Repetitiveness and Productivity in the Language of Adults with Autism

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Abstract

A multiple case study design was used to investigate the language and conversation of 6 adults with autistic spectrum diagnoses who had varied cognitive and social ability. The format for data collection was informal one-to-one interview carried out over some months. Wechsler Intelligence Tests were also carried out on the study participants. Data was audiotaped and transcribed. Conversation Analysis and structural linguistic analysis methodologies were used to analyse the data obtained. A primary interest of the study was the dimensions of repetitiveness in autistic language, and this was explored at the levels of speech, syntax and discourse. The identification of key characteristics of language in adults with autism was also an important aim of the study. Analysis of the data suggests that adults with autism exhibit peculiarities of speech and syntax which cannot necessarily be related to developmental linguistic delay. At the level of conversation, difficulties were also seen to exist in cohering discourse and interaction, maintaining topic and in the use of repair. Repetitiveness in autistic language is pervasive, in that it is seen to exist at all the linguistic levels considered in the study, and at all levels of cognitive ability. Further, repetitiveness appears to be used as a resource to enable talk to proceed, particularly at critical points in the discourse. The psycholinguistic implications of the data were also considered, particularly in relation to MacWhinney's Competition Model of language processing and acquisition.

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The Transcriptions

1. Introduction

This thesis concerns the language and conversation of 6 adults with autism, with a particular interest in the forms and functions of repetitiveness that exist therein. A mutiple case-study design has been used which focuses on the analysis of language at the levels of phonetics, phonology, syntax and discourse (including conversation analysis). While an analysis of semantic aspects of autistic language is bound to yield much of interest to the linguist, including such analysis would broaden the focus of the study to unwieldy proportions, and hence it has been omitted in the present work.

The multiple case-study design and broad linguistic/conversation analysis were chosen to allow the most thorough investigation possible of the aims of the study. These aims are shown below.

- **1.** To investigate forms and functions of repetitiveness at the different levels of adult autistic language, beyond echolalia as identified in the language of autistic children;

- **2.** To identify those features of adult autistic language which may be common between people with autistic spectrum disorders;

- **3.** To suggest possible psycholinguistic processes which may underpin the acquisition and performance of language by autistic people.

(1)

Bullet point (1) addresses the issue of repetitiveness in autistic language. While echolalia in autistic children has been extensively researched, other types of repetitiveness, specifically in end-state linguistic systems, have not. Work such as Howlin's (1982), has addressed echolalia in a developmental context by investigating its role in syntactic structure acquisition. Findings from these types of study have been subject to contentious interpretation, with the generally accepted thesis being that echolalia is of little developmental importance. Since the role of repetitiveness in non-autistic linguistic systems has been subject to recent re-evaluation, it seems likely that that an analysis of repetitiveness in adult autistic language may help provide substance for a reappraisal of the function of echolalia in autistic children as a tool for linguistic development. Echolalia is generally reckoned to disappear at a verbal age of three years (Howlin, 1982). It is a hypothesis of this study that rather than simply vanishing, echolalia develops as the autistic child grows older along a continuum of productivity. Full productivity may never necessarily be attained, but the dimensions of repetitiveness which are may enable us to achieve some understanding of linguistic development in a developmentally disordered population. Without longitudinal data, this investigation is only able to offer hypotheses as to the latter,

nevertheless, a resurgence of interest in repetitiveness in autistic language, of which echolalia is the most extreme example, may be presumed to be timely in the light of similar developments in normal language acquisition and performance.

(2)

A noted feature of studies of autistic language is a focus of interest on high-functioning research participants (for example, Ghaziuddin, Leininger, & Tsai, 1995; Ozonoff, Pennington, & Rogers, 1991a; Ozonoff, Rogers, & Pennington, 1991b; Rumsey, Andreasen, & Rapoport, 1986; Siegel & Minshew, 1996; Turner, 1999). This selectivity proceeds from an interest in identifying the linguistic features which are specific to autism. In this sense, the cognitive impairment that so often exists alongside autism is seen as separable from the condition. However, since the majority of persons with autism also suffer cognitive impairment (Frith, 1989a), this concentration of interest on a subset of the population seems to have introduced an imbalance into the field. The theoretical advantages of investigating the language of the 'purely' autistic are obvious; however, at least in the interests of furthering therapeutic practice, it was considered important to attempt to identify the features of language in autism as they exist across the entire spectrum. This redressing of imbalance has a further advantage, in that by looking at language across a range of abilities the language of the individual is contextualized. Hence the language of the Asperger's research participant with a full scale IQ in the normal range, is interesting in both its own right, but also because it has certain features which are comparable to those of an autistic person who is unable to achieve a scaled score on the same test.

(3)

In one sense, the study presented here is unique in that an attempt is made at simultaneously providing generalisable breadth of analysis alongside depth in the multi-layered linguistic functioning of individuals. The perspective thus enabled allows an insight into the ways in which language in autism seems to work. The same situations are responded to by different people in similar ways; behaviour that is ostensibly peculiar to a single research participant may appear quite differently when contextualized by the performance of others across a variety of situations. While functionalist accounts of language suggest that language is, to different degrees, emergent from function and cognitive factors (MacWhinney, 1989), it is equally permissible to propose the reverse: that linguistic performance may provide insight into autistic cognition.

Functionalism informs much of the interpretation of the data-analysis in this study. The value of this type of analysis to disordered langauge is appealing since it is able to comfortably account for individual variation. Autism is a disorder characterised by heterogeneity, hence functional analysis seems all the more appropriate in a study of this type. Apart from the work of Bates and colleagues (for example, Blackwell & Bates, 1995), it is noted that few attempts have been made to analyse or provide theoretical frameworks

for developmentally disordered language which are functional in origin. However, it may be that the time is ripe for a shift, modular accounts in the generative tradition having taken us so far along the way, a fresh perspective can at the very least provide the opportunity to reassess our account thus far.

2. Repetitive and Echolalic Language within Autism: A Review of The Field.

One of the main areas of interest in this study is repetitive and echolalic language within autism. As anyone familiar with the field will be aware, such an area encompasses a great deal and requires some preliminary definition. Issues surrounding the neuropsychological causes of autism are also explored here, though it should be noted that a great deal of contention continues to exist in this field. Such contention will undoubtedly continue until the question of 'where autism comes from' is finally resolved. This account is not intended to be an exhaustive summary of the relevant literature, rather to provide a basis and context which will inform the analysis described in the individual case studies.

Although the study focuses on the repetitive linguistic behaviours of young adults diagnosed as having autistic spectrum disorders according to the DSM IV definition (APA, 1994), most of the literature focuses on autistic children rather than adults. By necessity this is the field around which discussion of the main theories will centre. In any case, since developmental asynchrony has been identified as a characteristic of autism, a focus of interest in different age groups will be helpful in forming hypotheses as to the longitudinal development of the autistic use of repetitive and formulaic language, the implications in terms of neuropsychological factors, and likely processing strategies.

The DSM IV diagnostic criteria for autism are shown below.

"A. A total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3):

(1) qualitative impairment in social interaction, as manifested by at least two of the following:
(a) marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction
(b) failure to develop peer relationships appropriate to developmental level
(c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing or pointing out objects of interest)
(d) a lack of social or emotional reciprocity

(2) qualitative impairments in communication as manifested by at least one of the following:
(a) delay in or total lack of the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime)
(b) in individuals with adequate speech, marked impairment in the ability to sustain a conversation with others
(c) stereotyped and repetitive use of language or idiosyncratic language
(d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level

(3) restricted repetitive and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:
(a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
(b) apparently inflexible adherence to specific, nonfunctional routines or rituals
(c) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)
(d) persistent preoccupation with parts of objects

B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder." (APA, 1994: 70-71).

This type of checklist definition is suggestive of heterogeneity in the disorder. Sections A2 and B2 are of central interest to this study, although social factors are also taken into account, particularly in relation to analysis of conversation.

2.1. Primary psychological causes of autism

The search for a primary psychological cause of autism, as with other disorders of a developmental nature, has to orient to the identification of an impairment which is specific to autism, universal in those diagnosed with the condition and which has a causal precedence (Happe, 1994). Authors have suggested a range of possible primary causes, including poor emotion perception (Ozonoff, Pennington, & Rogers, 1991a), an inability to apply existing knowledge (Bowler, 1992), an impairment of intersubjectivity (Hobson, 1993), early socialising deficits (Klin, Volkmar, & Sparrow, 1992; Rogers & Pennington, 1991), and weak central coherence (Frith, 1989a). Two of the most compelling of such accounts are outlined in greater detail here: theory of mind and executive dysfunction. These have attracted the attention of a range of authors working in the field who have generated a large body of work investigating these potential primary psychological causes. Other potential causes are equally well substantiated by experimental evidence, but theory of mind and executive dysfunction are of greatest relevance to this study.. Important theoretical difficulties arising from the postulation and investigation of a primary psychological cause for autism are also usefully illustrated by these two accounts. The search for the primary psychological underpinnings of autism must be accompanied by the caveat that it is possible that autism may have multiple primary causes (Ozonoff, et al., 1991a): indeed, given the heterogeneous nature of the condition, multiple primary causes may in the end provide the most satisfying account of the psychological genesis of the condition.

2.1.1. Theory of mind

A theory of mind is an essentially human characteristic(Whiten,1993). Baron-Cohen defines a theory of mind as:

> "being able to infer the full range of mental states (beliefs, desires, intentions, imagination, emotions, etc.) that cause action" (Baron-Cohen, 2000: 3).

While not specific to autism, the association between autism and an impaired theory of mind is long-standing (Baron-Cohen, Leslie, & Frith, 1985; Frith, 1989b; Meltzoff & Gopnik, 1993; Ozonoff, et al., 1991a; Ozonoff, Rogers, & Pennington, 1991b; Tager-Flusberg, 1993), and has been seen to prevail even in those individuals with autism who have good general comprehension (Baron-Cohen, et al., 1985). The various tests that have been devised to investigate dimensions of the ability to 'mentalise' (or 'apply a theory of mind') serve to define its parameters, hence they are presented here with brief descriptions, following Baron-Cohen (2000: 5-15).

Understanding functions of the brain. In these tests children are asked what they think the brain is for. Autistic children's responses typically refer to the physical functions but do not mention the mental functions.

The appearance-reality distinction. Autistic children show a lack of differentiation between real objects and objects that have the appearance of another object. Baron-Cohen gives the example of an apple and a candle shaped like an apple (2000: 5). They thus show a lack of awareness of the dual nature of some objects, although an alternative explanation of the pattern of errors could be given in purely linguistic terms.

First-order false-belief tasks. These test the ability to understand that people can have different beliefs about the same situation. Autistic children do not demonstrate an awareness of what other people may think in these situations (also see second-order false-belief tasks below).

"Seeing leads to knowing" tests. Normally developing children are able to infer other people's mental states from actions (for example, through observing someone looking into a box, the normally developing child can infer that that person knows what is in the box). Baron-Cohen relates this ability to the Gricean maxim of 'be informative' in conversation. Those with autism are typically over-informative in conversation, telling people things that they already know, hence violating the maxim. Deception also depends on this inferencing ability.

Tests of recognizing and producing mental-state words. Autistic children have difficulty picking out words in a list that refer to mental states, just as they show limitation in their spontaneous production.

Tests of the production of spontaneous pretend play. Autistic children are impaired in using imagination in play.

Tests of understanding more complex causes of emotion (such as beliefs). These tests investigate the autistic lack of awareness of what, apart from physical events, can cause a person to feel, for example, happy or excited.

Tests of inferring from gaze-direction when a person is thinking, or what a person might want. Autistic children are unable to interpret gaze in a socially meaningful way. This ability is present in normally developing children of four years old.

Tests of being able to monitor one's own intentions. When intention is thwarted, normally developing children are able to correctly disclose what the intended outcome of their action was, compared to the actual outcome. Autistic children make frequent errors on this task.

Tests of deception. Deception involves the simultaneous comparison between reality and its false presentation. It also involves knowing about people's belief states, what people rely on in coming to hold a belief, and how these can be manipulated. Baron-Cohen also points out that to commit a deception also involves motivation and hence intention. Children with autism find deception difficult both receptively and productively.

Tests of metaphor, sarcasm and irony. Typically, autistic children have difficulty in interpreting these complex linguistic activities by disengaging from a literal intepretation, as they do with jokes.

Tests of pragmatics. The pragmatic impairment is amply documented in the literature (see below). As Baron-Cohen states,

> "almost every aspect of pragmatics involves sensitivity to speaker and listener mental states, and hence mind-reading, though it is important to note that pragmatics also involves using context" (2000: 13).

Surian et al's study (Surian, Baron-Cohen, & Van der Lely, 1996) found the recognition of Gricean maxims in autistic children's conversation to be impaired.

Tests of imagination. These reveal a significant impairment in autistic imagining over and above the one associated with spontaneous pretend play.

Second-order false-belief tasks. Some older children with autism, Asperger's syndrome sufferers, and high-functioning autistic children and adults may pass first-order false-belief tasks, although not in line with normal developmental expectations. The second order tasks involve determining embedded mental states, that is, what one person might think about another person's beliefs (2000: 15), and typically give problems to even those more able individuals who pass the first-order tasks.

The theory of mind theory currently holds that we have a certain innate ability to mentalise. This innate component consists of a 'starting state' theory and theory-forming mechanisms (Gopnik, Capps, & Meltzoff, 2000: 51). Theories of mind succeed one another and are revised as experiences accumulate and are processed. Thus an impaired theory of mind may be the result of problems in various components of the system. There may be a deficiency in the starting-state theory, a problem with the theory-forming

mechanism itself, or a difficulty in using experience to activate the process of theory revision (Gopnik, et al., 2000). Thus, those with perceptual impairments (for example, deaf or blind children) may have difficulties in mentalising due to a restriction of experiences which are accessible to them (Gopnik, et al., 2000). Gopnik suggests that the particular problem in autism relates to an absent or peculiar initial theory of persons which has a cascading effect on all later forming theories. She shows that autistic children are unable to link their own and others' experiences and have significant problems in attending to social signals right through the stages of development. Within the 'theory of theories' that she is suggesting, this is likely to have significant negative implications for the understanding of causality and notions about the world that the child is then able to construct. Thus, even children and adults with autism who seem able to perform adequately on theory of mind tasks, may have come to the correct solution via a very different route to that taken by non-autistic persons.

