got [a mushroom house] on the right hand channel
- 1439) IR: [yeah]
- 1440) IR: I've got that too
- 1441) IG: it goes to the right of the mushroom house continuing down
- 1442) IR: yeah
- 1443) IG: ||and THEN100 M|| UM 95 M|| just beLOW 109 M that|| UM 90 M|| it starts to CURVE 108 M left||
- 1444) IR: mmhmm
- 1445) IG: ||now i've got a DUCK 115 M pond in the middle channel||
- 1446) IR: I've not got anything else in the middle channel
- 1447) IG: um so the picture imagine is just er like two centimetres above the bottom of the page
- 1448) IR: mmhmm
- 1449) IG: um its... curves upwards in still in the middle channel um continuing going left um... and then it starts to drop down um continuing into the left hand channel I've got a farm at the end
- 1450) IR: yeah, I've got farm
- 1451) IG: yeah, in the left hand channel
- 1452) IR: yeah
- 1453) IG: so it goes under the farm
- 1454) IR: under the farm
- 1455) IG: yeah
- 1456) IR: yeah
- 1457) IG: and then have you got a picture of the hills in the left hand channel?
- 1458) IR: yeah

- 1459) IG: um the finish point is marked with an X it's just below or is almost in line
with the hills but a bit lower down
- 1460) IR: on the left
- 1461) IG: on the left hand side
- 1462) IR: ok
- 1463) IG: on the left hand side
- 1464) IR: ok
- 1465) IG: and that's the finish point
- 1466) IR: right, yeah
- 1467) IG: cool

Hertz value coding of Themes' key/ Group Eleven

- 1468) IG: ||ok UM 224 M|| you need to START 296 H about a thumb height above the old mine|| UM 202 M|| is the GREEN 256 H sort of mountain|| with a TRUCK 266 H coming out of it and some tracks||
- 1469) IR: ||YEAH 113 L||
- 1470) IG: ||UM 209 M|| is aBOUT 230 M like <abandoned tone unit>|| if the OLD 263 H mine is like level with the middle of your thumb|| the START 196 M is where your thumb nail is||
- 1471) IR: ||oh YEAH 219 M|| i have an X 213 M saying start||
- 1472) IG: ||ALright 229 M ok|| you NEED 280 H to draw a line about a thumb width down|| just beLOW 209 M the 'L' of the old||
- 1473) IR: ||UM 245 M|| so DRAW 207 M it to the <abandoned tone unit>||
- 1474) IG: yeah || if you DRAW 285 H it <abandoned tone unit>|| yeah if you draw it from the START 255 H point|| it's a CURVE 271 H line going from like <abandoned tone unit>|| the START 231 M point on a like.... sort of <unclear words> right|| [does that make any SENSE 217 M] ||SO 233 M||
- 1475) IR: [ok]
- 1476) IR: ||so like kind of like an 'L' 194 M||
- 1477) IG: ||YEAH 246 M|| UNderneath 206 M the 'L' || YEAH 243 M||
- 1478) IR: ||OK 224 M||
- 1479) IG: ||and then you want a STRAIGHT 271 H line|| so that um 206 M <abandoned tone unit> the LINE 223 M ends up quite close to the 'R' of the miner||
- 1480) IR: ||UM 234 M|| MINer 209 M||
- 1481) IG: ||oh IN 229 M in old mine||NO 240 M|| there is UM 223 M|| an actual GUY 199 M mining|| and his name is MINer 191 M|| UM 195 M|| and you want the LINE 197 M [to sort of meet the 'R' of the...<abandoned tone group>]
- 1482) IR: [||oh so I 205 M think some of the symbols are different||]
- 1483) IG: ||OK 196|| WELL190|| to the RIGHT 273 H of the old mine|| on MY 226 M map|| there is ...a....a GUT 211 M chiselling a way|| and he is called MINer 190 M|| UM 187 M || and HE 99 L <abandoned tone unit> || and the LINE 207 M continues up to sort of where the R || at the END 208 M of the word miner is||
- 1484) IR: ||OK 225 M|| so <unclear words>... next... so to the RIGHT 202 M of the old mine|| i have MOUNtains 190 M and a cactus||

1485) IG: [aah alright]

1486) IR: |[and] THERE 206 M is] no miner anywhere on it||

1487) IG: |[ok so i THINK 251 H]| where YOUR 223 M cactus is |[I 207 M have a
miner |[so if you DRAW 285 H a line going from old mine to cactus||

1488) IR: |[YEAH 102 L]| to UNderneath 195 M the word cactus||

1489) IG: |[YEAH 207 M]|

1490) IR: |[YEAH 242 M]|

1491) IG: |[and then you wanna GO 204 M quite sharply up||

1492) IR: |[YEAH 345 H]|

1493) IG: |[aBOUT233 M an inch maybe||

1494) IR: |[OK 236 M]|

1495) IG: |[and then you wanna do a STRAIGHT 266 H line across|| so you're going
OVER 236 M the mountains|| and then BACK 206 M under them||

1496) IR: |[ok YEAH 231 M]|

1497) IG: |[and then you want that to go QUITE 270 H far down|| the line is gonna get
in betWEEN 256 H a symbol on my map that says rocks|| and a symbol that says
CASTLE 232 M||

1498) IR: |[OK 247 M]| so i have a CASTLE 224 M|| and THEN 198 M <abandoned
tone unit>|[so CASTle 216 M is like just under cactus|| so your MINer 181 M|| and
then UNDER 207 M castle is tree|| so maybe that's what the rocks 196 M is||

1499) IG: |[uh ok no that sounds WRONG 199 M]|

1500) IR: |[OK 242 M]|

1501) IG: |[if you go DOWN 289 H from mountains on mine||

1502) IR: |[YEAH 251 M]|

1503) IG: |[the LINE 224 M goes in between castle|| which is in the FAR 231 M right
of the page||

1504) IR: YEAH

1505) IG: and the ROCKS 210 M which is just like dead centre of the page||

1506) IR: |[oK 232 M]| yeah so i have a COTtage 222 M there|| RIGHT 151 L||

1507) IG: |[so yeah so you wanna DRAW 228 M a line that goes under the mountains||
but on the SIDE 244 M I think of your cactus|| and then UNder 225 M the cottage||

1508) IR: |[OK 230 M]| so like in BETween 215 M cactus and castle|| [to the cottage||

1509) IG: |[|yeah|]| |[YEAH 221 M i think so|| I 227 M think that's where we are
going||