An absent or peculiar theory of mind has an undoubted effect on language acquisition. The precursors associated with the later-developing theory of mind have also been associated with important linguistic precursors. For example, joint attention skills, proven to be of critical importance in later linguistic development (Baldwin, 1991; Tomasello & Kruger, 1992; Tomasello & Todd, 1983), are dependent on such a theory. Sigman and Ruskin (1999) found that autistic children's joint attention skills reliably predicted good linguistic ability later in development. An impairment in joint attention has been related to the diagnostic delay in autistic language acquisition (Baron-Cohen, 1997). The pragmatic impairment in autistic language has an obvious relation to an impaired theory of mind, although as Tager-Flusberg points out, while " all researchers agree that pragmatics are closely tied to theory of mind, the direction of this relationship has not been clearly delineated" (2000:128). While some, such as Locke (1993), discussed further below, suggest that a theory of mind is necessary for language, others, such as Dunn et al (Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991), suggest that the relationship should be viewed conversely. Beyond these two well-researched issues, the relationship between theory of mind and syntax and lexis has begun to be investigated (for example, by De Villiers, 2000; Tager-Flusberg, 2000). The investigations of complementation and cognition verbs indicate that while a relationship between theory of mind and these aspects of language undoubtedly exists, its nature is likely to be complex and possibly bi-directional (Tager-Flusberg, 2000).

Theory of mind is now recognised to be a graded rather than absoloute component of cognition (Prizant, 1996). Executive function has also been suggested as the primary psychological impairment in autism, from which it is theoretically possible that theory of mind deficits can be generated (Ozonoff, et al., 1991a; Ozonoff, Strayer, McMahon, & Filloux, 1994).

2.1.2. Executive dysfunction

An alternative to Theory of Mind as the primary deficit underlying autism is executive dysfunction, proceeding from the research tradition of cognitive neuropsychology. Executive function is concerned with the high-level, conscious control of actions, specifically planning, impulse control, inhibition of prepotent responses, maintenance of appropriate ongoing action, and organisation and flexibility in thought and action (Ozonoff, et al., 1991a: 1083). The features of autism accord well with an executive dysfunction explanation. Lack of spontaneous thought and action (Bailey, Phillips, & Rutter, 1996), rigid, inflexible and perseverative behaviour (Ozonoff, et al., 1994), poverty of speech and action (Dykens, Volkmar, & Glick, 1991; Rumsey, Andreasen, & Rapoport, 1986) and lack of future-orientation and goal-directed behaviour (Ozonoff, et al., 1991a) have been identified as autistic characteristics consistent with an executive dysfunction hypothesis. Norman and Shallice (1986) provide the original model of executive function, in which the distinction between controlled, willed action and automatic actions, unavailable to conscious reflection, is made explicit.

The evidence for executive dysfunction in autism has been built on the basis of a number of studies utilising neurpsychological frameworks of investigation. The first such work involved a single case-study of an autistic male with idiot-savant abilities (Steel, Gorman, & Flexman, 1984). Although the battery of tests seemed to confirm an executive function disabilty, single case-studies cannot be considered conclusive evidence for a generalised autistic dysfunction. Rumsey's study (1985), using a group of nine high-functioning autistic males, however, also found evidence for executive dysfunction. The test used in this study was the Wisconsin Card Sorting Test (Grant & Berg, 1948): a tool typically used to investigate frontal lobe dysfunction (Stuss & Benson, 1984), and one which frequently features in studies of executive dysfunction in autism. Impaired conceptual level responding and perseveration were both identified as characteristics of the performance of the study participants. Later studies by Rumsey and colleagues using a battery of tests made similar findings (Rumsey & Hamburger, 1988; Rumsey & Hamburger, 1990). Fluency was also found to be impared in the participants of these later studies. Fluency and the inability to generate novel ideas were found to be similarly impaired in a study investigating these abilities in both low and high-functioning autistic subjects (Turner, 1999). In a study using 60 autistic children, Hughes and Russell found that there was a marked inability to disinhibit response to a salient object (1993), while findings from a further study by Hughes and colleagues suggested a planning deficit in autistic children (Hughes, Russell, & Robbins, 1994).

In relation to the triad of criteria in identifying primary causes of a developmental condition (that is specificity, universality and causal precedence) Ozonoff et al (1991a) note that neither executive dysfunction nor impaired theory of mind are specific to autism. In addition, in their study, they found that while a subset of subjects exhibited

theory of mind impairment, the notion of universality seemed to apply more justly to executive dysfunction. Happé (1994), however, disputes the contention made by Russell, Mauthner, Sharpe, & Tidswell (1991), that there is an entailment of mentalising or theory of mind ability by executive dysfunction. and suggests that the time is ripe for a new epidemological investigation into the non-social features of autism, similar to Wing and Gould's classic work (1979), such that new clusters of features may be identified, thus providing fresh insight into what is becoming an increasingly complex field of study. This thesis accords with this spirit, in that while communication is part of Wing's triad of impairment, it has long been assumed that since it is not universal in autism it is hence of secondary importance in causal explanations. Concurring with Tager-Flusberg (2000), the contention giving rise to this thesis is that, when examined closely, language in autism will exhibit peculiarities not necessarily associated with those features normally attributed to straightforward developmental language delay arising from impaired cognition.

2.2. Language in autism

The DSM IV definition of autism, given above, allows for the possibility of an autistic diagnosis without any evidence of linguistic impairment, although its recurrent mention in the definition is indicative of a degree of importance if not centrality in the disorder. Some workers in the field of autistic language (Happe, 1994; Hobson, 1993) consider the linguistic deficit in autism to be secondary to the social impairment, in the former case, and the cognitive impairment, in the latter case. The issue of what is primary and what dependent in the manifestation of autism is complex, and given the heterogeneity of the disorder is unlikely to be resolved for some time. The debate over language's role in the autistic condition has, in fact, continued with healthy volubility over the last 3 decades. This discussion sometimes clouds the fact that approximately only 50% of diagnosed autistic persons ever acquire spoken language (Prizant, 1996).

The features of autistic language which have received most attention in the literature are echolalia (discussed in detail below), pronominal reversal, extreme literalness, pragmatics entailing problems relating to the roles of speaker/listener, and deictic reference (Wetherby & Prutting, 1984: 295). Impaired conversation is also mentioned in the DSM IV diagnostic definition. Investigators have only recently come to apply the conversation analysis methodology to disordered language (Dobbinson, Perkins, & Boucher, 1998; Perkins, Body, & Parker, 1995; Willcox & Mogford-Bevan, 1995). Previous to this, discourse analysis has been the preferred methodology of investigation, and has focused mainly on cohesion in autistic discourse (for example, Baltaxe & D'Angiola, 1992; Tager-Flusberg, 1995; Baltaxe, 1977; Fine 1994; Johnston, 1985). These studies have consistently found that cohesive ties of all types are less succesfully used by autistic children than controls (Baltaxe & D'Angiola, 1996), or are simply less frequent (Tager-Flusberg, 1995).

The formal aspects of language (phonology, syntax and semantics) in autism have also been addressed. An early review of studies dealing with these aspects by Tager-Flusberg (1981) suggested that while phonology and syntax were comparable in their development to those of normal children, semantics and pragmatics showed deficiencies. This finding has been taken to imply that there is no global linguistic deficit in autism, although there is a developmental lag, concomitant with that which may occur in mentally impaired populations (1981: 52). This finding is partly substantiated by Bartolucci et al's 1980 findings in a study comparing production of Brown's morphemes (Brown, 1973) in an autistic group with mentally retarded and mental age matched normal controls. However, the autistic group in this study demonstrated atypical ranking of morphemes out of line with developmental norms. This is suggestive of not just a specific lag in morpheme aquisition but atypical development (Bartolucci, Pierce, & Streiner, 1980). The problematic morphemes are the present progressive, past regular, articles, third regular, uncontracted copula and uncontracted auxiliary. No systematic analysis of semantics or reference requirements of these morphemes can suggest a reason for problems in their use (Bartolucci, et al., 1980: 48).

Asynchronous language development implies a dissociation between levels of language consistent with theories of modularity (Fodor, 1983). In particular, the semantic/pragmatic deficit can be equated with a deficiency in early communicative and joint-attention-based gestures as well as the socio-emotional autistic deficit (Tager-Flusberg, 1981).

Later work has separated the semantic and pragmatic aspects of language in autism, suggesting that while a semantic deficit does not exist, the pragmatic impairment is serious and universal (Tager-Flusberg, 1996). This is seen by Tager-Flusberg to derive from an impaired theory of mind, which is also mobilised to explain prosodic deficits and pronominal reversal, since both involve a lack of awareness of interlocutor needs (Tager-Flusberg, 1996). The deictic deficiency has also been explained by absence of early joint-attention skills and a systemic confusion between self and other (Rees, 1984). These factors are similarly consistent with a theory of mind explanation for autism.

2.2.1. Echolalia: Communicative value
Echolalia is a frequently mentioned characteristic of autism and its dimensions have been explored in a large number of studies (Atlas & Blumberg Lapidus, 1988; Baltaxe & Simmons, 1977; Bender & Fareta, 1972; Cantor, Evans, Pearce, & Bezzot-Pearce, 1982; Fay, 1967; Fay, 1969; Fay, 1974; Howlin, 1982; Local & Wootton, 1995; Nagy & Szatmari, 1986; Paccia & Curcio, 1982; Prizant & Duchan, 1981; Prizant & Rydell, 1984; Rydell & Mirenda, 1991; Schuler, 1979; Schuler & Prizant, 1985; Tager-Flusberg, 1996; Violette & Swisher, 1992). Echolalic language within autism may have an immediate or

delayed presentation. This categorisation has existed since autism's first definition by Kanner in 1943. Both delayed and immediate echolalia refer to utterances in which a speaker repeats a model utterance verbatim, with the term ' delayed' indicating an unspecified time lapse between the model and the echolalic utterance. Fay and Schuler (1980) suggest that these two types of echolalic utterance may reflect differences in memory processing.

There may also occur instances of so-called mitigated echolalia (Paccia & Curcio, 1982), in which the echoed utterance is not an exact reproduction of the model. Utterances such as these are often taken to imply some kind of communicative intent on the part of the speaker. The mitigation may take the form of prosodic restructuring (Baltaxe & Simmons, 1985; Paccia & Curcio, 1982), pronominal re-organisation or some other type of syntactic alteration, which may or may not be appropriate to the speech event (Voeltz, 1977; Buium and Steucher,1974, cited in Prizant & Duchan, 1981). Obviously, the question of communicative intent versus automaticity within echolalia and repetitive language (Schuler, 1979) is interesting and underpins much of the discussion in the literature outlined below.

A useful notion to bear in mind here may be the distinction Lyons (1977: 33) makes between communicative and informative signals. Lyons remarks that:

> " a signal is communicative . . . if it is intended by the sender to make the receiver aware of something of which he was not previously aware."

Put another way, "communicative means meaningful for the sender". By contrast, a signal is said to be informative if "it makes the receiver aware of something of which he was not previously aware", and is" meaningful for the receiver" (1977: 33). In the Lyons sense, then, an utterance can be said to be communicative only if the speaker has made a choice between alternative signals. If a speaker has no choice available to them then the utterance is said to be non-communicative: "meaningfulness implies choice" (Lyons, ibid).

An informative utterance has value or significance in that it adds to the knowledge of the receiver. Autistic use of echolalia in discourse presents us with a problem with regard to this definition, since intention on the part of the speaker may not be easy to establish. The informativeness of such an utterance is likewise dependent on the interpretation of the receiver. Certainly, a surface level analysis of an echolalic utterance implies a non-informative signal, since the utterance is lexically parasitic on earlier discourse, and is therefore unlikely to contain new information. An attempt to define a different notion of communicative and/or informative utterances is therefore necessary if progression beyond a simple non-interactive, non-functional account of echolalia is to be made (Fay, 1969; Shapiro, 1977).

Kanner's opinion as to whether or not echolalia can be interpreted as having any kind of communicative function similar to those types described below is a little difficult to gauge. At times he talks of what appear to be instances of expressive echolalia (Kanner, 1943, cited in Howlin, 1982: 5), and yet at others he seems persuaded of the absolute meaningless of these utterances (ibid: 34). Many authors regard echolalia simply as a reflection of an inability to comprehend language (for example, Fay,1969; Shapiro,1977), and therefore as non-communicative in essence. These authors do not deal seriously with any cognitive factors which might prompt an instance of echolalic or repetitive language. However, more recent work has approached echolalia as potential evidence of communicative intent. While Howlin, noting that echolalia apparently disappears from language at an approximate verbal age of three years (1982), views it as evidence of severely impaired communication with a primarily social or phatic function, others have gone to great lengths to explore its dimensions. While these studies offer detailed accounts of echolalic functions, their over-arching purpose is to establish the dimensions of communicative intent that can be seen to exist in echolalic utterances.

Prizant and Duchan's (1981) work on immediate echolalia was the first real attempt to functionally categorise immediate echolalia. Their work represents an attempt to redress the balance of research which had concentrated on the structural characteristics of echoic utterances often elicited in unnatural experimental environments, such as that done by Shapiro and Lucy (1978). Shapiro and Lucy (ibid) measured responsed latencies of echolalic and spontaneous utterances, concluding that the shorter response latency of echolalic utterances was an indication of use of a lower level of cognitive processing. Prizant and Duchan suggest that different instances of echolalia may reflect "degrees of comprehension" (1981: 242), and, in keeping with a pragmatically oriented methodology, in their data collection evidence

> " concern for natural contexts, situational factors, and non-verbal behaviours co-occuring with the production of the echolalic utterances" (1981: 242).

Thus the study has an entirely different focus and objective to that of Shapiro and Lucy, despite the ostensible similarity.

The subjects were four autistic boys who were video-taped at home, at school in a one to one interaction environment, and at school in a group activity environment. The data was analysed according to communicative context and structural characteristics, as well as measuring onset latencies of echolalic utterances. The structural categories thus arrived at are shown below.

i. Interactive echoes -degree of comprehension of the model;

ii. Non-interactive echoes - degree of comprehension of the model;

iii. Interactive echoes - no comprehension of the model;

iv. Non -interactive echoes - no comprehension of the model. (1981: 245)

Functional categories are as follows:

1. Non-focused
2. Turn-taking
3. Declarative
4. Rehearsal
5. Self-regulatory
6. Yes-answer
7. Request (1981: 245-247)

These categories are used and further subdivided in the work of Schuler and Prizant (1985). The least functional of the categories, (1) - non-focused, occured only rarely (1.0% - 7.1%) in the speech of each child, but was present in every child's speech. This type of echolalia seemed to occur as a response to an extreme sensory stimulus such as pain and was observed to decrease in accordance with greater linguistic ability. Category (3) utterances, rehearsal, seemed to have a cognitive rather than socio-communicative origin. The most intentional of all echolalic responses is that of (7), request, which often included the addition of spontaneous material to the model utterance. There is, then, a continuum of communicativeness within immediate echolalia with non-functional repetition, 'parrot-like' and characterised by its automaticity, at one end, and request-type echolalia, focused and interactive at the other. Prizant and Duchan also extend the pragmatic notion of echolalia by suggesting that it may have a function within language acquisition processes; a notion which has been taken up by others (for example, Schuler & Prizant, 1985; Tager-Flusberg, 1989; Tager-Flusberg & Calkins, 1990) and which is explored further below.

Schuler and Prizant (1985), in developing the concept of a communicative echolalic continuum, propose its extension to include longitudinal development in a single speaker. The developmentally less mature echoers may use relatively automatic and pre-intentional echoes, which gradually give way to those which exhibit increased intention and discrimination (1985: 181). Schuler and Prizant also equate the use of echolalia with the gestalt style of language processing within normative language development (Nelson, 1981; Peters, 1977).

Delayed echolalia received analysis similar to its more easily-identified sibling, immediate echolalia, in Prizant and Rydell's (1984) work. They define 'communicative' using the Bates 1979 definition of symbolic communication in which an utterance is said to be symbolically communicative if there exists

"conventionality of the signal, evidence of communicative intent and an understanding that the signal exists apart from what it refers to" (Prizant & Rydell, 1984:189).

They analyse delayed echolalic utterances from three autistic subjects with regard to communicative intent, symbolic communicative activity and conventionality of signal, arriving at fourteen functional categories of delayed echolalia in the process: non-focused; situation association; rehearsal; self-directive; label (non-interactive); turn-taking; verbal completion; label (interactive); providing information; calling; affirmation; request; protest; directive. Leaving aside the question of symbolic versus non symbolic acts and concentrating on the area of communicative intent, the authors cite the categories of request, protest, labelling (interactive), calling, affirmation, directive and providing information as showing evidence of communicative intent. The determination of function-category of a specific utterance (and by extension, the degree of communicative intent) is made by reference to co-occuring behaviours, extra-linguistic context, sequential discourse location or hypothesized function of the echolalic utterance. While the chance of subjectivity interfering with utterance categorisation is reduced by incorporating interjudge reliability into the methodology, the problem of establishing the extent of communicative intent evidently remains, as the range and variety of methods for categorisation indicates. This matter aside, the final hypothesis offered dovetails neatly with the findings from immediate echolalia studies, in that it is suggested that delayed echolalic utterances may begin as non-communicative and progress longitudinally towards becoming more communicative.

2.2.2. The environment of echolalia

Functional accounts of echolalia do not explore fully the nature of the phenomenon, hence the existence of studies which investigate its cognitive and linguistic underpinnings. Since these can only be investigated indirectly and by systematic manipulation and control of the eliciting input, a return to more controlled environments was called for. Violette and Swisher investigated these inputs in terms of interlocutor style and content (1992). The finding that immediate verbal imitations most often occurred when the adult, child-directed input consisted of unfamiliar words and was delivered in a highly directive way were taken to suggest that echolalia is a response to an "uncertain or informative event" (1992: 139). Whether the immediate verbal imitations were related to linguistic or cognitive uncertainty, or to an interaction between the two could not be determined within the methodology. Violette and Swisher's functional interpretation was that the utterances in question were minimally communicative, indicating knowledge of the pragmatic principle of turn-taking in conversation. Echolalia, for the subject of this study at least, then has a functional interpretation with cognitive/linguistic implications.

Rydell and Mirenda's work (1991) is similar in perspective to that of Violette and Swisher's discussed above. The investigation this time centred on autistic subjects' responses to adult high-level constraint and low-level constraint utterances. The definitions of high and low constraint are rather loose; for example an 'attention device', which is given as an instance of a high-constraint utterance, may in natural language consist of any one of a variety of phrases, and is given only a 2-line definition in the cited work. Some such phrases, simply by virtue of the different contexts in which they are likely to occur, may require a more definite response than others; that is, some high constraint utterances are 'higher' than others in particular contextual environments. The two attention device phrases cited as examples in the appendix, "*see?*" and "*look at that*", indicate the problems which might arise when definitions are this loose. With prosodic alteration, " *see*" can become rhetorical (" *there you are; that's how you do it*") or interrogative ("*can you confirm that you see what I'm trying to show you*"). In a similar way "*look at that*" can have a different illocutionary force (Searle, 1969) depending on context and/or its prosodic features. The findings of the authors are somewhat ambiguous, perhaps as a result of this methodological and definitional uncertainty. Subjects produced more echolalic responses to a high constraint style, but also produced more spontaneous responses to this style of input. It is, then, difficult to conclude that the production of echolalia is related to any type of input style, only that it can be elicited in the same way that productive speech can be. This has possible implications for the argument in favour of the communicative intent of echolalia given above, in that echolalia might appear to have more in common with productive intentional communicative speech, than with non-communicational behaviour since either may be elicited by a similar stimulus.

2.2.3. Prosody in echolalia

Paccia and Curcio (1982) dealt with the question of instances of mitigated echolalia in the form of prosodic re-structuring of an examiner's question. The five autistic children in their study were given input in the form of sentence completion tasks, wh-questions, yes/no questions which required a correct yes answer, and yes/no questions which required a correct "*no*" answer. The children's responses were audio-taped and subjected to acoustic analysis to check for prosodic restructuring. The analysis indicated that, when an echolalic utterance occurred with prosodic restructuring, it often seemed to be an indication of affirmative response on the part of the autistic subject. The authors also note, however, that the subjects were more likely to produce echolalic utterances in response to questions which they did not comprehend. Evidence for non-comprehension was taken from subjects' earlier responses to PPVT comprehension tests, using declarative base forms of the experimental tests' interrogative forms. Another finding, which is not examined in detail, is that an echolalic utterance which is semantically or syntactically mitigated is more likely to have contrastive prosody than an unmitigated utterance.This finding held across all five subjects. The affirmative function type of

echolalic utterance signifies that a higher level of processing is in operation than might be used should the subject's response be taken to signify a simple conversational turn-taking type strategy, as found in the Violette and Swisher study. *"yes"*-signifying entails turn-taking in a hierarchy of pragmatic functions.

Local and Wootton explored mitigated echolalia further in their 1995 work on the 'unusual echoes' of a single autistic boy. By using a detailed phonetic analysis of immediate echoes in autistic speech, combined with a conversation analysis approach to their data (1995: 155), they found that certain apparently non-functional instances of echolalia bore a suprisingly close resemblance to the models on which they were parasitic. Such close echoing has no counterpart in normal speech and hence Local and Wootton give it the term 'unusual echoing'. While other, less structurally faithful echoes seemed to have clearer functional attributes, unusual echoes are considered to play a discourse role, in that they allow the child to interact in discourse when that discourse becomes cognitively difficult for the child.

2.2.4. Prosodic development

Prosodic restructuring of model utterances in echolalia has received special attention in the literature (Schuler& Prizant, 1985; Baltaxe & Simmons, 1985; Local & Wootton, 1995; Paccia & Curcio, 1982; Tager-Flusberg, 1993). This interest undoubtedly stems from the half-way house between exact and mitigated echolalia that prosodic restructuring seems to represent. Schuler and Prizant suggest that difficulties in segmenting the speech stream due to a poor perception of prosody coupled with a lack of joint attention ability might leave the autisitic language learner with a heavy reliance on the gestalt language learning mechanism (1985). The linguistic outcome of this may well be instances of echolalia as the autistic language user struggles towards communicative, productive language.

The development of prosody has been asserted as a potentially facilitative element in the process of language acquisition, particularly syntax (Baltaxe & Simmons, 1985; Peters, 1995), interacting in a complex way with the acquisition of other levels of linguistic ability. Although dysfunctions in prosody are dissociable from other linguistic levels in acquired disorders, the implications for a language learner of a developmental prosodic difficulty are possibly pervasive. Some research (for example, Baltaxe, 1984) has shown that autistic children's capacity to understand meaning based on contrastive stress lagged behind language-impaired (aphasic) and normal controls. Conversely, a review of work in the field of prosodic ability in autism by Tager-Flusberg (1989) is taken by the author to suggest that, while prosodic dysfunction "may provide important clues into the nature of core deficits in autism" (1989: 98) due to its pervasiveness throughout the autistic population as well as its persistence into adulthood, it is of more socio-emotional interest than linguistic. This perspective proceeds from the notion that prosody with an emotional

significance is related to the right hemisphere while prosody with a linguistic significance is located in the left. Hence, while it is not disputed that prosody is deficient in autistic populations, it is considered that linguistic use is spared while socio-emotional use is impaired. However, Perkins (2000: 20 (footnotes 7 and 8, citing Eisele and Aram, 1995; Wray, 1992 and Blumstein, 1988)) urges wariness in the hemispheric association of specific linguistic processes, since recent research in neurolinguistics indicates that both hemispheres seem to be involved in language processing.

Prosodic deficit may exist at either phonetic or phonological levels, or indeed at both simultaneously (Wells et al., 1995). A phonological prosodic deficit can be said to exist if it is impossible for a listener to identify the elements of the tone unit, or indeed its boundaries, due to their non-systematic marking by the speaker. A phonetic deficit exists when the system for marking tone unit elements may be non-conventional but is nevertheless systematic.

2.2.5. Neuropsychology of echolalia: Processing and acquisition

Neuropsychological causes of echolalia are also considered in the literature (Fay, 1974; Prizant & Rydell, 1984; Rydell & Mirenda, 1991; Schuler & Prizant, 1985). Workers in this field make the suggestion that we consider echolalic behaviour in the context of typically dysfunctional autistic social and cognitive development, in combination with the more normal development of memory and isolated phonological and even syntactic abilities. Such asymmetric development in company with a gestalt continuum-end type acquisition process (Rydell & Mirenda, 1991) (see below) might well lead to the autistic language user's preference for echolalia, both immediate and delayed. Further to this, it is suggested that the less intentional instances of echolalia may be part of a sub-cortical 'old brain' type response to stimulus, likened to the repetitive vocalisations of animals, while the more communicative intentional echolalia represents an assertion of more sophisticated neural mechanisms attempting to establish themselves (Prizant & Duchan, 1981; Rydell & Mirenda, 1991; Schuler & Prizant, 1985).

Echolalia as an aid in the process of language acquisition has been addressed (Howlin, 1982; Tager-Flusberg, 1989; Tager-Flusberg & Calkins, 1990), following the work that has been done on the use of imitation as a tool for normal language acquisition and development (for example, by Bloom, Lightbown, & Hood, 1974: see below). Researchers working within the field of normal child language acquisition have made hypotheses about the use of repetitive or imitative language (Bates, Bretherton, & Snyder, 1988a; Corrigan, 1980; Nelson, Baker, Denninger, Bonvillian, & Kaplan, 1985) similar to those proposed by Tager-Flusberg and Calkins (1990) and Howlin (1982): that is, imitative/echolalic language may be used to assist in the acquisition processes of certain aspects of language; either within the domain of vocabulary (Corrigan, 1980), semantic-syntactic relations (Corrigan, 1980; Bloom, Lightbown, & Hood, 1974) or

syntax (Bloom, et al., 1974). Casby's 1986 work also suggests that the normal child may use imitation or repetition principally to enable them to take part in conversation. In all the above work, it is noted that normal children proceed from an imitative use to a spontaneous use of an item (Casby, 1986). In no case is imitation found to be non-functional.

Despite residual contention over the specific role and amount of imitation in normal development (summarised by Tager-Flusberg and Calkins, 1990), the consensus is now that it has an important part to play in acquisition and development. Much variation has been noted in children's use of imitation (Bates, Dale, & Thal, 1995). This is particularly apparent in the literature on quantitative studies (for example, Bloom, et al., 1974). The interpretation of it in terms of individual differences (for example, Bates, Bretherton, & Snyder, 1988b; Bates, et al., 1995) therefore seems obvious and appropriate. Children are seen as tending to be primarily gestalt or analytic processors within this framework. These are terms borrowed from the field of visual processing and pattern recognition (Holdgrafer, 1994; Kimchi, 1992). Gestalt children favour importing holistic, unanalysed 'chunks' of language into their repertoires, the individual constitutents of which they do not have productive use at first. Gestalt children are said to have a heterogeneous vocabulary consisting of a large amount of item-learned chunks of unanalysed language. Analytic children, on the other hand, build utterances up gradually, productive constituent by productive consitituent. Analytical children have vocabularies which contain a large number of referential expressions i.e. nominal phrases. Nelson (1973, cited in Bates, et al., 1995:121) uses the terms 'referential and 'expressive' to differentiate broadly the same types of children. The gestalt child gradually learns to break down their holistic utterances and begins to use the components productively. The analytic child has superficially less complex language but, in fact, in terms of productive competence is more advanced than a holistic child with an MLU of around the same length. Analytic children are classed as fast learners. Categorisation of children into these two types inevitably depends on analysis of productive language. However, processing is inferred from production (Bates, et al., 1995: 121).

Later work on these two styles of language acquisition has used less loaded terminology to describe the two variants: 'strand one' and 'strand two'. A full summary of the research into these variations can be found in (Bates, et al., 1995: 122). Interestingly for this study, with particular reference to the prosodic deficiency in autism, 'strand two' (gestalt children) are equated with being intonation rather than word oriented in the early stages of acquisition, meaning that these children focus on suprasegmental features in their early utterances rather than segmental.

The formal similarity between normal imitation and echolalia suggests the possibility that there may be a concomitant similarity in function in the acquisition process. This

possibility has been explored with relation to syntactic structure acquisition (Howlin, 1982; Tager-Flusberg & Calkins, 1990). As with normally developing children, central to this notion is the thesis that echolalic utterances should have a higher MLU (Brown, 1973) and a higher IPSyn score (Scarborough, 1990) than spontaneous utterances, relating to the notion that when children use echolalic language they are 'practising' with language slightly above their current level of use. More advanced structures are hypothesised to appear firstly in echolalic utterances and eventually to form part of spontaneous language. A period during which a particular structure may form part of mitigated echolalic utterances may intervene. Tager-Flusberg and Calkins' (1990) experimental results showed no evidence that echolalic utterances have a higher MLU than spontaneous speech in autistic children's language, and they thus conclude that they have no role in the acquisition of syntactic structures. The average MLU of the autistic subjects in Tager-Flusberg and Calkins' study is given as 2.33 with a range of 1.63 - 2.69. Howlin's 1982 research gives slightly different results. In her study, children with lower MLU's appeared to use echolalic phrases greater in length than their spontaneous speech. The conclusion of the authors here is, then, that echolalia may be used in structure acquisition at lower MLU's. Later, the relationship between echolalic and spontaneous utterance length reverses. However, there is an obvious danger in the use of MLU as a measure of base-line syntactic ability with autistic language users, in that it is virtually impossible to be certain that all the utterances on which MLU is based, however ostensibly productive they seem, are not in fact instances of echolalia, the phenomenon of delayed echolalia being especially difficult to detect. An MLU score may, then, give a falsely high impression of an autistic speaker's level of ability.