- 1510) IG and IR: (laugh)
- 1511) IR: ||COOL 242 **M**||and we're about underNEATH 212 **M** the cottage|| OR 205
M||<abandoned tone unit>
- 1512) IG: ||YEAH 190 **M**|| it must be underNEATH 165 **M**||
- 1513) IR: ok
- 1514) IG: ||UM 196 **M**|| and then on MY 298 **H** map|| THERE is 225 **M** a... symbol
just down and left of your cottage called forest||
- 1515) IR: ||DOWN 226 **M** and left|| i have a STONE 267 **H** giant||
- 1516) IG: ||ok with your STONE 272 **H** giant|| i want you... need to make like a C 252
H shape around it|| QUITE 240 **M** a big 'C' about two thumbs heights worth||
- 1517) IR: ok
- 1518) IG: so go over your stone giant and then quite far down and then a 'C' shape
- 1519) IR: yeah
- 1520) IG: and then it quite a long line across the page it goes from quite far under your
stone giant to what I have as under the tree
- 1521) IR: ||OK 246 **M** i see|| i have so i have a TREE 213 **M**|| but i am not...i don't
know if it's slightly HIGHer 212 **M** up|| maybe than YOURS 235 **M**||
- 1522) IG: uh it's almost slightly down of middle of the page [of the far right hand side]
- 1523) IR: [ok]
- 1524) IR: yeah so that's the same so it's going
- 1525) IG: so it's going underneath the tree
- 1526) IR: ok
- 1527) IG: so the ... the line itself is literary underlining the word tree
- 1528) IR: yeah
- 1529) IG: uh and then you want to go on that sortish down again about two thumbs
widths we're going down past what on my map is mushroom house
- 1530) IR: ||OH 111 **L** yeah|| I've got that|| UM 226 **M**|| SO 222 **M** i am going|| DOWN
201 **M** the right hand side of the page||
- 1531) IG: yeah
- 1532) IR: have you got a GOLD 240 **M** mine|| under the TREE 162 **L** ||and
aBOVE186 **M** the mushroom house||
- 1533) IG: I don... I have a yellow house slightly up...
- 1534) IR: my yellow house is slightly to the left
- 1535) IG: yeah mine <unclear words> [is slightly to the left]

1536) IR: [in the centre]
1537) IR: ok so I am going right past the mushroom house
1538) IG: yeah
1539) IR: and then under it
1540) IG: and then under it yeah
1541) IR: ok
1542) IG: and then you wanna do about a thumb width to the left and near enough
straight line
1543) IR: yeah
1544) IG: and then you wanna go over what on my page is a duck pond
1545) IR: ok is that slightly to the left and below the yellow house?
1546) IG: that's... ||ON 223 **M** mine|| it's diREctly 222 **M** below the yellow house||
1547) IR: ok I have nothing directly below then <unclear words>
1548) IG: ok so it's literary at the bottom of the page [in the middle]
1549) IR: [yeah]
1550) IR: ok yeah
1551) IG: so if you wanna do just like a little like pekey over... over the duck pond
1552) IR: ok yeah
1553) IG: uh and then there is a farm right at the very bottom of the page on mine
1554) IR: ok
1555) IG: you wanna go underneath the farm
1556) IR: ok yeah
1557) IG: and then once you've gone past the farm just underneath <unclear words>
you ... you gonna get thumb width up to the finish point
1558) IR: cool, shall I mark it as finish?
1559) IG: yeah, it should be slightly left of a symbol called hills on my map
1560) IR: yeah yeah is it um is it.... directly left or slightly below?
1561) IG: uh slightly below not lots
1562) IR: ok I make it slightly further up, cool and then just write finish
1563) IG: and that should be finished there yeah
1564) IR: awesome
1565) IG: that wasn't too bad
1566) IR: yeah done

Hertz value coding of Themes' key/ Group Twelve

- 1567) IG: ||OK 164 M|| TIM 182 M|| at the VERY 227 H left hand side of your [of your map]|| IS 173 M there something that says||OLD 141 M mine||
- 1568) IR: [yeah]
- 1569) IR: ||YEAH 129 M||
- 1570) IG: ||is like a GREEN 148 M thing||
- 1571) IR: [||YEAH 112 M]
- 1572) IG: [||and that's] just to the LEFT 160 M of miner|| REALLy145 M|| but to the NORH 147 M east of swamp||
- 1573) IR: ||YEAH 144 M|| yeah 122 M||
- 1574) IG: ||ok COOL 128 M|| will you SEE 279 H about <abandoned tone unit||... if you iMAGine 207 M there was o'clock|| EXACTLYly 152 L placed over that old mine||
- 1575) IR: ||YEAH 108 M||
- 1576) IG: ||you SEE 226 H where it'd be|| UM 137 M|| when the HAND 148 M would be ||ERR 129 M|| in BEtween 153 M ten and eleven||
- 1577) IR: ||TEN 124 M and eleven|| YEAH 106 M||
- 1578) IG: <unclear words> ||JUST 192 H|| OFF 178 M le|| <abandoned tone unit>... ||you KNOW 161 M|| NOrth 163 M ||<abandoned tone unit>
- 1579) IR: ||sort of NORTH 141 M west|| YEAH 178 M||
- 1580) IG: Yeah NOrth 163 M west exactly|| and about EXactly 160 M|| TWO 192 H|| but JUST 242 H two and half to three cm north west [of that old mine||]
- 1581) IR: [ok]
- 1582) IG: if you PUT 181 M an x there||
- 1583) IR: ||RIGHT 106 M ||YEAH 112 M||
- 1584) IG: ||aa...an X 143 M|| UM 129 M|| you put an X 133 M there|| [ok]
- 1585) IR: [yeah]
- 1586) IG: ||so that's where it says START 130 M on my map|| ||so there's an X 141 M there||]
- 1587) IR: [|| YEAH 123 M||]
- 1588) IG: and then FROM 204 H that|| OUTcomes 139 M a blue|| NOT 183 M dotted line|| BUT 158 M like <abandoned tone unit>|| ...it's like a BLUE 177 M line|| where it HAS 153 M little|| SMALL 186 M blue lines|| and each of them is ABOUT

- 139 **M** <abandoned tone unit> ||YEAH 145 **M**|| so the ROAD 174 **M** is that|| that's the WAY 146 **M** the road looks on my map ||so it STARTs 220 **H** from there||
- 1589) IR: yeah
- 1590) IG: [and] WHAT 220 **H** happens|| IT 189 **M**|| basiCAlly 220 **H**|| it SWOOPS 202 **H** down|| GENTly 183 **M**|| FROM 190 **M** that starting point|| with a motion that goes SLIGHTly 201**H** to the left||
- 1591) IR: ok
- 1592) IG: ||and then CURVes 172 **M** in underneath the old mine||
- 1593) IR: [ok]
- 1594) IG: [[but] it... it NEVER 186 **M** is <abandoned tone unit>||... well by the TIME 216 **H** it gets to underneath the old mine || the road about ONE 156 **M** and half cm below the text|| where it SAYS 157 **M**|| [old mine ||]
- 1595) IR: [right] ||YEAH 65 **L**|| ok so it sort goes aROUND118 **M** like a C ||for the START 99 **M**|| aROUND 108 **M** the old mine|| just aBOVE 100 **M** the of [the swamp]|| SORT 97 **M** of north east of swamp ||REALly 84 **L**||
- 1596) IG: [[YEAH 81 **L**]]
- 1597) IG: ||EXACTly 172 **M**|| it's not a REALly 180 **M** curvaceous 'C' || it's <abandoned tone unit> it's just a LITtle 167 **M** bit of a swerve around from the start underneath old mine|| and then it conTINues 203 **H** to go|| alMOST 185 **M**|| alMOST 181 **M** in a more or less straight line ||RIGHT 164 **M** across to underneath where it says miner||
- 1598) IR: ||OK 136 **M**||
- 1599) IG: so which is about... the miner is about three cm to the four five cm to the right of old mine on mine.
- 1600) IR: ||i've got MOUNtains148 **M**|| and a CACTus 96 **L**||
- 1601) IG: ||OK 159 **M**|| well MINE 154 **M** says MINer140 **M** is|| is <abandoned tone unit> what's to the RIGHT 159 **M** [of your mountains||]
- 1602) IR: [[i ve' got] <abandoned tone unit> ||to the RIGHT 198 **H** of old mine|| in a SORT 156 **M** of top rightish area|| sort of PARAllel 154 **M** to the start line|| is MOUNains 115 **M**|| and then just benEATH 123 **M** that|| but slightly to the WEST 107 **M**|| is a CACTus 100 **M**||
- 1603) IG: ok right oh so... so here ...here is... here is what we'll do then um so where your old mine underneath old mine if you can... if the road continues easterly
- 1604) IR: yes

- 1605) IG: with a slightly north east gradient on my map
- 1606) IR: ok
- 1607) IG: your probably don't have this. I have a little picture of some... a man in a mine
- 1608) IR: right
- 1609) IG: and it says miner underneath it
- 1610) IR: ok
- 1611) IG: you don't have that
- 1612) IR: ||NO 122 M|| but it SEEMs 180 H to be|| as QUITE 140 M similar area to mountains|| so MAYbe108 M<abandoned tone unit>||
- 1613) IG: ||I 237 H have mountains on mine|| but it's more <abandoned tone unit>
- 1614) IR: ok
- 1615) IG: but... but the MOUNtains 181 M on my page|| is only about THREE 169 M cm away from the right margin||
- 1616) IR: ||YEAH 121 M yeah|| I think that's about RIGHT 104 M with mine as well|| YEAH 95 M||
- 1617) IG: ok so you.... I ...I just don't think you've got miner that's the only [difference... difference]
- 1618) IR: [no... no so mine is just the opposite]
- 1619) IG: ok so in that case so go... go the... the road goes in between old mine and mountains
- 1620) IR: right
- 1621) IG: more or less proximate you know height on the page to them... [to the]
- 1622) IR: so that yeah
- 1623) IR: ||YEAH 114 M ||so that's aBOVE111 M|| WHERE 106 M my cactus is i imagine|| so it's SORT 233 H of <abandoned tone unit>|| so THAT's 151 M|| NEARly 157 M|| NEARly 143 M|| HORizontal 121 M to the where you are going|| and just SLIGHTly 102 M up|| and KEEP 91 M going||YEAH 80 L|| under mounTAINs 110 M||
- 1624) IG: yeah
- 1625) IR: and then in between [yeah so]
- 1626) IG: [yeah so] and then you ... and then there is like a... the road goes ...I t... tell you what
- 1627) IR: yeah

- 1628) IG: I am just trying to think of outside the box may may...maybe we could make... we could like section our pages
- 1629) IR: ||OK 128 M|| give that a GO 111 M||
- 1630) IG: g g...give that a go.
- 1631) IR: ||there SEEMS 191 H to be <abandoned tone unit> ||might BE 163 M
<abandoned tone unit> there... there is a BIG 183 H punch of them|| on the RIGHT 126 M hand side|| VERTICALy 109 M on mine|| i have a LOT 113 M of objects|| which SORT of 130 M follow each other|| QUITE 90 L um <abandoned tone unit>||in almost the line going DOWN 102 M|| and then EVERYthing 108 M else on the left|| SEEMs 95 M to be spread about||
- 1632) IG: ||YEAH 159 M||
- 1633) IR: there is ONE 116 M in the middle|| and then we have a FEW 97 M|| sort of in LINE 90 M with the old mine|| and that tends to be the GENERal 88 L layout for lines|| so i THINK 95 M um <abandoned ton unit> ||
- 1634) IG: || I 173 M think|| i think your imAGEs 154 M and pictures|| are SO 144 M different [to mine]|| that the almost is is... there is almost no VALUE 129 M in using <abandoned tone unit>
- 1635) IR: [yes]
- 1636) IR: ||i think if we<abandoned ton unit>... i think if we CARRY 211 H on for mountains|| and what's underneath MOUNTAINS 110 M|| and SEE 142 M where we go from there|| so DID 113M some guessing|| is gonna go DOWN 96 M at some point now|| ISN'T 81 L it||
- 1637) IG: yeah yeah it... it goes dramatically down with [um]
- 1638) IR: [right] because from what I because from what I have so far that puts me near just above castle so I don't know of you have a castle
- 1639) IG: right ok yes yes I do have a castle on the... on the ... I tell... I tell you what shall ...we just do this to give our...ourselves an extra dimension of [support]
- 1640) IR: [yeah yeah]
- 1641) IG: can... can you fold your page in half
- 1642) IR: yeah ok
- 1643) IG: right so if we fold our page in half
- 1644) IR: which way?
- 1645) IG: um so

- 1646) IR: sort of like horizontally yeah
- 1647) IG: yeah horizontally down yeah and then open it again. Should we...
- 1648) IR: ok my... my half line is right above the tree
- 1649) IG: yeah same here
- 1650) IR: ok that ... that helps
- 1651) IG: is your half line is... is that tree on the right more or less the right [side]
- 1652) IR: [yeah] yeah yeah it's a bit in but is on the
right
- 1653) IG: [yeah]
- 1654) IG: I ... I think your tree and mine are in the exactly same place
- 1655) IR: ok
- 1656) IG: ok
- 1657) IR: that's a good point to get to
- 1658) IG: that'd be a good point to get to um
- 1659) IR: so I'm guessing, uh well did you have castle?
- 1660) IG: yes
- 1661) IR: yeah so that's... that's obviously slightly to the right and quite <unclear
words> three and half cm
- 1662) IG: yes, I think your castle and
- 1663) IR: that's... that's the same place then castle and tree
- 1664) IG: your castle and my tree are in the exact same place
- 1665) IR: ||so at the MOMent 136 M|| the ROUTE 121 M i've got so far is just above
the castle|| coz you said DROPPed 93 M dram dramatically down from mountains||
so i am in the area 100 M just above castle now|| diRECTly 126 M above it||
- 1666) IG: ok
- 1667) IR: directly above it
- 1668) IG: ok um do you have rocks to the left of your castle [by about c...]
- 1669) IR: [no, I don't] no rocks
- 1670) IG: ok so um that's cool so as the... the line as the road comes down from
mountains it's.... it's sortly it...it's kind of... it's not going directly down the page
Tim, it's sort of [going to the left]
- 1671) IR: [right] ok so in with the bit then
- 1672) IG: in with into the centre of the page more or less
- 1673) IR: [right] ok