Tager-Flusberg (1989) suggests that while autistic children may appear to use a gestalt communicative style, this does not necessarily imply a gestalt acquisition strategy (1989: 108). Indeed, in her earlier work, Tager-Flusberg is clear that the mechanisms of grammatical development are the same for autistic as for normal children (1989: 108). Later work (for example, Tager-Flusberg, 2000: 144), however, responding to more recent developments in the field of cognition in autism, links the theory of mind deficiency with a deficiency in grammar acquisition, thereby concurring with the notion of atypical linguistic development processes in autism. A note of warning has also entered the debate on this issue: Bates et al (1995: 150) urge caution in equating 'holistic' styles of acquisition with formulaic or rote language that characterise particular developmentally disordered language styles. Bates, (1995) as do others working with formulaic language (such as Wray, 1999), differentiates the two on the grounds that holistic chunks are susceptible to analysis while the same cannot be said of echolalia. This represents a theoretically cautious position, which is academically sound. However, in the absence of longitudinal research into echolalia (of which there is none to my knowledge), it is not possible to say whether or not echolalia is susceptible to analysis at

a later stage. Certainly, the increasing communicativeness of echolalia, described above, would seem to suggest that echoes are subject to analysis as development progresses.

Schuler and Prizant cite work (1985: Tomlinson, 1982, unpublished manuscript) which shows evidence of non-focused echolalic utterances containing corrected syntax. Such a phenomenon is not known to occur in normally developing children, who are extraordinarily resistant to production of structures they have not yet acquired (Menyuk, 1969). Non-focused, corrected echolalia may be evidence of the existence of a syntax development module capable of a certain degree of development without need of semantic information. The dissociation of phonology from semantics and syntax is widely attested in the autistic language literature (for example, Dawson, 1996; Tager-Flusberg, 1994; Tager-Flusberg & Calkins, 1990), but a dissociation of syntax and semantics to this level may have implications for atypical language processing models, in particular, functional accounts.

Dissociation between linguistic levels in normal acquisition is not substantiated within the research. Both Locke (1995; 1996a; 1996b) and Bates et al (1995) have demonstrated a clear association between vocabulary size and grammatical development, suggesting that the two correlate in development in important and predictable ways. The central notion here is that a large vocabulary, acquired within normal time-frames (Locke, 1995; Locke, 1996a; Locke, 1996b), is predictive of advanced grammatical development later on. Both authors incorporate references to atypical language development into their accounts, finding that they are consistent with their models. In Locke's model, if there is some impediment to early vocabulary acquisition, the consequences for later language development can be far-reaching and pervasive (Locke, 1994).

Locke's model consists of four overlapping phases in language development (Locke, 1996a). The first of these involves the child becoming oriented to its social world and to its caregivers' faces and voices. The second is concerned with storing linguistic items in a rote manner and uses the same neural mechanisms as those which operate in social cognition tasks. The items it stores are socially important to the developing child. They are exactly those which enable the child to maintain the important relationships it needs and perform the instrumental functions essential to its well-being. This component is known as the specialization in social cognition module (SSC). Locke suggests that it has a strong right hemisphere association. The third phase is of the most importance linguistically, involving activation of a grammatical analysis module (GAM). The GAM begins operation once a critical amount of items have been stored by the SSC module (but see below) and works to analyse and compute rules from the SSC input. Locke suggests that the GAM component is distinct in its neural underpinnings from the SSC. The final phase involves integration and elaboration of analysis and stored items. Not only does each phase depend for the timing of its onset on the successful operation of its

predecessors, but also relies on biological factors which have a schedule separate to the system as a whole. Hence there is a critical period in which the modules can operate most successfully. Should the 'boat be missed' for onset of the GAM, then the target linguistic system will be critically affected. When this happens, for instance where there is a developmental delay in language or cognition, other less well-specified neural systems take over the work, resulting in possibly adequate but not optimum linguistic ability (Locke, 1996a).

"Delayed neurological development interacting with declining language-learning sensitivity" (Locke, 1994: 614) are then the combinatory source of developmental language disorders. The model allows for variation in the patterns of language in specific developmental disorders. Where some disorders, such as Down's syndrome, proceed from an overall cognitive impairment we might simply expect 'less' language; that is, language which is less complex syntactically and in which vocabulary is restricted. Such is the generally agreed presentation of language in Down's syndrome, allowing of course for some inter-individual variation of particular strengths and weaknesses (Chapman, 1995). The joint-attention and social deficits which are so noticeable in autism, however, suggest that, within the model, the resulting language is likely to be quite different. While Down's syndrome children may sometimes suffer problems in the first phase due to hearing difficulties, these problems are not specific nor defining in the disorder. Autistic children however, are likely to be universally impaired in language as a result of the inadequate operation of the first phase. All subsequent phases are then bound to have a baseline limitation resulting from this early disadvantage. Indeed, as Locke says "by definition, those with autism have a dysfunctional SSC" (1993: 369). This dysfunction can be directly related to the inadequate completion of the first phase of the model. The extent of linguistic dysfunction in autism is also likely to be highly varied since non-specialised mechanisms will be called into service from the earliest possible point in the system. Later problems overlaid on these can only increase the complexity of the linguistic deficiency, as input to phases is likely to be corrupt at all stages. Again, Locke is specific in the effect that interference in the efficiency of the early stages of the model is likely to have:

> " Such characteristics reduce the felt urge to convey, and deprive the GAM of the utterance data and referential information needed for the induction of grammatical principles." (1993: 369).

Since so little is known about the neuropsychological processes and the extent of neural plasticity continues to be a matter of debate, the effect of non-specialised systems taking over language development is something of a mystery. However, Locke's model is appealing in that it accords with much of the developmental data for normal and disordered language, in particular the correlation between early prelinguistic and vocabulary skills and later grammatical development (Locke, 1995). The model also

suggests an explanation of the interaction between gestalt and analytic language in language acquisition.

2.3. Other forms of repetitiveness: Formulaicity

Topic bias (Perkins, 1994), linguistic routines or repetitiveness (Manschrek, 1985; Rumsey, et al., 1986), and formulas (Hickey, 1993; Perkins, 1999; Weinert, 1995; Wray & Perkins, 2000) may also have a bearing on our understanding of echolalia. These features can characterise normal and disordered language as well as the language of L2 speakers. Here, some of the issues relating to formulaicity are dealt with. Other types of repetitiveness (such as frames) are dealt with in the individual case studies, where they are better placed to explicate particular aspects of the data.

Formulaic language is interesting to researchers because of its relation to idiomaticity in language (Wray, 1999; Wray & Perkins, 2000). Idioms in this sense are" lexical units larger than words" (Bolinger, 1976: 3), which language users store, rather than construct morpheme by morpheme on every occasion of hearing or speaking. Some have a meaning which cannot be deduced from the sum of the parts, while some are quite penetrable on first hearing. Fillmore (1988, following Makkai, 1972) calls the former decoding idioms and the latter, encoding . Idiomatic expressions have a positive bearing on a speaker's perceived communicative competence (Hymes, 1972) and appear to involve faster, more accessible processing (Wray, 1999), which contributes to an overall impression of native-speaker-like fluency in language (Pawley & Hodgetts Syder, 1983). Even when the neuropsychological perspective was in its comparative infancy, there was a suggestion that the production and interpretation of idioms derive from different neural mechanisms to those systems dedicated to productive language (Bolinger, 1976), and that the main reason for this is to do with economy and efficiency of processing resources. The use of formulas in adult language can thus be accounted for within Locke's model, as well as developmentally.

A list of common formulas in English is given in Pawley and Syder (1983). Some corpus studies suggest that the amount of formulaic language we use is extensive (for example, Altenberg 1998, cited in Wray, 1999), although much depends on the type of utterances that are counted as formulas and the nature of the corpus itself (Wray, 1999). The wide use of formulas is not accounted for by linguistic theories in the Chomskian tradition (Bolinger, 1976; Chafe, 1968), and suggests that often on-line processing by-passes productive atomistic construction of spontaneous utterances in favour of the quicker method of formulaic look-up (Wray & Perkins, 2000:15-17).

The use of formulaic sequences is a critical component in language acquisition and development within the Locke model discussed above (Perkins, 1999). Formulaic sequences allow speakers to socially interact, and are hence also an important and

necessary feature of L2 as well as native language acquisition. The functional outcome of formula use is noted in relation to the wider issue of social interaction: that is, speakers with restricted linguistic systems at their disposal may achieve ends not accessible to them via productively generated language. Desires can be expressed, needs can be met and services obtained. The usefulness of formulas in social interaction is then not necessarily reserved for those who are interested in social life, but for all who are capable of recognising their own needs and wants. The social deficit in autism does, then, not preclude the attractiveness of formula use from a social interactive perspective, as long as 'social interaction' is understood to have a functional or instrumental component to its meaning.

Incorporating formulas into the 'grammar' of normal, productive language as well as language development is clearly important in the analysis of repetitive and echolalic language in autism. The use of formulas depends on different processing mechanisms to those used for truly productive language, depending on the SSC module, rather than the more specifically linguistic, in the Chomskian sense, GAM. Wray and Perkins (2000: 23) point out that, since the SSC module cannot help but be impaired in autism, perhaps our expectation would be highly unformulaic language rather than the reverse. Once again, neuropsychology is not yet in a position to address this question realistically at present. In particular, formulaic language appears to have a robustness beyond that of productive mechanisms, as evidenced by aphasic data (Wray, 1999).

2.4. Conclusion

Repetitive language in autism has been of interest to researchers since the mention of echolalia in the original definition of autism by Kanner in 1943. This interest has produced work which focussed on its form, function and latterly its cognitive and neuropsychological underpinnings. Researchers have, however, chosen to focus on echolalia almost as if this were the sole realisation of linguistic repetitiveness in autism and have, possibly because of this focus, stressed the difference between autistic echolalia and the types of repetition that occur in non-disordered language. Underlying this trend, there is an implicit homage to the notion of modularity in language, such that its components are seen as separable and mutually distinct. Thus echolalia has been seen as a pathological symptom of a disordered system, with no relationship to productive language. This thesis aims to redress the balance and therefore considers echolalia and repetitiveness in relation to the complete autistic linguistic system. Further to this, the use of language by autistic people is also considered in relation to that of non-autistics. The notion of linguistic processing which informs the analysis is, then, essentially interactive.

3. Methodology

Data for the study was collected between March 1995 and July 1996 from 6 adult research participants. These participants all had diagnoses of autistic spectrum disorders and were resident in autistic communities in Yorkshire. Of the six study subjects, only one, Tom, had a diagnosis of Asperger's syndrome, while the remainder had been diagnosed with autism. Details of the study participants are given in the table My: i shown below. It should be noted that the names and places of residence of the participants have been changed throughout the study to ensure confidentiality.

My: i - Study participants' details

Study Participant	Place of Residence	Age at Time of Recordings
Tina	Forest House, Yorkshire	25
Phoebe	Forest House, Yorkshire	27
Gary	Forest House, Yorkshire	24
Mary	Forest House, Yorkshire	26
Tom	Midwell House, Yorkshire	33
Penelope	Midwell House, Yorkshire	28

The researcher visited the research participants before beginning data collection in order to familiarise them with both the researcher and the recording equipment. Selection of study participants was made on the basis of caregivers' recommendation and volubility. Criteria such as cognitive ability were not taken into account since the intention was to examine the talk of a variety of people with autism in order that comparision could be made between them. Audio and video tapes were made of conversations between the autistic research participants and the researcher, with the occasional presence of other participants. With the exception of Tina, these other participants were not central to the talk. Talk was intended to be as informal and naturalistic as possible although, since all of the research participants were resident in autistic communities, the environment was sometimes more formal than may have been desirable. However, since those participating in the study were used to these environments it is presumed that this was not especially detrimental to data collection. The data was then transcribed according to Conversation Analysis (henceforth CA) conventions based on Psathas (1995), and subjected to structural linguistic analysis and analysis using the Conversation Analysis methodology. The latter was used to provide greater depth to the

study than would have been possible with a purely linguistic analysis. The transcription conventions can be found in Appendix 1 and the transcriptions in Appendices 2 - 7 of the study. It should be noted that some deviations from the more usual transcription conventions were made. In particular, IPA symbols are used to indicated tone movement rather than CA symbols. This was done to allow for greater detail in the transcription of tone movement. Further, curly brackets are used to mark off words which are transcribed phonetically rather than the more usual square brackets. This was done to eliminate any possible confusion with the CA use of square brackets (to indicate overlap). The transcription conventions used in this study are then a mix of IPA and CA conventions. The transcription was checked for accuracy by a Linguist working in the Department of Human Communication Sciences at Sheffield University.

Tone movement was transcribed due to the importance of prosody and prosodic deficit in the field of autistic language research (Paccia, 1982; Dawson, 1996; Baltaxe, 1985; Tager-Flusberg, 1993; Simmons, 1975). A particular focus in this study was to investigate the nature of the prosodic deficit; that is, whether *prosodic* or *intonational* deficits were pervasive in autistic language, and, particularly in the latter case, was this at phonetic or phonological levels. A deficit at the phonological level is far more suggestive of a superordinate linguistic deficit than one which exists at the phonetic level (Wells et al., 1995).

The CA methodology was included in the study as workers in the field of autistic language research have long since recognized the need for work which investigates in depth the nature of the conversational impairment in people with autism (Baltaxe & Simmons, 1977; Baltaxe & D'Angiola, 1992; Bennet-Kastor, 1994; Fine, Bartolucci, Szatmari, & Ginsberg, 1994; Krantz & McClannahan, 1993; Local & Wootton, 1995; Paccia & Curcio, 1982; Tager-Flusberg, 1995; Thurber & Tager-Flusberg, 1993), in addition to studies which aim to investigate impairment in linguistic competence or functioning (Baltaxe & D'Angiola, 1992; Bartolucci, Pierce, & Streiner, 1980; Frith, 1989b; Mundy, Sigman, & Kasari, 1990; Paccia & Curcio, 1982; Rumsey, et al., 1986; Simmons & Baltaxe, 1975; Tager-Flusberg, 1981; Tager-Flusberg, 1993; Tager-Flusberg, Calkins, Nolin, Baumberger, Anderson, & Chadwick-Dias, 1990).