- 1674) IG: but as it goes into to the centre it takes... do you have forest by any chance?
- 1675) IR: No
- 1676) IG: ok see <unclear words> forest is more for me is right on the crease
- 1677) IR: right ok so straight so in the middle [it's quite] in the centre ok,
- 1678) IG: [it's in the middle]
- 1679) IR: ||shall i go THERE 111 M|| coz to the RIGHT 160 M <abandoned tone unit>
slightly to the LEFT 145 M of that and up|| is a COTtage 115 M|| I don't know if
you got a cottage
- 1680) IG: no, I don't
- 1681) IR: ok so so yeah we are near the tree aren't we are just to the left of the tree
now by say four cm directly in the middle of the page were the crease is
- 1682) IG: yeah um then there is... so there is There is a big 'C' shaped bend?
- 1683) IR: yeah
- 1684) IG: and is... is exactly... is...is like a large 'C' and it's... swerves right under...
it swerves itself right back in again underneath the tree
- 1685) IR: ok right
- 1686) IG: that's not a very clear instruction I am giving you
- 1687) IR: we're sort of near the edge of the page then I guess now if we're doing I
will do like a sort of like a boat shape 'C' if you look at... if you to draw a boat and
you do that arc in that way
- 1688) IG: yeah
- 1689) IR: that under the tree if you see what I mean
- 1690) IG: yes so
- 1691) IR: and then so it sort of near the edge of the page where of that is that works out
or we're quite near the tree still where the 'C' ends 'd you know what I mean, so
like...
- 1692) IG: yeah
- 1693) where... where that loop goes underneath the tree where... where does the last
point of that loop goes is it just... is it quite close to the tree
- 1694) IG: yeah
- 1695) IR: or is it quite close ... quite close to the edge of the page
- 1696) IG: is your tree about six or seven cm from the right margins
- 1697) IR: five may be [yeah]
- 1698) IG: [yeah]

- 1699) IR: maybe to six probably yeah so... so we're in that vicinity aren't we? The gap in between the tree and the margins I imagine now
- 1700) IG: yeah
- 1701) IR: from the point we've reached
- 1702) IG: we'll... we'll put it this way
- 1703) IR: yeah
- 1704) IG: if you ... if you turn... if you turn your page so the start is that at your bottom left on your [desk]
- 1705) IR: [yeah yes]
- 1706) IG: So you're looking at the page almost... on the margins... on ... on the landscape [as a postal portrait]
- 1707) IR: [yeah] right
- 1708) IG: the shape of this road is like a big 'm' that covers the entire page
- 1709) IR: ok I've sort of have it, little bit
- 1710) IG: so
- 1711) IR: because where we were from the old mine straight across around the cactus and then back in
- 1712) IG: yeah
- 1713) IR: I think I've gone right into the cent... right in the middle of the centre of the page
- 1714) IG: yeah
- 1715) and it a loop in back underneath the tree so it sort of like looks like an 'n' almost, more than an 'n' if I have it in that position you said.
- 1716) IG: yeah yeah
- 1717) IR: so it sort of has that... that shape a bit. Ok, cool.
- 1718) IG: so
- 1719) IR: ||i think i THINK 159 M <abandoned tone unit> yeah i THINK 156 M||
FROM 143 M tree we can see where we go then||
- 1720) IG: I'm... I'm... I'm just going to fold my page almost again to make it now so it will quartered
- 1721) IR: yeah yeah ok I will do that um in the same way ok. I will give that a go at least

- 1722) IG: yeah and then I've just got now I like four of the exact same shapes on my page. I am looking at on it... um it's... it's interesting is just difficult I've got that such that we... I've got different images
- 1723) IR: yeah yeah well, I think, we are on the right hand side now, middle right hand side, I think
- 1724) IG: just below the tree
- 1725) IR: to try like... to try and take the images out of the equation that's the area we are
- 1726) IG: oh yeah
- 1727) IR: are you just below the tree away?
- 1728) IG: I am just below the tree
- 1729) IR: ok i... in...in the bottom we should...right I think I know when you are then cause I was going a bit further up which is I was getting confused of being close to the margins
- 1730) IG: ok
- 1731) IR: so that makes some more sense if we were just around here and I've got a gold mine underneath now
- 1732) IG: underneath the...
- 1733) IR: underneath where is sort of about
- 1734) IG: I don't have a gold... [gold mine] at all on my entire thing
- 1735) IR: [right]
- 1736) IR: let's see if we've got a yellow house
- 1737) IG: I've got a yellow house
- 1738) IR: ||ok ok so FROM 149 M there|| we're LOOKing 131 M at sort of err one 123 M o'clock um area|| FROM 113 M where we are to the yellow house||.
- 1739) IG: yes
- 1740) IR: yeah
- 1741) IG: yeah, that's co... that's correct [great]
- 1742) IR: [ok]
- 1743) IG: do you have a mushroom house directly underneath the tree by about ten cm
- 1744) IR: yeah yeah yeah got that
- 1745) IG: ok so the road goes more or less from underneath the tree and swerves down all the way at round the mushroom house
- 1746) IR: right ok on the ... on the right side yeah

- 1747) IG: on the right side of the mushroom house
- 1748) IR: ok
- 1749) and then curls back in so it um comes to what I have is called a duck pond but basically even if you don't have the duck pond
- 1750) IR: the yellow house is pretty close by isn't it now to this now I imagine if we are going back underneath the mushroom house
- 1751) IG: but it doesn't go the road doesn't go back so [high up] because the yellow house...
- 1752) IR: [ok yeah]
- 1753) IR: yeah ok I stopped it just sort of next to the mushroom house at the moment
- 1754) IG: yeah a...
- 1755) IR: to the left
- 1756) IG: to the left of the.... that's great and then if you have a slight if the road takes a slight up turn up a little bit
- 1757) IR: yeah
- 1758) IG: and then then before you going anywhere else do you have a farm at the bottom left
- 1759) IR: yes
- 1760) IG: bri.. and is it ah right ok do you have hills above the farm land
- 1761) IR: yeah
- 1762) IG: ok brilliant so basically see where you are now um just past the mushroom house about three cm below the yellow house
- 1763) IR: yeah
- 1764) IG: see if you just like it's like a line that just goes underneath the farm
- 1765) IR: yeah
- 1766) IG: and eventually rises itself back up again until it's about two or three cm to the left of hills
- 1767) IR: yeah got it
- 1768) IG: and then you see [there so] if you want to finish in the exact same place that I am
- 1769) IR: yeah
- 1770) IG: if we consider that your farm is about five no about three cm below your hills just to the left a little bit.
- 1771) IR: yeah yeah yeah

- 1772) IG: ok so the finish... the finish sign
- 1773) IR: yeah
- 1774) IG: and you put an X there is about if you squeeze your I guess index finger ne..
- 1775) IR: yeah
- 1776) IG: next to the farm at like the ten between ten and eleven o'clock
- 1777) IR: right
- 1778) IG: it's about that width away [from the farm] and then there is fi... it says
finish and it puts an x there
- 1779) IR: [ok]
- 1780) IR: right got it done I am very confident
- 1781) IG: ok I am sure we finished it I'm... I'm confident that we finished in the right
place and started in the [right place] but I'm not confident that our road is
necessarily....
- 1782) IR: [yeah]

Appendix S

The identification of the 59 marked Theme into high and mid key choices/Speakers are identified by Gender (Female=F; Male=M)

Group No./ Speaker's Gender	Speaker's Role	Marked Theme Instance + Rheme	H	M	L
Group One IG: M	IG1	SO 122 M horiZONtally 141 H it's about HALF 127 M way up the caravan park	X		
	IG1	horiZONtally 148 H IT 113's M to the right just to the right of the abandoned cottage	X		
	IG1	OK 128 M so to the RIGHT 149 H of west lake PROBAbly 145 H one centimetre may be one and half there is a TRIG 127 M point	X		
	IR1	/	/	/	/
Group Two IG: M IR: F	IG2	YEAH 141.5 M so on MINE 145 M it's CALLED 135 M an old mill		X	
	IG2	OK 157 M so ER 136 M on the BOTtom 181 H right... of the... of the sheet there should be er <abandoned tone unit> on MINE 139 M i have got a FENCED 136 M meadow have you got ANYthing 168 M in this area		X	
	IG2	YEAH 138 M ok SO 157 M where you so... let's SAY 204 H that your route is at the top of the old mill at the start uh... at this POINT 110 M so on MINE 147 M it GOES 125 M i suppose in an EASTerly 151 M direction or to the left er to the RIGHT 113 M			X
	IG2	OK 132 M so on MINE 166 M there is a FENCed 165 M meadow it's aBOUT 141 M say halfway up the page on the left hand side		X	
	IR2	NO 204 M NEXT 241 M to west lake i have FARMed 226 M land		X	
	IG2	YEAH 123 M SO 164 M in a SORT 196 H of north er south direction of west lake there is a PLACE 128 M called trig point here	X		
	IG2	SO 160 M ER 135 M on the MAP 175 H have you got a MONument 168 H	X		
	IR2	ER 252 H WELL266 H just beLOW 163 M the mill wheel the OLD 240 H mill mine is called the mill wheel there was a PICKet 230 M fence to the UM 192 M SOUTH 228 M WEST of the OLD mill			X
Group Three	IG 3	so... so FROM 114 H the mountains we end up on the RIGHT 96 M <inaudible> the far side of the mountains to... tothe LEFT 92 M or nearer side of the castle	X		

Group No./ Speaker's Gender	Speaker's Role	Marked Theme Instance + Rheme	H	M	L
IG: M IR: F	IG 3	um so.... so LEFT 122 H of the castle what's on YOUR 91 M map so the CASTle 100 M is on the far side	X		
	IR 3	OK 251 M so at THAT 218 M point i would be kind of MIDdle 197 M of the page IG: ok I 188 M think		X	
	IR 3	ok so for ME 270 H that's KIND 229 M of by the stone giant < IG: ok> i THINK 150 M	X		
Group Four IG: F IR: M	IR 4	well i got KIND 170 H of two columns a LEFT 182 H and a right column and THEN 106 M < abandoned tone unit> so on the LEFT 123 M column it GOES 113 M START 118 M OLD 120 M mine SWAMP 135 M COTtage 115 M STONE 122 giant M HILLs 122 M farm		X	
	IG 4	OK 196 M so on MY 221 M map there is like the OLD 179 M mine and then the SWAMP 163 M		X	
	IG 4	and i don't HAVE 192 M the stone giant but beFORE 204 H the hills and the farm there IS 156 M a forest but it's a BIT 193 M more to the right like diRECTly 187 M under the old mine	X		
	IG 4	RIGHT 194 M under miner kind of alMOST 202 M parallel but little lower than the swamp i have ROCKs 154 M		X	
	IR 4	directly above the MUSHroom 131 M house there is a GOLD 120 M mine		X	
Group Five IG: F IR: F	IG 5	WELL 229 M ON 223 M mine it's on the TOP 247 M left hand corner there is... i... an... OLD 221 M mine		X	
	IG 5	SO 219 M you go <abandoned tone unit> NEXT 292 H to the old ...old mine what have you GOT 288 H	X		
	IR 5	a) UM 218 M to the RIGHT 226 M of the old mine i have MOUNTains 197 M b) b) and beLOW 193 M i have a SWANP 188 M c) c) and DIAGONally 178 M i have a CACTus 190 M		X	X
	IR 5	yeah so UNDER265 H my swamp i have a COTtage 207 M a little like LITTLE 207 M yeah COTtage 206 M	X		
	IR 5	a) YEAH 213 M SLIGHTly 243 M up from the COTtage i have a CASTLE 232 M b) and then slightly DOWN 195 M from the cottage i have a TREE 185 M		X	X
	IR 5	horizontal LIKE 199 M <abandoned tone unit> from the COTtage235 M to the castle it was horizontal UP 236 M		X	
Group Six	IG 6	UM 229 M and then so.. sort of beLOW 208 M that there is the forEST 256 H		X	

Group No./ Speaker's Gender	Speaker's Role	Marked Theme Instance + Rheme	H	M	L
IG: F IR: F	IG 6	UM 218 M and THEN 207 M so in LINE 230 M with the yellow house on the BOTtom 205 M of the page there is DUCK 209 M pond		X	
	IR 6	so then LIKE 231 M directly beneath that i've got a STONE 195 M giant		X	
Group Seven IG: F IR: F	IG 7	and THEN 216 M to the RIGHT 255 H of old mine do you have a MINer 96 L	X		
	IR 7	on the RIGHT 164 M and then beLOW 179 M the cactus i have a CASTLE 162 M		X	
	IG 7	OVER 215 H the castle i DON'T 204 M have a cactus	X		
	IR 7	so diRECTly 330 H across from the mushroom house ALmost 226 M to the otherside of the page but not quite i have HILLS 218 M	X		
	IR 7	ok GOOD 200 M and then beLOW 228 M the hills i have a FARM 187 M		X	
	IG 7	UM 186 M to the RIGHT 247 H of the farm, I have a DUCK 226 M pond on... on the SAME 248 M level	X		
	IG 7	and THEN 220 M UM 200 M UNDER 214 M the farm SCOOP 214 M up to the left		X	
Group Eight IG: F	IG 8	REALly 276 H hard to describe without <abandoned tone unit> ... and then to the RIGHT 217 M of the old mine there is a MINer 185 M		X	
	IR 8	/	/	/	/
Group Nine IG: M IR: F	IG 9	and then FROM 102 M there so <inaudible> it comes STRAIGHT 104 M across the mountains LOOPS 106 M down and round up to START 88 L off a right angle and gonna comes down MORE 84 L diagonally		X	
	IR 9	just to the TOP 203 M left of castle and then underNEATH 206 M castle i have a TREE 207 M		X	
	IG 9	and then FROM 109 M there IT 90 M <abandoned tone unit> from THAT 98 M position it CURVEs 106 M up and aROUND102 M forest which i think forest so it's gonna to go in BETWEEN 90 M where my forest and uh cottage is for you		X	
	IR 9	so FROM 340 H the start it GOes 224 M right down under the mine and then it goes to the RIGHT 182 M	X		
Group Ten	IR 10	and then the SWAMP 106 M and then beLOW 104 M that the cottage		X	
	IR 10	ah on the LEFT 113 M hand side i've got the ma... the OLD 111 M mine a SWAMP 111 M the... there is a COTtage 123 M a STONE 117 M giant		X	