In the main, researchers interested in the talk of those with autism have used techniques such as discourse analysis within a quantitative study framework to uncover the specific features of autistic discourse and conversation. Such studies have been of great importance in identifying discourse strategies used by autistic language users, but have the disadvantage of blurring the details of autistic talk managment; that is, one is left no wiser as to how the various strategies identified in quantitative studies are realized in the context of actual conversations. The use of qualitative research techniques such as CA can therefore be complementary in "offering an apparently 'deeper' picture than the variable-based

correlations of quantitative studies" (Silverman, 1993: 15). Indeed, as noted by Fine et al. (1994), rather than a sharp divide existing between researchers in the field of autistic discourse on the grounds of methodology, there is a recognition that a qualitative approach using a case-study design is essential in order to understand precisely how conversational ability is deficient within the autistic population.

CA has been used to investigate various subgroups within the more generally disordered language population (for example, Edmonds & Haynes, 1988; Local & Wootton, 1995; Wilkinson, 1995; Willcox & Mogford-Bevan, 1995). It should be noted that studies focusing on conversational interaction are of particular interest when considering the autistic spectrum group, since the more general description of "deficits in pragmatic functioning" (Tager-Flusberg, 1981: 52) (see also Chapter Two above) has long been associated with this group. The ethnomethodological roots of CA (Garfinkel, 1967) have encouraged in practitioners the development of a strongly data-driven perspective. As expressed by (Schiffrin, 1994):

4. Tina

4.1. Background

4.1.1 General

Tina is a twenty five year old woman with Autism resident at Forest House Autistic Community in South Yorkshire, England. She is verbal and her carers classify her as echolalic. She has mental retardation as well as epilepsy for which she takes medication. At times Tina can exhibit challenging behaviour, manifesting in physical aggression and loud repetitive outbursts.

4.1.2 Social and emotional

Tina falls into Wing and Gould's social category of active but odd (1979), since she usually enjoys company and will participate in social activity and even take an initiating role in a social context. In common with Gary (see chapter 6 below), she has a marked fascination with emotional behaviour. She appears to be intrigued by acted or pretend emotional displays. Social routines such as handshaking also arouse her interest.

Tina's epilepsy necessitates constant one to one care, hence Tina's caregiver takes part in the conversations with her and is present throughout the administration of the Intelligence Test. Tina has formed a particularly strong relationship with this caregiver at Forest House. It is believed that without this relationship her behaviour would be far more challenging than it is at present.

4.2. WISC-R Intelligence Test

Tina was 25 years old when the Wechsler Intelligence Scales for Children-Revised (henceforth, WISC-R) (Wechsler, 1974) was administered. The test took place in a closed room in the day centre of the residential unit where she lives. Her primary caregiver was present. Tina was restless throughout the testing and her attention often had to be brought back to the tasks by both the researcher and the caregiver. It was sometimes necessary to repeat questions more than twice which, according to the directions given in the WISC-R manual, invalidates obtained test scores. However, it is noted that even when questions were repeated Tina's overall raw test scores were extremely low, falling below the baseline for obtaining either a scaled verbal or performance IQ score.

TT: i -WISC-R: Tina's raw scores

Verbal Tests	Raw Scores	Performance Tests	Raw Scores
Information	2	Picture Completion	0
Similarities	1	Picture Arrangement	0
Arithmetic	2	Block Design	0
Vocabulary	2	Object Assembly	1
Comprehension	0	Coding	0
Digit Span	1		

Given both the difficulty Tina had in responding to the questions and the rather disappointing results obtained, there are few reliable conclusions that can be drawn. The verbal subtests have slightly higher scores than the performance subtests, but, once again, the reduced overall profile makes any conclusion unsound.

4.3. Speech

4.3.1 Consonant lengthening and devoicing

Tina often lengthens utterance final consonants, for example:

T1a

S   `right (0.6) what d'you 'call `this   *holds up thumb*

         (1.6) 'what is jt

T   (0.7)fum:: =

T1b

C   (0.6)`wha:t

T   (0.6)we have to do our(0.5) we 'have (.) to do our (0.9)°traffic ⌐lightss°

T1c

S   [you   ] can have some in a `minute

         (1.0) how many 'da:ys in a week 'Ti[na   ]

T   [when] (.) an (.) can I have some ⌐li:::ne{zss}

T1d

C   (.)`ri:ght (0.5) no:w(.) ['what is 'Sushie`asking yer   ]

T   [when can I-(.) when can I have s]ome⌐line{s:}

T1e

S   (1.1) that's 'what you⌐ do with your⌐ shirt (.)⌐innit

T   (1.0) 'I ave to keep 'warm:

T1f

S   (5.0)`right (.) I need my ⌐trees

T   (2.7) why do I have to do any 'suːmːsː

T1g

C   (.) 'when sh- can (.) 'when sh can she [`earn it |

T   [when (.)] am I gonna earn more
           ˌliːːːneˈ{zːːsːː} =

T1h

S   ['you're 'over exˈcited (.)ˏaren't you]

T   (.) 'guess what (1.2) *out alo ng the angelas ːːˈ*   *creak*
           (.) *a ːll the waybound { fɒm (.) ˈæːndʒɪləsːː}*   *sings; creak*

T1i

S   (1.1)what ⌐sound do they 'make

T   (1.1){bsːzːsː[szːsːːːː} |

Note that in T1c, T1d, T1h and T1i there is some considerable devoicing of the final consonant as well as lengthening. Consonants are commonly lengthened and partially devoiced utterance finally in non-autistic conversation (Laver, 1994) to indicate a suitable turn transition place (Langford, 1994). It has also been noted that segment duration in children's speech is often extended (Smith, 1994). This has been attributed to children's less developed motoric ability possibly arising from neurophysiological factors (Tingley and Allen, 1975; Sharkey and Folkins, 1985; Schwartz, 1988; Smith, 1992, cited in Smith, 1994:156).

Possibly due to her epilepsy and the medication necessitated by it, Tina has a generally dyspraxic presentation. It is feasible that the prolongation of segments in her speech is a result of circumscribed motoric function. However, we should note Rumsey et al's findings (Rumsey, Andreasen, & Rapoport, 1986) in relation to affective flattening which suggest that medication should not necessarily be considered primarily causative with regard to linguistic features in a disordered population. The specific location of particularly prolonged segments as well as the abnormal extent of lengthening do, however, warrant further explanation. It will be noted that the conversational environment preceeding the production of these features is often a wh-question . On one occasion, (T1h) the wh-word is produced by Tina as part of the community wide formula *"guess what"*. Since Tina's handling of wh-questions is discussed separately below, it is not proposed to offer a detailed interpretation of this phenomenon here. We merely note that excessive prolongation of segments frequently occurs in utterances produced following wh-questions.

It should be noted that wh-words are not always indicators of interrogative structures.

Wh-words may occur as relative pronouns in non-interrogative constructions or as relative pronouns in elliptical interrogative constructions such as is shown in T1h. A possible interpretation of Tina's overly overt stressing of utterance final phonetic signifiers in the wh- environment is that Tina understands all wh-words to be indicators of interrogative structures. Since she shows awareness of adjacency pair conventions elsewhere it can be assumed that when Tina is able to definitely recognise the first part of such a pair, her second part contribution is then delivered with gross emphasis.

The possibility of circumscribed motoric function is also suggested by Tina's utterances which contain unclear articulations. While these utterances are difficult to identify as speech errors, since they do not always have an obvious target, they do recur consistently throughout the transcriptions. T1j and T1k exemplify these productions.

T1j

1	T	(.)I have got a {palɪənts}(.) I have got a 'coin(.) from (.) at (.){klɪn} (.)ˎpalace
2	S	(.)ˆhave you 'love
3	T	[((groaning))]
4	C	[she meansˋ Buckingham Palace]

T1k

1	S	(.) 'why's th{ɪ} (.) wjtch 'angry
2		(2.6) 'why's thatˎ witch ˎangry
3	T	(.) cos she's a {tʃiːltəmm̩] (.) guess what

The caregiver's intepretation of Tina's utterance at line 1 of T1j indicates that the target in this case is "*Buckingham*". Whether these types of misarticulation are due to a deficiency of phonological or planning ability is not possible to judge, however, given the general lack of identifiable targets.

4.3.2. Vowel lengthening

Tina often lengthens vowels. Again, this is most often a characteristic of utterance final words as in T1 above and as exemplified below in T2. Vowel lengthening is not always utterance final as shown by T2b, T2c, T2f and T2h.

T2a

S	(2.3) I'll 'bring you some 'more next time Iˆcome
C	(2.0) i - if you'reˋgood
S	(1.0) if you'rè good
C	(.)ˋ yeahˋ
T	(0.4) I should think you jolly wellˎwiː::ll

T2b

T   = don't you da:re 'urt er 'fa::ce   *stroking S's face*

S   (0.6) don't I˘ what

C   (.) she'll get˘cro::ss

T   (.) DON'T YOU‿DARE 'URT ER 'FA:::CE:: =

T2c

C   ↑‿you-↑ (.) ↓ I 'ope I didn't 'ear a ['swear‿word] ↓‿then

T   [.hhhhhhhhh]

T   (0.6) ↓*no::yer 'bloody well didn't* ↓   *creak*

T2d

T   (.) *you 'bloody 'well did [‿not]*   *creak*

C   [I'll] 'tell you 'where‿these are 'going

T   *no::::::::::::::[::*]:::   *creak*

T2e

C   ['yes it‿is (0.7) ↑shall I put it‿in ↑]

T   (0.7) *no:::::::* (0.7) *no‿d o:n't* =   *creak*

T2f

C   (2.7) she can't have it‿back (.) till you 'talk [˘properly   ] =

                                                  [((*loud bang*))   ]

      = ↑‿oo::h↑ (1.5) till you 'talk‿properly

T   (.) *ple:ase may I have it‿back ple:ase 'Sushi::e*   *creak*

T2g

T   (0.9) *ple‿ase may I have it back aunty Ci:[ndy:::]*   *creak*

T2h

T   (0.6) *I:: would li ke my:‿boo:k 'no:w*   *creak*

As with the consonant lengthening and devoicing above, vowel lengthening is a feature of normal speech, particularly in relation to the placing of stress, nuclear tone and in utterance final position (Laver, 1994). Again, Tina's use of the feature is comparable with normal use and would be considered unimportant were it not so exaggerated, the most extreme example being T2d. Her preferred use of lengthened vowels seems to be for the purpose of emphasis as in T2f above. It is notable that in T2a and T2b vowels are lengthened in combination with a pitch movement on the relevant syllable. In non autistic speech, the combination of nuclear pitch movement, segment lengthening and amplitude increase on one syllable assists

us in recognising that syllable as the most important within an utterance in a conversational context.

From the examples above, it is clear that Tina does not always combine all three of these features to isolate a syllable as central to the utterance in which it occurs. Tina, on some occasions, uses just vowel lengthening to pinpoint a syllable within an utterance with no accompanying pitch movement or noticeable volume increase. There is a possibility that there are very slight movements in pitch and volume which are undetectable without the benefit of electronic measurement. However, ostensibly, it would appear that exaggeration of segment length is a phonetic resource used by Tina to indicate constituents of particular importance. Such a feature would make sense if it were the case that Tina's use of pitch movement were circumscibed - a proposition which is considered below.

4.3.3. Pitch movement and amplitude in speech

Thus far we have considered segment (specifically vowel) length, duration and devoicing of final segments. The first two features together with rate of speech, loudness, timbre and pitch movement make up the linguistic phenomenon known as prosody, that is the non-segmental features of speech in which the syllable is the significant unit (Wells et al., 1995). Autistic language users are noted to have problems relating to their use of prosody (Baltaxe, 1984; Baltaxe & Simmons, 1985; Dawson & Lewy, 1989; Frith, 1989; Local & Wootton, 1995; Rumsey, et al., 1986) though, due to the variation between autistic speakers regarding their use of prosody and also the subtlety with which such a difficulty can manifest, this is a difficult area on which to comment. Within Tina's speech, we see an apparent lack of consistency in her use of prosody, it being perhaps more appropriate to consider prosodic idiosyncracies as tendencies rather than definitive, regularly occurring and predictable features.

On occasions, Tina uses monotonous tone, identified in DSM IV (APA, 1994) as a likely autistic characteristic. For example:

T3

T   (.) Sushi::e(.) I would like you to shake your 'fa::ce

where there is extension of the vowel in the final syllable but no pitch movement. As the final content word in the utterance, "*face*" would be expected to be the site of nuclear pitch movement. Further, since "*face*" is an unlikely consituent to occur at this point it would be the most likely candidate for nuclear pitch in contrast with, for example, "*shake*". Likewise, there is absence of pitch movement in the presence of vowel extension in the following utterances from the same transcription (Transcription Three, 22.5.96: WISC-R):

T4a

T   (1.2) blow it 'ou::t

T4b

T   (2.7) why do I have to do any 'suːmːsː

T4c shows no vowel extension however:

T4c

T   (2.8) moo

T4d

T   Cindyːː

The conversational context for the above utterances varies. T4b is a discourse initiator, while T3, T4a and T4c are produced in response to the researcher's questions. T4b not only has vowel extension but also final consonant lengthening. T4d, whilst having the pragmatic function of attention getting, actually involves Tina calling her caregiver. This type of utterance is commonly associated with a stylised tone contour in British English ("calling contour") which involves a sequence of two level tones, one for each syllable, the pitch of each corresponding to approximately the start and finish of a fall-rise tone (Cruttenden, 1997: 120). T5 illustrates another feature of Tina's speech in that new information is not signified intonationally, a feature which has been noted to occur in the speech of some autistic children (Baltaxe & Simmons, 1985). T5b also serves as demonstration of another feature noted by Baltaxe and Simmons (ibid., p.104); that of overprecision of articulation, in that there is no contraction of the auxiliary. This is most likely related to a prosodic deficiency.

T5a

T   (0.9)he's a °*plumber*°   *whisper*

T5b

T   (.)I have got a {palʊənts}(.) I have got a 'coin(.) from (.) at (.){klʊn} (.)͵palace

Tina also uses pitch movement idiosyncratically as in T6 below.