Group No./ Speaker's Gender	Speaker's Role	Marked Theme Instance + Rheme	H	M	L
IG: M IR: M	IR 10	and then on the RIGHT 104 M hand side the MOUNtains 115 M are in line with the old mine		X	
	IG 10	and then um just beLOW 109 M that UM 90 M it starts to CURVE 108 M left		X	
Group Eleven IG: F IR: F	IG 11	OK 196 M WELL190 M to the RIGHT 273 H of the old mine on MY 211 M map THere 310 H is ...a....a guy chiselling a way	X		
	IR 11	OK 225 M so <inaudible> so to the RIGHT 202 M of the old mine i have MOUNtains 190 M and a cactus		X	
	IG 11	UM 196 M and then on MY 298 H map THERE is 225 M a... symbol just down and left of your cottage called forest	X		
	IR 11	DOWN 226 M and left i have a STONE 267 H giant		X	
	IG 11	ok with your STONE 272 H giant i want you... need to make like a C 252 H shape around it QUITE 240 M a big 'C' about two thumbs heights worth	X		
	IG 11	that's... ON 223 M mine it's diRECTly 222 M below the yellow house		X	
Group Twelve IG: M IR: M	IG 12	OK 164 M TIM 182 M at the VERY 227 H left hand side of your of your map IS 173 M there something that says OLD 141 M mine	X		
	IG 12	so there's an X 141 M there and then FROM 204 H that OUTcomes 139 M a blue NOT 183 M dotted line BUT 158 M like <abandoned tone unit> ...it's like a BLUE 177 M line where it HAS 153 M little SMALL 186 M blue lines and each of them is aBOUT 139 M <abandoned tone unit> YEAH 145 M so the ROAD 174 M is that that's the WAY 146 M the road looks on my map so it STARTs 220 H from there	X		
	IR 12	so at the MOMent 136 M the ROUTE 121 M i 've got so far is just above the castle coz you said DROPPed 93 M dram dramatically down from mountains so i am in the area 100 M just above castle now <IG: ok> diRECTly 126 M above it		X	
	IR 12	IR: i think i THINK 159 M <abandoned tone unit> yeah i THINK 156 M FROM 143 M tree we can see where we go then		X	
	IR 12	ok ok so FROM 149 M there we're LOOKing 131 M at sort of err one 123 M o'clock um area FROM 113 M where we are to the yellow house		X	

Appendix T

Tables 1-5 of Categories A-E of Key analysis of the marked Theme in terms of the thematic structure

Table 1/ Category A: Marked Themes with high marked topical Theme and mid textual Themes that are uttered in separate tone groups

Group	Speaker's role	Marked Theme instance
Group One	IG1	54) SO 122 M horiZONtally 141 H it's about HALF 127 M way up the caravan park
	IG1	123) OK 128 M so to the RIGHT 149 H of west lake PROBABly 145 H one centimetre may be one and half there is a TRIG 127 M point
Group Two	IG2	201) YEAH 123 M SO 164 M in a SORT 196 H of north er south direction of west lake there is a PLACE 128 M called trig point here
	IG2	235) SO 160 M ER 135 M on the MAP 175 H have you got a MONument 168 H
Group Seven	IG7	1028) and THEN 216 M to the RIGHT 255 H of old mine do you have a MINer 96 L
Group Eleven	IG11	1483) OK 196 M WELL190 M to the RIGHT 273 H of the old mine on MY 226 M map there is ...a....a GUY 211 M chiselling a way and he is called MINer 190 M
Group Twelve	IG12	1567) OK 164 M TIM 182 M at the VERY 227 H left hand side of your of your map IS 173 M there something that says OLD 141 M mine

Table 2/ Category B: Marked Themes with high marked topical Theme only or with textual Themes uttered in the same tone group with the high marked topical Theme as a single Theme

Group	Speaker's role	Marked Theme instance
Group One	IG1	58) horiZONtally 148 H IT 113's M to the right just to the right of the abandoned cottage
Group Three	IG3	347) so FROM 114 H the mountains we end up on the RIGHT 96 M <unclear words> the far side of the mountains to... to the LEFT 92 M or nearer side of the castle
	IG3	356) so LEFT 122 H of the castle what's on YOUR 91 M map so the CASTle 100 M is on the far side
	IR3	412) ok so for ME 270 H that's KIND 229 M of by the stone giant i THINK 150 M
Group Four	IG4	496) but before 216 H the hills and the farm there IS 156 M a forest
Group Five	IG5	677) NEXT 292 H to the old ...old mine what have you GOT 288 H
	IR5	747) so UNDER265 H my swamp i have a COTtage 207 M a little like LITTLE 207 M yeah COTtage 206 M

Table 2/ Category B: Marked Themes with high marked topical Theme only or with textual Themes uttered in the same tone group with the high marked topical Theme as a single Theme

Group	Speaker's role	Marked Theme instance
Group Seven	IG7	1060) OVER 250 H the castle i DON'T 204 M have a cactus
	IR7	1126) so diRECTly 330 H across from the mushroom house ALmost 226 M to the otherside of the page but not quite i have HILLs 218 M
	IG7	1130) to the RIGHT 260 H of the farm i have a DUCK 226 M pond
Group Nine	IR9	1340) so FROM 340 H the start it GOes 224 M right down under the mine
Group Eleven	IG11	1514) and then on MY 298 H map THERE is 225 M a... symbol just down and left of your cottage called for/EST 353 H
	IG11	1516) ok with your STONE 272 H giant i want you... need to make like a C 252 H shape around it QUITE 240 M a big 'C' about two thumbs heights worth
Group Twelve	IG12	1588) and then FROM 204 H that OUTcomes 139 M a blue NOT 183 M dotted line

Table 3/ Category C: Marked Themes with mid marked topical Theme and high textual Theme uttered in separate tone groups

Group No.	Speaker's role	Marked Theme instance
Group Two	IR2	284) WELL266 H just beLOW 163 M the mill wheel the OLD 240 H mill mine is called the mill wheel there was a PICKet 230 M fence

Table 4/ Category D: Marked Themes with mid marked topical Themes and mid textual Themes in separate tone groups

Group No.	Speaker's role	Marked Theme instance
Group Two	IG2	191) OK 132 M so on MINE 166 M there is a FENCed 165 M meadow
Group Three	IR3	409) OK 251 M so at THAT 218 M point i would be kind of MIDDLE 197 M of the page I 188 M think
Group Five	IG5	672) WELL 229 M ON 223 M mine it's on the TOP 247 M left hand corner there is... i... an... OLD 221 M mine
Group Seven	IG7	1139) and THEN 220 M UM 200 M UNDER 214 M the farm SCOOP 214 M up to the left
Group Ten	IG10	1443) and THEN 100 M UM 95 M just beLOW 109 M that UM 90 M it starts to CURVE 108 M left

Table 4/ Category D: Marked Themes with mid marked topical Themes and mid textual Themes in separate tone groups

Group Twelve	IR12	1718) YEAH 150 M i THINK 156 M FROM 143 M tree we can see where we go then
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Table 5/ Category E: Marked Themes with mid topical Theme only or mid topical Theme with textual Themes uttered in the same tone group