T6

S   (2.6) how many˙pennies (.) in a ⁻pouːnd

T   (3.8) I've got a ͵two 'pence

where the stress and falling pitch on "*two*" would have the function of contrast as its most likely interpretation within an utterance, and would be acceptable as a response to a question such as "*have you got a five pence?*". As a declarative rather than a responsive utterance, T6 would be expected to show nuclear pitch movement on "*pence*". The context in which T6 occurs, however, does not require a contour with contrastive function. Thus the misassignment of sentence stress on "*two*" rather than "*pence*" makes T6 sound contextually inappropriate, as if Tina were taking part in a different conversation.

T5a, above, is also interesting in that, here, the likely site of pitch movement is instead indicated by a change in voice quality, in this case, whisper. Falling tone in a declarative utterance of this type is most usual, with a pitch movement on *"plumber"*, as the most important, indeed, here the sole, content word (Turner, 1972).

Tina is able to use pitch movement in a way that is more consistent with the conventions of British English. Indeed, in T7 below she uses contrastive tone correctly in a two clause utterance (despite the nonsensical content of the turn).

T7

C   (5.7) a‿wheel(2.2) an a`ba:ll

       (2.0) what`are they

T   (1.5) °it‿has (0.5) an it‿hasn't°

The prosodic content of the prior other-turn here does, however, suggest that Tina may be using the carer's tone contour as a model for her own, especially given the meaninglessness of the turn's content.

Similarly, in T8, Tina correctly indicates the requested new clausal information intonationally:

T8

S   (1.5) ow many dárling

T   (2.1) °‿two pieces°

In T9 below, Tina apparently uses appropriate intonation to produce interrogatives.

T9a

T   (0.8) Sushie 'where's Jed‿ziah

T9b

T   [can I] have some‿li::ne{zsss}

Finally, intonation contours during a counting sequence are compared below:

T10

T	[one] (1.1) two (0.9) three (0.7) four (0.8) five (0.7) six (0.5)	*creak*
	an`seven (0.8) eight (0.7) nine (0.8) ten (0.6) eleven (0.5) 'eight	*creak*
	(1.6) [fifteen]	*creak*

C1 (caregiver utterance)

C   ='one‿two 'three‿four‿five 'six

     'seven 'eight (1.5) nine that was ‾nine‿look

While Tina shows an absence of tone movement for all but one member of the number sequence, the carer demonstrates a variety of tones while she counts. The only use of falling

tone by Tina occurs after she has linked the succeeding digit to the preceding sequence with " *and*". In the context, this could be considered an appropriate use of falling tone. Utterance final position does not seem to be a predictive factor in the use of pitch movement for Tina here, nor does item subsequent extended pausing. We should note, however, that Tina is prevented from finishing her counting sequence by repair-overlapping by the caregiver. A second counting sequence by Tina, occuring at lines 228-230 of Transcription Three (Appendix 3.1), is allowed to end naturally however. This second sequence also has only one item marked by falling tone: as is the case above, this is the digit "*seven*" which occurs mid-sequence. There is therefore a possibility that falling tone and the lexeme " *seven*" may regularly co-occur within Tina's repertoire.

The pattern that emerges of Tina's use of intonation is thus a complex one. Tina is evidently not incapable of using pitch in a manner comparable to that of non-autistic speakers of British English, and she is certainly able to manipulate pitch to some extent. However, at times her use of intonation is potentially pragmatically problematic for an interlocutor (for example, T6 and both counting sequences). The data also seem to suggest that Tina may sometimes use the prosodic features of voice quality, segment duration and amplitude in place of pitch movement, and that these features may compensate for the absence of pitch movement at times. An interesting point also arises in relation to the level of semantic and pragmatic ability when one considers Tina's manipulation of prosodic features: Atkinson-King (1973) found that within a normal (child) population "the production of prosodic patterns never exceeded their comprehension" (Baltaxe & Simmons, 1985: 103). Other research also indicates that non-autistic infants during their first year are able to make receptive use of prosodic markers to segment speech and to differentiate their target language from other languages (Kent & Miolo, 1995). Further, normally developing infants of this age also show functional consistency in their productive prosody (Locke, 1995). Given the above conflation between productive and receptive competence, and since motoric ability is far from fully developed at the age of less than one year, the likely source of Tina's prosodic idiosyncracies would then seem to be neuropsychological/linguistic rather than motoric/physiological. This same issue of motoric/physiological versus neuropsychologic/ linguistic deficiency is taken up in a later chaper (Chapter 10). It may also have some relevance to the analysis of the voice quality feature in Tina's speech.

4.3.4. Voice quality
Above we have seen Tina use both whisper and creaky voice within the conversational context. Creaky voice, also called glottal or vocal fry, is described by Laver (1996: 201) as phonation with low fundamental frequency, that is, pitch, and "strong adductive tension and medial compression, but little longitudinal tension, and with vigorous ventricular involvement" (Hollien, Moore, Wendhal, & Michel, 1966: 247). The auditory effect is of a series of rapid taps. Once this voice quality is initiated by Tina it persists over many turns.

Indeed, Tina may conduct entire conversations with this voice quality. The onset of creak in three sessions with Tina are shown below

T11a

T	((*sings*))	
C	↑‚you-↑ (.) ↓ I 'ope I didn't 'ear a ['swear word] ↓‚then	
T	[.hhhhhhhhh]	
T	(0.6) ↓*no ::yer 'bloody well didn't* ↓	*creak*

T11b

C	(2.9)‚count [em]	
T	[*one*] *(1.1) two (0.9) three (0.7) four (0.8) ¯five*	*creak*
	(0.7) six (0.5) an `seven (0.8) eight (0.7) nine (0.8) ten	*creak*
	(0.6) eleven (0.5) 'eight (1.6) [fifteen]	*creak*
C	[el¯ev] en	
T	(2.7) *eight* =	*creak*

T11c

S	(.) [no:: cos you 'know what to-]	
T	[*no :::o ::::h*]	*creak*
C	[( )]	
T	gi me the hands Sushi:::: [::e]	*creak*
S	`[wh]at 'sweetheart	
T	(1.2){ *ɪkə} the hands Sushi ::e ¯e::h*	*creak*

Creaky voice persists throughout the conversations from which T11a and T11b are taken. In the conversation from which T11c is extracted however, creaky voice is an intermittent feature. Laver (1994) describes creaky phonation as being used by some speakers as a marker of personal identity (ibid: 196). This would, however, not seem to be the case with Tina as she does not always use creaky voice consistently throughout all conversation. Cruttenden suggests its use as indicative of boredom or resignation (1997: 174), while at the discourse level, Laver suggests (1996: 330) that creak, or vocal fry, may be used as a signal by non-autistic English speakers as an indication of finality in an utterance. Again, this is clearly not the function of Tina's creak since its occurence is more pervasive than this.

As entertained briefly above in relation to prosodic features and control, there is a possibility that Tina's use of creaky phonation may occur as a result of insufficient motoric control over vocal mechanisms. However, the use of creak could also be attributable to conversational factors. The onset of creak shown in the extracts above occurs at all times within the structural context of difficulty in maintaining the conversation for Tina, though it is not the case that difficulty in conversational maintenance always gives rise to the use of

creak. As can be seen below, Tina also has recourse to what we have called 'repetitive episodes' at these points. On some occasions, repetitive episodes themselves are combined with the use of creak. Tina is unique within the cohort of subjects in her use of this device to signify that she is having difficulty with the conversation, although all the subjects have recourse to some device in such a context. Paccia and Curcio (1982: 45) note the use of creaky voice by one of their five subjects although the environment in which it occurs is not discussed.

4.4 Repetition

Repetition occurs in many different guises within Tina's language. In the first place, echolalia does not occur within her speech as originally defined by Kanner (1943; 1946) cited by Schuler & Prizant (1985:164) as "the rote and literal repetition of the speech of others". Tina does not often use other's turns as speech models for her own. Instead Tina's own speech generally provides the model for repetitive utterances. In T12 below we do however see an example of Tina repeating part of an other sequence in an environment described by Paccia and Curcio (1982) as likely to provoke an immediate verbal imitation (or 'IVI' following Violette & Swisher, 1992:139); that is, a wh-question.

T12

S   (1.6) can you`tell me (0.8) what a`thief is

T   (1.3) I don't kno::w

S   (0.7)you don't ˏknow °what a thief is°=

T   = can you 'tell me::: (1.8) can you 'tell me
       what's {əm}   (0.9) can you tell me what is a piece of 'beef (.) `is::

The various types of repetition within Tina's conversational language are outlined here and discussed separately below.

1. Frames

The term 'frame' is used not in the conversational sense described by Tannen (1993), but in the structural acquisition sense used by Hickey (1993). Hickey suggests that children in the process of acquiring language use frames to enable them to master new structures. At first the frame occurs as an unanalysed unit combined, often incorrectly, with other constituents. Gradually the frame is broken down to be used more and more productively in more and more structures which eventually come to resemble correct adult target forms.

Hickey's criteria for identifying frames are shown below.

1. the utterance is at least 2 morphemes long (necessary, graded)
2. the utterance coheres phonologically (necessary)
3. the individual elements of an utterance are not used concurrently in the same form separately or in other environments (typical graded)
4. the utterance is grammatically advanced compared to the rest of the child's language (typical, graded)
5. the utterance is a community wide formula or one which occurs frequently in the parents' speech (typical, graded)
6. the utterance is an idiosyncratic chunk (typical, graded)
7. the utterance is used repeatedly in the same form (typical, graded)
8. the utterance is situationally dependent (typical, graded)
9. the utterance may be used inappropriately, either syntactically or semantically (typical, graded)
(Hickey, 1993: 32)

2. Self as a model for repetition

Self not other modelled repetition is far more prevalent within Tina's conversation. An example of this is given in T13 below. Reformulation is also a common feature of Tina's self repetition and, again, this is a feature of T13.

3. Preferential collocations

Repetition within Tina's conversation may have a lexical basis taking the form of 'preferential collocations'; that is, certain lexical items almost always seem to co-occur within the same utterance. Further to this, coherence *between* utterances is often maintained through the choice of lexical items.

4. Repetitive episodes

Tina has so-called repetitive episodes where she cannot seem to move beyond the repeated phonological production of certain sequences. Sometimes these are recognizable words, either syntactically acceptable or semantically meaningful, or not: they may also be strings of complete nonsense. These repetitive episodes appear to be similar to tics or perseverative behavioural tendencies.

5. Non-autistic repetition

Repetitiveness within the conversation of the participants besides Tina is considered, in order that overt comparison may be made between autistic and non autistic types of repetitiveness.

6. Scripted prompts

Finally, the use of scripted prompts to elicit responses from Tina are considered.

4.4.1. Frames - 4.4.2. Self as a model for repetition

Tina's language was first described to the researcher by her carers as very echolalic. Her language is certainly very repetitive but seemed at first to consist more of frames (Hickey,

PAGE MISSING IN ORIGINAL

T14a

frame: *"where's my ....."*

S   tell me bout the` swimming (2.6)

      tell me bout the` swimming, Tina =

T   ='where's my (.) ↓mummy em↓ (.) ↓ˏbeːːar↓

S   'where's your m- =

T   = *'where's my daddy 'beːar*   *harsh voice quality*

      (0.9) *where's my `dad*   *harsh voice quality*

T14b

frame: "whereabouts is my ....."

T   = 'Sushie(.) whereabouts is my three likkleˏpig 'book

      (1.3)[it's in] my 'boxsːː

S   [(-)]

S   (.) in your` box

T   (0.6) whereaˏbouts is my 'box

As with T13, Tina initiates both these sequences and uses her own first utterance as a model for her later utterances. The two examples T14a and T14b clearly demonstrate that Tina has the competence to ask the same thing in different ways, namely a request to be told the location of something, but prefers to use the same structure across local turns. In T14a, her question is neither relevant to nor recoverable from the preceding discourse. The progression to *"where's my dad"* seems to be due to the obvious link between *"daddy bear"* and *"dad"* .

In T14b, Tina conflates an adjacency pair into one turn. Again, it is clear from this that the pragmatic function of the interrogative utterance is not the conventional one of facilitating the discovery of new information.

In all three examples, T13, T14a and T14b, the influence of Tina's first turn is shown over her next turn or turns. The local frame operates on Tina's discourse more strongly than the intervening other turns. The question naturally arises as to what can be motivating this type of repetitiveness. Perhaps the answer lies in simple perseverative tendencies. However if this were the case then surely Tina would be more inclined to make use of more standard types of echolalia.

4.4.3. Preferential collocations

Preferential collocations bear some similarity to the frames described in (1) above.

T15a

Preferential collocation: *"shake"* and *"hand(s)"*

S   = it's(.)

　　　　twenty 'five to` twelve(0.7) have you got a 'watch
　　　　(2.3)°you haven't got one(.) have you °

T　　　　(2.1) *I'd like shake your ha ::nd*　　　　　　　　　　　　*creak*

T15b

T　　　　[*no ::::o ::::h*　　　　　　　　]　　　　　　　　　　*creak*

C　　　　[(　　　　　　　　　　　　　)]

T　　　　*gi me the hands Sushi :::: [:e]*　　　　　　　　　*creak*

S　　　　　　　　　　　　　　　　　` [wh]at 'sweetheart

T　　　　(1.2)*shake the hands Sushi ::e `e :: h*　　　　　*creak*

S　　　　(.)you 'shaking my` hand

Note the syntactic error in Tina's first turn in extract T15a. These utterances are not like Hickey's frames because the same lexical items appear in different types of construction. For example, T15c shows the appearance of *"shake"* and *"hands"* in a quite different context to one where the main concern is social routines.

T15c

S　　　　　　　　　　[it is 'c] alled a brolly (.) it`is called a 'brolly (1.6) that's` very 'good (.)
　　　　'let me 'write down what 'you [`said]

T　　　　　　　　　　　　　　　　　[it　　] is called a shake yer hands

Rather than a frame I suggest that these extracts show the preferential collocation feature referred to earlier in relation to the lexemes *"time"* and *"right"* in T13. Here *" shake"* and *" hands"* are not embedded in a rigidly inflexible structure. Rather, it appears that the two items merely co-occur with one another within an utterance. This co-occurence of items has none of the implications for facilitating structure acquisition that is suggested by a Hickey frame. What can be noted however, is that operating over turns this type of preferential collocation, almost coincidentally, gives Tina's talk the appearance of cohesion. A further point is that in all but one case, the utterances are initiators or responses to questions. Initiation and interrogative response are, as mentioned above, notorious sources of difficulty for people with autism. There is a possibility then, that preferential collocations provide a ready-made resource for Tina to use when she is presented with a tricky conversational task, as well as enabling her to bring cohesion to her discourse.