Group	Speaker's Role	Marked Theme instance
Group Two	IG2	169) so on MINE 145 M it's CALLED 135 M an old mill
	IG2	177) on MINE 139 M i have got a fenced meadow
	IG2	183) so on MINE 147 M it GOES 125 M i suppose in an EASTerly 151 M direction or to the left er to the RIGHT 113 M
	IR2	198) NEXT 241 M to west lake i have FARMed 226 M land
Group Four	IR4	471) so on the LEFT 123 M column it GOES 113 M START 118 M OLD 120 M mine SWAMP 135 M COTtage 115 M STONE 122 giant M HILLS 122 M farm
	IG4	494) so on MY 221 M map there is like the OLD 179 M mine and then the SWAMP 163 M
	IG4	513) RIGHT 194 M under miner kind of alMOST 202 M parallel but little lower than the swamp i have ROCKs 154 M
	IR4	606) directly above the MUSHroom 131 M house there is a GOLD 120 M mine
Group Five	IR5	678) a) to the RIGHT 226 M of the old mine i have MOUNtains 197 M b) and beLOW 193 M i have a SWAMP 188 M c) and DIAGONally 178 M i have a CACTus 120 M
	IR5	759) a) SLIGHTly 243 M up from the cottage i have a CASTLE 232 M b) and then slightly DOWN 195 M from the cottage i have a TREE 185 M
	IR5	788) from the COTtage235 M to the castle it was horizontal UP 236 M
Group Six	IG6	901) and then sor.. sort of beLOW 208 M that there is the forEST 124L
	IG6	930) so in LINE 230 M with the yellow house on the BOTtom 205 M of the page there is DUCK 209 M pond
	IR6	946) so then LIKE 231 M directly beneath that i've got a STONE 195 M giant

Table 5/ Category E: Marked Themes with mid topical Theme only or mid topical Theme with textual Themes uttered in the same tone group

Group	Speaker's Role	Marked Theme instance
Group Seven	IR7	1042) and then beLOW 179 M the cactus i have a CASTLE 162 M
	IR7	1129) and then beLOW 228 M the hills i have a FARM 187 M
Group Eight	IG8	1155) and then to the RIGHT 217 M of the old mine there is a MINer 185 M
Group Nine	IG9	1239) and then FROM 102 M there <unclear word> it comes STRAIGHT 104 M across the mountains
	IR9	1250) and then underNEATH 206 M castle i have a TREE 207 M
	IG9	1264) from THAT 98 M position it CURVEs 106 M up and aROUND102 M forest
Group Ten	IR10	1374) and then beLOW 104 M that the cottage
	IR10	1396) on the LEFT 113 M hand side i've got the ma... the OLD 111 M mine a SWAMP 111 M the... there is a COTTage 123 M a STONE 117 M giant
	IR10	1402) and then on the RIGHT 104 M hand side the MOUNtains 115 M are in line with the old mine
Group Eleven	IR11	1515) DOWN 226 M and left i have a STONE 267 H giant
	IG11	1546) ON 223 M mine it's diRECTly 222 M below the yellow house
	IR11	1484) so to the RIGHT 202 M of the old mine i have MOUNtains 190 M and a cactus
Group Twelve	IR12	1737) ok ok so FROM 149 M there we're LOOKing 131 M at sort of err one 123 M o'clock um area
	IR12	1664) so at the MOMent 136 M the ROUTE 121 M i 've got so far is just above the castle

Appendix U

The meaning generated of the interaction between Marked Theme with the high Key

Group	Speaker's role	Marked Theme instance	Function	Function category
Group One	IG1	54) SO 122 M horiZONtally 141 H it's about HALF 127 M way up the caravan park	Projecting location to present new details about the layout of the route	A (1)
	IG1	58) horiZONtally 148 H IT 113's M to the right just to the right of the abandoned cottage	Projecting location to present new details about the layout of the route	A(1)
	IG1	123) OK 128 M so to the RIGHT 149 H of west lake PROBAbly 145 H one centimetre may be one and half there is a TRIG 127 M point	Projecting location to locate a landmark after knowing that it does not exist on the other map	B
Group Two	IG2	201) YEAH 123 M SO 164 M in a SORT 196 H of north er south direction of west lake there is a PLACE 128 M called trig point here	Projecting location to locate a landmark after knowing that it does not exist on the other map	B
	IG2	235) SO 160 M ER 135 M on the MAP 175 H have you got a MONument 168 M	Projecting the IR's map	E
Group Three	IG3	347) so FROM 114 H the mountains we end up on the RIGHT 96 M <unclear words> the far side of the mountains to... to the LEFT 92 M or nearer side of the castle	Projecting location to signal a fresh start	D
	IG3	356) so LEFT 122 H of the castle what's on YOUR 91 M map so the CASTle 100 M is on the far side	Projecting location to check what landmark is found	C
	IR3	412) ok so for ME 270 H that's KIND 229 M of by the stone giant i THINK 150 M	Projecting IR's map	E

Group	Speaker's role	Marked Theme instance	Function	Function category
Group Four	IG4	496) but beFORE 204 H the hills and the farm there IS 156 M a forest	Projecting location to locate a landmark after knowing that it does not exist on the other map	B
Group Five	IG5	677) NEXT 292 H to the old ...old mine what have you GOT 288 H	Projecting location to signal a fresh start	D
	IR5	747) UNDer265 H my swamp i have a COTtage 207 M	Projecting location to locate a landmark	A (2)
Group Seven	IG7	1028) and THEN 216 M to the RIGHT 255 H of old mine do you have a MINer 96 L	Projecting location to check the availability of a specific landmark	C
	IR7	1126) so diREctly 330 H across from the mushroom house ALmost 226 M to the otherside of the page but not quite i have HILLs 218 M	Projecting location to locate and clarify what landmark is near the mushroom house on the IR's map after knowing that a landmark (duck pond) is missing	B
	IG 7	1126) OVER 250 H the castle i DON'T 204 M have a cactus	Projecting location to signal that the upcoming information is in contrast with what is predicated	E (1)
	IG7	1130) to the RIGHT 247 H of the farm i have a DUCK 226 M pond on... on the SAME 248 M level	Projecting location to locate a landmark after knowing that it does not exist on the other map	B
Group Nine	IR9	1340) so FROM 340 H the start it GOes 224 M right down under the mine	Projecting location to present new details about the layout of the route	A (1)
Group Eleven	IG11	1483) OK 196 M <not audible> to the RIGHT 273 H of the old mine on MY 211 M map There 310 H is ...a....a guy chiselling a way	Projecting location to locate a landmark after knowing that it does not exist on the IR's map	B
	IG11	1514) and then on MY 298 H map THERE is 225 M a... symbol just	Projecting location to introduce a new landmark	A(2)

Group	Speaker's role	Marked Theme instance	Function	Function category
		down and left of your cottage called forest		
	IG11	1516) ok with your STONE 272 H giant i want you... need to make like a C 252 H shape around it QUITE 240 M a big 'C' about two thumbs heights worth	Projecting a location to present new details about the route	A (1)
Group Twelve	IG12	1567) OK 164 M TIM 182 M at the VERY 227 H left hand side of your of your map IS 173 M there something that says OLD 141 M mine	Projecting location to check the availability of a specific landmark.	C
	IG12	1588) and then FROM 204 H that OUTcomes 139 M a blue NOT 183 M dotted line	Projecting location to present new details about the layout of the route	A (1)

Appendix V

The meaning generated of the interaction of the Marked Theme with the mid key choice