Frames and preferential collocations are described above as if they were discrete entities. A perhaps more enlightening perspective can be gained however if we look at Tina's utterances in relation to both features at one and the same time:

T16

S   (1.6) ˈhow d'you make some ˈwater ˌboil

         (1.9) mˆe:::h

         (1.4) ˈhow do you make ˌwater ˌboil

T   (.) Sushi::e(.) I would like you to shake your ˈfa::ce

S   (0.7) you want to ̯shake my ̗face

         (.) you ↓ˇcan't shake my ˈface↓

This is apparently an example of Tina playing with the collocation "*shake*" and "*hands*" in a way which is suggestive of an abstract frame. She also does this in T15c with "*it is called a shake your hands*". In both cases, Tina makes a non-meaningful utterance. She is apparently replacing one lexical item with another: in T15c using the previous turn as a model and in T15b using the favourite collocational combination as a model. The T15c example is especially interesting since the substitution of "*shake your hands*" for " *brolly*" indicates that "*shake your hands*" is in some sense treated as a single unit by Tina. "*shake your face*" also implies the operation of some type of holistic chunking of utterances, this time through the breaking down of a single unit and attempted combination into an *incorrect* sequence. Rather than merely being a mistake, the example in T16 seems to be playful in delivery and manner. This playing with language could only be possible if Tina had the concept of "*shake your hands*" as a single unit on which to base the reworking. " *shake your hand*" must then exist for Tina as an unanalysed 'chunk' somewhere in her linguistic inventory. Possibly it began life as a formula, is now more often a preferential collocation, gradually moving towards greater and greater productivity.

T14 and T15c imply that structural frames similar to Hickey's may operate within a local field, since the structural influence occurs only in following turns to the original model.

There are, then, two strategies at work here: the use of a frame or preferential collocation to assist in the formulation of an utterance when conversational work becomes excessively difficult for Tina; the use of previous turn structures on which to base new turns. There is also a possibility that the preferential collocations here may be holistic chunks of language that have progressed to stages of semi-productivity. At times they look like chunks and at other times like idiosyncratic collocations. At no time do they look like fully productive language.

One final example to show the influence of structures in a local environment elsewhere in the transcripts is shown below at T17.

T17

Local context influence: *"I have to . . ."*

```
1   T                                               = °I ave to ride on my ˎbiːke°
2   S        (0.7)you av-
3   C        (.)ʃ noːː  (0.5) 'what do you do with a 'hat and aˋshiːrt
4            (2.6) 'what d'youˋdo with em
5   T        (0.9) I have to 'put it round my ˎshouːːlder
6   S        (1.1) that's 'what you ˎdo with your ˎshirt (.) ˌinnit
7   T        (1.0) 'I ave to keep 'warmm
```

Again, Tina's initial utterance is in response to a question that was obviously causing her difficulty. The same question repeated by Cindy, the caregiver, gives rise to a second instance of the structural frame "*I have to*" utterance with an item more relevant to the question ("*put it round my shoulder*") in the empty slot of the frame structure. It is almost as if Tina's conversational rules allow a common structural frame to continue across turns in place of, or perhaps equivalent to, topic. Thus, local structure repetition may work in the same way for Tina as topic does in non-autistic conversation, that is, discourse is cohered structurally rather than by means of topic.

4.4.4. Repetitive episodes

This type of repetitiveness within Tina's language is quite different from the types we have seen illustrated above. Here, Tina seems less driven by a willingness to communicate in any way at all. These repetitive episodes are more like perseveration than any other type of repetitive language encountered thus far.

T18

```
C        [some-] someˋ things- =
T                          = GAIːː
C        (.) ↓no↓ you 'talk ˎproperly =
T                          =GAIgdy GAI g{kxjːːə}
         (0.6).hh(1.0){jɒ}-(.)gai gdy GAI [giːː      ]
C                                  [ˎright   ] I think I'll 'put that
         ˎbag in[ 'dustbin ]
T            [ {jə}gai gai  ] G[AIː    ]
C                          [ˎright ]
         {ə}GAI GDY GAI GIːː
C        (.)'pop to your ˎroom 'then [ ˎcm on]
T                          [gai eee ]er [ go on    ]up to my ˎgoom
```

T19

| T | | =you ask a chick chick |

TINE `LOVEY

C   (.)`no take- =

T   = chick 'Tine lovey

C   (.)'what do 'Steve [and`Michael 'do] in 'that`socialising 'book =

T   [‿Ti:ne lovey   ]

                                          = an a (.)nice little

'chick 'chick TI::NE lovey

C   (.)`listen (.)`listen 'look at`me: (0.8)`listen

     (.)you're not [‿talking 'nicely‿are you]

T   [chick chick chicken 'Ti]ne lovely

These episodes seem to emerge gradually from the discourse and fade just as gradually. They are possibly linked to excitement but appear to have no relation to other types of repetitiveness in Tina's language. The phoneme strings or phrases do not seem to occur anywhere else. The rhythmic nature of these repetitive episodes precludes the possibility that they are dysfluent in character.

4.4.5. Non-autistic repetition

Within the transcripts of Tina's conversation it becomes clear that the language of the non-autistic participants exhibits repetitive features. Non-autistic conversational participants make use of repetition for a variety of reasons and effects. Johnstone cites the following as normal uses of conversational repetition (1994: 6).

> Repetition can be a bridging device in conversation, a way of dealing with
> interruption, or a way of validating what another speaker has said. Repetition is
> a persuasive device. It is one of the primary forms of play.

and again:

> Repetition functions didactically, playfully, emotionally, expressively, ritualistically;
> repetition can be used for emphasis, or iteration, clarification, confirmation

From the transcripts of Tina's conversation it is clear that it is not only her who uses repetition. The extracts below exemplify the use of repetition by Tina's co-participants.

T20a

C   (1.8)`every 'day

     (1.2) an-(.) an 'tell‿Sushie you went‿walking‿yesterday

     (0.6)'what did you‿see on that‿pond

T   (1.5) [some 'ducks::   ]

C   [°what did you see°]

C   (0.5) some ͵ducks

        (.) [all ͵different   ] 'kinds

T   [*daddy 'du ɾks::*]   *creak*

             (0.8) *daddy ducks:*   *creak*

C   `daddy ['ducks   ]

S   [((cough))] =

T   = *daddy ducks* (.) *and 'muver ducks*   *creak*

T20b

S   (0.8) I'm 'pleased to 'meet`you

T   (0.9) 'pleased to 'busy ͵meet yer

S   (.) 'pleased to(.) [`meet   ] 'you

T20c

T |Sushi:e (.) I h|ave got a daddy ͵Si:mon

S   (0.6) ↑ha[ve you got a   'dadd]y`Simon↑

T20d

T   [when can] I go when it's my`turn ↓Sushi::e↓

S   (.) I don't 'know when is it your 'turn

T20e

T   (0.8) she calls me(.) chickenn ͵Tine {lə'vɒn}

C   (0.6) she calls her chic[ken   ] ͵pi::e =

T20f

T   = 'Sushie(.) whereabouts is my three likkle ͵pig 'book

      (1.3)[it's in]my 'box:::

S   [(-)]

S   (.) in your`box

T   (0.6) wherea ͵bouts is my 'box

S   (.) I don't ͵know wherea'bouts ͵is your 'box (3.9)`that your 'box

Some of these examples are reformulations, as in T20b where S repeats Tina without the unnecessary lexical item "*busy*". This is reminiscent of caregiver language for the purpose of correction (Bennet-Kastor, 1994) where mothers have been found to repeat around 22% of their two year old's language (Bennet-Kastor, 1994:162). In T20a Cindy repeats Tina's utterance and then expands it (Bennet-Kastor, 1994; Johnstone, 1994). Interestingly, in her third turn, Tina repeats Cindy and expands on her utterance. The two then appear in this instance less like caregiver and infant and more like mutually supportive co-operators in

discourse. T20e is a reformulation by Cindy, again, apparently for the purposes of correction. In T20f, the researcher repeats Tina's turn, and by doing so returns the original question to Tina. This is made clear by the use of intonation where S stresses *"is"*. Likewise in T20d, where Tina's question is used by the researcher to set Tina a question.

The key factor with these non-autistic repetitions is intonation. The researcher and caregiver make clear with their intonation patterns that they are consciously re-working the model utterance to make clear the discourse function. Simpson (1994) illustrates the importance in normal discourse of the intonation pattern in repetitions. Since nothing, or very little that is new, is added to the lexical or syntactic content of the utterance, the intonation is the only means whereby an interlocutor can be made aware of the significance and intended function of the repeated utterance.

As noted above, Tina's other-repetitions are much less frequent than those of her co-participants:

T21

T	[↑*sh'*] *angry little wi:::::::::tch* ↑
	odd voice quality
S	(0.7) 'angry 'little ˌwitch
T	(1.2) ↑*shangry little wi:::::::::tch*↑ *odd voice quality*

Here Tina appears to use herself as the model with an S turn intervening, rather than to other-model. The *"angry little witch"* sequence is one introduced by her, here and in other contexts. As has been noted above, Tina is far more likely to self-repeat than other-repeat:

T22

1	S	=⁻ye:::s (1.3) a::nd (.) how many`ears have`you 'got
2		(3.3) how [m]any`ears
3	T	[e]
4	S	(1.5) how´many
5	T	(0.9) one
6	S	(1.1) how´many
7	T	(0.8) one
8		(2.7) °two:°
9	S	(0.5)how´many
10	T	(0.7)°two°
11	S	(.)̀two(.)° that's it°
12		(0.9)̀now (.) think ˌha:rd 'Tina
13		(1.5) 'how many`legs (.) has a`dog 'got
14	T	(3.3)°one°
15	S	(0.6) 'how many ˌlegs
16	T	ONE

17   S   (1.3) think ˌhaːrd about aˋdog
18   T   (0.7) one

Here, Tina seems unable to disinhibit *"one"* as a response to the researcher's questions. This sequence is somewhat puzzling in that Tina does eventually provide a correct answer to the researcher's first question (line 8). It is not, then, clear whether her persistently incorrect responses to the dog's legs question are due to genuine confusion, inability to disinhibit perseverative responding, or even willfulness in the context of unwelcome questioning. Self-models similar to the above are pervasive throughout the transcripts. Their genesis is often clearly external to Tina herself. T21 exemplifies this: the angry little witch is a character in a book which Tina and her caregiver have been reading together.

T23 below shows Tina using a self-model as a basis of a turn in which inability to disinhibit repetition manifests in the production of a syntactic error. Here plurality is incorrectly signified in company with the singular determiner. Plurality also gives Tina difficulty in the self-modelled frame-type repetition at line 6 of T17 above, where *" shoulder"* is supplied instead of the more conventional *"shoulders"* .

T23

T   [*five   ] 'years 'old   creak
C   (0.5)↓noˍ↓ (.) he in't (.) he'sˊtwenty::
T   (1.2) 'one yea[rs o] ld =   creak

Since Tina produces few utterances which have a productive appearance, it is difficult to ascertain whether errors of syntax are related to a restricted linguistic competence, or whether influence from the structure of the local context is so strong that it adversely affects current utterance structure in a similar way to perseverative speech errors in normal language (Harley, 1995). T24a below is suggestive of the former explanation, since there is no obvious model for Tina's errorful utterance in the local context. As with T24 and T17, the error concerns a noun phrase; in this case the determiner. It is however noted that some native speakers find the use of the determiner in T24a acceptable.

T24a

T   (2.7) why do I have to do any 'suːmːsː

A restricted linguistic competence may be expected, given Tina's performance on the WISC-R intelligence test. Such an interpretation of the data is, however, suggestive of an interactive rather than a modular account of language in autism.

4.4.6. Scripted prompts

A further type of repetitive language evident in the interaction between Tina and her caregiver is the use of 'scripted prompts'. The caregiver uses these in an attempt to elicit topic-focused language from Tina:

T25
C   tell, Sushie 'what you got to do when you 'cross, road
T   (1.8) 'look both ,ways
C   (0.6) cos (.) if you 'don't you'll , get
T   (1.1)°squashed°

The caregiver uses the format of an imperative " *tell*" construction to elicit a response from Tina. In her second turn the caregiver then uses rising intonation together with a sentence lacking its main verb (that is, a prompt question) to elicit more on the same topic from Tina. The script is evidently well-rehearsed and represents an attempt by Cindy to make Tina's conversational contribution cohesive in a non-autistic way. This strategy is often attempted by Cindy, but more often than not is unsuccessful:

T26
C   (0.8), tell her you 'went to , library last 'week and you got 'two, books (1.6)
        and (.) 'what they, call em
T   (0.6)w-(.) when can I do me 'eating 'out , book

In T26 above, Cindy tries the same structure with the imperative "*tell*" construction, but this time Tina does not give a response. Instead there is an extended pause (line 1). Possibly this is because this routine has not been rehearsed as T25 had been. Cindy attempts a more direct wh-interrogative elicitation requiring a more specific response from Tina, who responds on topic though not in the way Cindy requires. Tina also fails to complete the adjacency pair, responding to a question with another question rather than a response.

Cindy continues to attempt elicitation of topic-centred discourse. Note the incomplete sentence + rising tone in line 1, to which Tina this time does not respond on topic:

T27
C   =w-'what do they call them other, boo:ks (0.6) 'eating´out (.) and (.),wha::t Tine
T   (.)((unintelligible))(.) whereabouts is [(1.1)   ] that 'Linda
C2   [((cough))]
T   (.) whereabouts is`Linda
C   (.)in thē book
T   (0.6)b-(.)[w-   ]
S   [isn't]'that what it`says in the 'book =
T   =wh[e-]
C   `[Li]nda (.) and`Sue =
T   =whe- (.)
        whe-
C   [(1.1)wh-(.) whe-(.) where 'where do they]'go for a ,meal
C2   [((coughing))   ]
T   [(0.7)wh- wh when it's] 'lunch is nearly`over

C2   [((coughing   ]
C   (0.8)when's 'lunch nearly`over
T   (.)'little(.) I'm a 'little little (0.7) 'little little=
C   = 'Michael´an
T   (.)   nice[little   ]
C   [`Ste::ve]

The researcher and Cindy both join in in an attempt to elicit more topical conversation, using a combination of unfinished rising tone sentences, single-phrase topic-central utterances and direct wh-questions. Tina's responses are on topic but not directly relevant. Her contributions are either dysfluent, hesitant or wh-questions. The dysfluency and hesitation may be incipient repetitive episodes such as is shown in T28 below. The wh-questions produced by Tina look very much as if they form part of the question and answer routine that normally accompanies the subjects dealt with in the book. However, as noted above, Tina has a habit of turning the roles around from responder to questioner. Eventually Tina reverts to a repetitive episode, similar to one encountered later in the transcript (Transcription Two: beginning at line 90). This time the repetitive episode seems to emerge as a result of Tina's evident inability to continue with the direction that the discourse is taking:

T28

T   = *'where's my daddy 'be:ar*   *harsh voice quality*
        (0.9) *where's my `dad*   *harsh voice quality*
S   (1.3) (hh)I(hh) don['t‚know]
T   [when can] I go when it's my`turn ↓Sushi::e↓
S   (.)‚I don't 'know when i`s it your 'turn
T   (0.5) 'when 'it's- (.) when can I go ups-((sniff))(0.5) my`tu:rn
        (1.1) when are you ma- (1.0)m(.)you know what` I am (.) 'Sushi::e
S   (.)[`what   ]
T   [a little-](.) 'nice 'little (0.4) little m((2 sylls)) 'Sushie
        (.) nice 'little(.) little little (0.7) 'what's you 'call it (.) 'Sushie (0.6)
        'little little (0.5) 'little little (1.2) c'm ere‚Tina(.)[lovey] nice little
C   [(   )]
T   chick'chick Tine^ lovey =

Tina's attempt to reverse the roles of question poser and responder has not met with success here, but can be seen as a precursor to a repetitive episode. Similarly, Tina's attempts to use frames/ preferential collocations prefigures the repetitive episode. The use of repetition, then, begins to have the appearance of a strategy to cope with conversational difficulty. An indication of Tina ultimately giving up on being able to produce any kind of acceptable discourse contribution, is the occurence of a repetitive episode.