Group No.	Speaker's role	Marked Theme instance	Function	Function category
Group Two	IG 2	169) OK 140 M YEAH 141.5 M so on MINE 145 M it's CALLED 135 M an old mill	Additive for clarification of the landmark name	B
	IG2	177) on MINE 139 M i have got a fenced meadow	Additive for locating a new landmark by extension from location (the map itself)	A (1)
	IG2	183) so on MINE 147 M it GOES 125 M i suppose in an EASTerly 151 M direction or to the left er to the RIGHT 113 M	Additive for extending information on the route by adding new details on its layout	A (2)
	IG2	191) OK 132 M so on MINE 166 M there is a FENCed 167 M meadow	Additive for the clarification and confirmation of the existence of landmark that is introduced but not yet agreed on its location	B
	IR2	198) NEXT 241 M to west lake i have FARMed 226 M land	Additive for clarification of what landmark is found on the IR's map by extension	B
	IR2	284) WELL266 H just beLOW 163 M the mill wheel the OLD 240 H mill mine is called the mill wheel there was a PICKet 230 M fence to the UM 192 M SOUTH 228 M WEST of the OLD mill	Additive for clarification of what landmark is found on the IR's map	B
Group Three	IR3	409) OK 251 M so at THAT 218 M point i would be kind of MIDDle 197 M of the page I 188 M think	Additive for the clarification of the route layout	B
Group Four	IR4	471) so on the LEFT 123 M column it GOES 113 M START 118 M OLD 120 M mine SWAMP 135 M COTtage 115 M STONE 122 giant M HILLs 122 M farm	Additive for locating new landmarks by extension	A (1)
	IG4	494) so on MY 221 M map there is like the OLD 179 M mine and then the SWAMP 163 M	Additive for locating new landmarks by extension from a location (the map itself)	A (1)

Group No.	Speaker's role	Marked Theme instance	Function	Function category
	IG4	513) RIGHT 194 M under miner kind of alMOST 202 M parallel but little lower than the swamp i have ROCKs 154 M	Additive for confirmation and clarification of a landmark location	B
	IR4	606) directly above the MUSHroom 131 M house there is a GOLD 120 M mine	Additive for the clarification of landmark location	B
Group Five	IG5	672) WELL 229 M ON 223 M mine it's on the TOP 247 M left hand corner there is... i... an... OLD 221 M mine	Additive for locating new landmark by extension	A (1)
	IR5	678) a) to the RIGHT 226 M of the old mine i have MOUNTains 197 M b) and beLOW 193 M i have a SWANP 188 M c) and DIAgonally 178 M i have a CACTus 190 M	Additive for locating new landmarks by extension	A (1)
	IR5	759) a) YEAH 239 M SLIGHTly 243 M up from the cottage i have a CASTLE 232 M b) and then slightly DOWN 195 M from the cottage i have a TREE 185 M	Additive for locating new landmarks by extension	A (1)
	IR5	788) from the COTtage235 M to the castle it was horizontal UP 236 M	Additive for extending information on the route by adding new details on its layout	A (2)
Group Six	IG6	901) and then sor.. sort of beLOW 208 M that there is the forEST 124 L	Additive for locating a new landmark by extension from a location	A (1)
	IG6	930) so in LINE 230 M with the yellow house on the BOTtom 205 M of the page there is DUCK 209 M pond	Additive for clarifying the location of a landmark that is introduced but not yet agreed on its location	B
	IR6	946) so then LIKE 231 M directly beneath that i've got a STONE 195 M giant	Additive for clarifying the location of a landmark that is introduced but not yet agreed on its location	B
Group Seven	IR7	1042) and then beLOW 179 M the cactus i have a CASTLE 162 M	Additive for locating a new landmark by extension	A(1)

Group No.	Speaker's role	Marked Theme instance	Function	Function category
	IR7	1129) and then beLOW 228 M the hills i have a FARM 187 M	Additive for locating a new landmark by extension	A(1)
	IG7	1139) and THEN 220 M UM 200 M UNDer 214 M the farm SCOOP 214 M up to the left	Additive for extending information on the route by adding new details on its layout	A (2)
Group Eight	IG8	1155) and then to the RIGHT 217 M of the old mine there is a MINer 185 M	Additive for locating a new landmark by extension	A (1)
Group Nine	IG 9	1239) and then FROM 102 M there <unclear words> it comes STRAIGHT 104 M across the mountains	Additive for extending information on the route by adding new details on its layout	A (2)
	IR 9	1250) and then underNEATH 206 M castle i have a TREE 207 M	Additive for locating a new landmark by extension	A (1)
	IG 9	1264) from THAT 98 M position it CURVEs 106 M up and aROUND102 M forest which i think forest so it's gonna to go in BETWEEN 90 M where my forest and uh cottage is for you	Additive for extending information on the route by adding new details on its layout	A (2)
Group Ten	IR10	1374) and then beLOW 104 M that the cottage	Additive for locating a new landmark by extension	A (1)
	IR10	1396) on the LEFT 113 M hand side i've got the ma... the OLD 111 M mine a SWAMP 111 M the... there is a COTtage 123 M a STONE 117 M giant	Additive for locating new landmark by extension from an established location	A (1)
	IR10	1402) and then on the RIGHT 104 M hand side the MOUNTains 115 M are in line with the old mine	Additive for locating a new landmark by extension from an established location	A (1)
	IG10	1443) and THEN 100M UM M 95 just beLOW 109 M that UM 90 M it starts to CURVE 108 M left	Additive for extending information on the route by adding new details on its layout	A (2)
Group Eleven	IR11	1484) so to the RIGHT 202 M of the old mine i have MOUNTains 190 M and a cactus	Additive for locating a new landmark by extension from an established location	A (1)
	IR11	1515) DOWN 226 M and left i have a STONE 210 M giant	Additive for the clarification of what	B

Group No.	Speaker's role	Marked Theme instance	Function	Function category
			landmark is on the IR's map after knowing what landmark is found in the same location on the IG's map.	
	IG11	1546) ON 223 M mine it's diRECTly 222 M below the yellow house	Additive for extending information on the route by adding new details on its layout	A (2)
Group Twelve	IR 12	1664) so at the MOMent 136 M the ROUTE 121 M i' ve got so far is just above the castle	Additive for the clarification of the route layout	B
	IR12	1718) YEAH 150 M i THINK 156 M FROM 143 M tree we can see where we go then	Additive for clarification of the route layout	B
	IR12	1737) ok ok so FROM 149 M there we're LOOKing 131 M at sort of err one 123 M o'clock um area	Additive for clarification of the route lay out	B

Appendix W

The Marked Themes That Appear in Cluster in the Map Task Dialogue

Group No.	Marked Themes Appear in Cluster	Function with its category symbol
Group One	123) ok so to the right of west lake probably one centimetre may be one and half there is a trig point	Refocusing/ F
Group Four	513) right under miner kind of almost parallel but little lower than the swamp I have rocks	Refocusing/ F
Group Six	930) so in line with the yellow house on the bottom of the page there is duck pond	Refocusing/ F
Group Seven	1126) so directly across from the mushroom house almost to the other side of the page but not quite, I have hills	Repair meaning/D
Group Eleven	1483) ok well, to the right of the old mine on my map there is ...a....a guy chiselling a way and he is called miner	Repair meaning/D