4.5. Communication in Conversation

Thus far it has been seen that repetition can be helpful for Tina in conversation in that it may enable her to both initiate and contribute to talk. In extreme circumstances, it may also enable her to close the discourse by reverting to episodes of repetitiveness. The possibility has been considered that the various types of repetition in Tina's repertoire may even represent a means whereby she is able to introduce new structures into her competence. A further advantage of using repetition as a conversational strategy is that it creates, albeit to a limited extent, the effect of cohesion; this point is important when one considers the difficulty autistic language users have with maintaining topic in conversation (Baltaxe & D'Angiola, 1992; Tager-Flusberg, 1993; Willcox & Mogford-Bevan, 1995). Thus, repetition is by no means an 'empty' feature of Tina's language: it enables her to do a great deal both linguistically and conversationally. However, one distinct disadvantage of repetitiveness is that it clouds the issue of meaningfulness in language. We are left with the question of how communicative is this type of language?

If Lyons' (1977) contention that communication implies intent and also choice is accepted, then, on both counts, Tina's preferential collocations and frame-type utterances preclude her from the communicative, since the range of utterances available to her is necessarily restricted both by her limited repertoire and also the strong influence exerted by her own immediately preceding turns. Her choice of language is evidently highly circumscribed and her intention seems to be shaped largely by chance other utterances or the structure rather than the semantic content of her own utterances. Other features of her language seem to reinforce this notion, for example, the conflation of adjacency pairs within a single turn and frequent overlapping, both exemplified above.

Closely related to the notion of communicativeness, meaningfulness can be assessed through the examination of a semantic system. As we see below, Tina's system certainly seems to exhibit signs of deficiency:

T29

S   (0.9) no:w (0.7) what d'you ‾ca:ll (.) a 'baby, co:w

T   (2.8) moo

S   (0.9) it says moo(.) yeah

     (.) whas a ` baby 'cow 'called

T   (1.9) 'shee:p

S   (0.3) ↑a ‾sheep (0.6) o̦ kay ↑

T30

C   'what` is a 'knife

(1.9) you ˉknow what a 'knife is ˉdon't you

T   (2.3) you do it with a 'fo::rk

S   (0.5)you 'do it with a ↑‿fo:rk ↑(.)‿yes ((clap))

T30 represents the culmination of an extended sequence during which the knife question was asked seven times by both Cindy and the researcher. During this sequence, Tina evaded response by herself repeatedly asking a question ("where's Harry?"). Tina's transcripts contain many such examples. Her actual responses to the questions, shown in the extracts above, are related, but not strictly relevant, to the required response. Again, it should be remembered that wh-questions are known to be problematic for autistic people. However, there is clearly difficulty over and above that which exists at discourse level in T29 and T30, such that Tina is unable to provide a clear and unambiguous response to the questions posed.

When expressive linguistic ability is restricted to such an extent, communicative ability must be necessarily affected. The concept of cohesion in discourse may also be a problem for one whose semantic expression is limited since 'topic', the usual means of cohering discourse, is linked to semantic awareness. This semantic limitation may then be related to Tina's tendency to cohere her talk by structural rather than topical means. For example the following utterance follows a long period of *"Can you tell me Tina, what is a . . ."* questions:

T31

T   (0.8) {kənə?}- (.) can you˙tell me

S   (0.8)what =

T   = Sushie (.) where {ɪz˦ə} (.) where is a 'fan 'tastic

S   (0.4)'where 'is fan‿tastic

T   (0.7) 'no::(.) can you (.) 'tell me(.) where is a 'fan'tasTIC

T32 precedes the T30 sequence above and, as with T31, follows an extended questioning sequence.

T32

S   (.)'what's a ‿kni::fe

T   (1.0)'no:: (.) 'where's(.)‿Harry

S   (1.6) 'I don't ‿know where 'Harry is

In both T31 and T32 Tina repeats an utterance over and over again, effectively taking over the questioning role from the researcher and forcing her into respondent position. Harry was not relevant to the discourse until Tina's mention, while Tina's utterance in T31 makes no sense in conventional terms. The use of *"fantastic"* as a noun further implies that the

content of the question is not of primary importance. Function and structure seem to be more salient here. The overarching implication of T31 and T32 is that Tina's use of these utterances is not semantically competent. These utterances seem to be far more consistent with a holistic strategy where frame-type structures are combined with constituents whose semantic and discourse relevance is of secondary importance, than with a productively competent analytic strategy.

Structure and function then, seem to be more salient aspects of Tina's discourse than do semantic expectations and requirements.

4.6. Summary

It is clear from the described features of Tina's language, that, while repetition is prevalent, she is not particularly echolalic. Her use of her own utterances as models and those of others to help structure utterances rather than merely parrot them, gives an overall impression of some degree of productivity at work within a limited cognitive framework. Limited cognition as well as limited productive competence is further suggested by Tina's syntactic errors, although, as mentioned above, such an interpretation of the data has far-reaching implications for the nature of linguistic processing in autism, and possibly in non-autistic language. Tina seems predisposed to put discourse functions before semantic relevance of her talk, particularly in the context of sequences in which she is clearly out of her depth. In the performance of these functions, repetitive strategies are mobilised. These strategies may overlap and interact with one another in complex ways and vary in the degree of productivity which underpins them.

The issue of cohesion has recurred often in the discussion of Tina's conversation. Tina's cohesive devices certainly seem idiosyncratic at times. Tannen (1993) discusses how participants' expectations of discourse may form a large part of the understanding and expression within conversation. On this level, it is possible to see that Tina's use of her past experience of the world is not comparable to that of her conversational co-participants. There is a disjunction between what she expects of others and what they expect of her in conversation. What we have seen demonstrated in Tina's talk is Tina struggling with the conversational expectations of others, whilst they in turn struggle to manage hers. In short, a communication problem.

To quote Becker (1982, cited in Telles Ribeiro, 1993: 78):

> The problem is not only that there is language, but that it is so complex. Using language involves doing several things at once, any one of which can go wrong. That is, in using language I am making sounds (or inscribing them), shaping structures, interacting with people, remembering and evoking prior text, and referring to the world - all at once.

In trying to understand Tina's use of language there has been a focus on what is lacking or idiosyncratic. By looking at her conversation from the perspective of so many levels to consider with so few resources to hand, however, one may take a more indulgent perspective. Communication with Tina is possible, so long as the notion of communicative can be defined according to the needs and uses of language users with autism. Telles Ribeiro (1993) speaks of analysing coherence within a text from the perspective of participants conveying "superordinate messages", or a metamessage. From this perspective it may be possible to understand how it is that Tina may have made her talk cohesive beyond the use of structure alone.

5. Phoebe

5.1. General Background

Phoebe is an autistic woman resident at Forest House in South Yorkshire. Conversations were audio and video recorded between Phoebe and the researcher during August and September, 1995. The WISC-R intelligence test was also carried out but was not video recorded since it was felt that Phoebe might find this too distracting and hence a fair assessment of her cognitive ability would not be obtained. Phoebe was twenty seven years old at the time the recordings were made.

5.1.2. Social and behavioural

Phoebe has a somewhat passive overall demeanour and is unlikely to initiate actions of any kind. Since she does not actively avoid social interaction, nor does she interact in an eccentric manner, she falls into Wing and Gould's second category of social subtypes within autism: passive (1979). She has obsessive behaviours especially in relation to food and drink, and has phases during which specific foods or drinks are preferred. At the time of the recordings, Coca Cola and tea were her favourite drinks and her interest in food was primarily focussed on various types of sweets. When Phoebe does initiate activity it is usually in relation to a desire to obtain food or drink, and on these occasions Phoebe is found to exercise extreme willfulness in contrast to her more usual passivity. Indeed, Phoebe's obsession with drinking is so pronounced that she has been diagnosed as suffering from polydypsia (obsessive drinking). Obsessions within autism are frequently noted in the literature (Baron-Cohen, 1989; Rutter, 1985) and, it has been suggested, may give rise to compulsions or compulsive behaviour in order to reduce anxiety brought about by obsessiveness (Foa & Tillmans, 1980; Rachman, de Silva, & Roper, 1976). Phoebe's perseverative scratching and eye-rubbing mentioned below may then be considered as compulsive.

Phoebe's passivity is reflected in her restricted use of gestures and facial expression. This is in accord with Lord's findings (1993: 308), based both on parental accounts of their autistic children and also empirical study (1993: 307). She has a tendency to sit in a slumped position and to be unresponsive to questions or conversation. The researcher, it will be noted, makes frequent use of repetition in an attempt to combat this lack of responsiveness; a strategy which is not always successful. Phoebe makes eye contact only very rarely and shows no particular tendency to respond to contact through touch. Smiling is also infrequent. Again, Lord found this to be a characteristic of children with autism (Lord, 1993). Phoebe has a stooped standing posture and walks on her toes.

On occasion, Phoebe perseverates physical reaction type behaviours, for example rubbing her eye or scratching. The movements begin abruptly and continue for longer than is

generally regarded as normal. Phoebe also often rocks whilst in a sitting posture, keeping her lower body and her arms still. During the recordings, Phoebe also exhibited narcoleptic type behaviours. As mentioned above, these behaviours may or may not be seen as compulsive (that is, arising out of obsession-induced anxiety). Perhaps a more productive way of considering this type of behaviour is to follow the argument proposed by both O'Gorman (1967) and Rimland (1964), who suggest that the autistic inability to fully comprehend their environment leads the autistic individual to focus on certain highly predictable elements of it; that is, they develop 'obsessions'. When anxiety is increased through relatively increased unpredictability of environment, repetitive or apparently compulsive behaviour results as a means of bringing some familiarity, and hence control, to a chaotic situation. Such a model is attractive in that it seems to explain particular features of autistic conversation as well as the well-documented autistic foci of interests. One should beware however, that in making such a model account for conversational behaviour as well as physical behaviour, one may run very close to suggesting that the features of autistic language are explicable by the same mechanisms that govern non-linguistic behaviour. The various types of repetitiveness that occur within conversation and language must then be analysed most carefully since the theoretical implications are far reaching.

5.2. WISC-R Intelligence Test Scores

The WISC-R was administered in a closed room in the satellite house at Forest House where Phoebe lives and spends the majority of her time. Other than the researcher, no-one else was present in the test room. As mentioned above, the video recorder was not set up in order to minimise distracting influences during testing. Phoebe seemed more than usually alert during the test, at points even reaching a degree of excitability. At times it was necessary to bring her attention back to the questions by overt methods such as repetition, and attention focussing techniques. Depite this and in common with Tina, Phoebe's test results were disappointing. Her scores were so low as to make obtaining a scaled score impossible for either the performance or verbal subtests.

PhT: i - WISC-R: Phoebe's raw scores

Verbal Tests	Raw Scores	Performance Tests	Raw Scores
Information	2	Picture Completion	0
Similarities	0	Picture Arrangement	2
Arithmetic	4	Block Design	5
Vocabulary	8	Object Assembly	6
Comprehension	0	Coding	0

Given Phoebe's generally distracted performance and the low scores obtained, any conclusion made is unlikely to be sound. It may be noted that, whereas Tina obtained a

slightly higher score for the verbal subtests than the performance subtests, Phoebe's scores seem roughly equivalent.

5.3. Speech

5.3.1. General

Throughout the recordings, Phoebe speaks with a low amplitude and sometimes rather quickly, running words together. A fair amount of her speech is not articulated clearly:

Ph1

1	Ph	*((mumbling while drinking))*
2	S	´yeah
3		(4.1) see the m-(.) 'whiskers are´missing
4		(1.0)` now (.) what im'portant 'part's 'missing` here (0.6)
5		(0.6) what's 'missing ˏthere
6		(1.2) in 'that` picture
7		(.) 'look at the 'picture˛ Phoebe
8	Ph	(1.0) aːr (.)i -it's (.)˛funny those (.) they're˛standing 'up (.) n see if they 'are
9		'standing up (.) cn .hhh (.) can` wee wee *((4 sylls (.) 2sylls))* (.)` all right
10	S	what's 'missing 'there` Phoebe
11	Ph	*((drinking noise))*
12	S	↑can you 'see what's ˏmissing↑
13	Ph	(2.9) { ðə`wɪnːdə səuːlɛʃ}

Ph2

	S	(.) now (.)` these 'pictures (.) 'tell a ˏstoːːry (0.8) o´kay (.) about a
		ˏlady who [ˏweighs herself]
	Ph	[have a còke (.) an] {lɪkɹɪ` sɔlʃɔts}
		(.)°((*4 sylls*))°

Ph3

1	Ph	(2.1)yeah I have
2	S	↑'where did you´go↑
3	Ph	{wʊɾ˛ɛɾi}
4	S	(0.9) ↑with´elly↑
5	Ph	{wʊɣ'ɛli}
6	S	(0.9)p-´pwhelli
7	Ph	no {wɪd`dɛdi}
8	S	(1.2)˛say a'gain=
9	Ph	={wɪd`dɛdi}
10	S	with´eddy
11	Ph	(1.4){wɪd`dɛdi}　　*slightly increased in vol and slight increase in pitch on stressed syllable*

12	S	(1.3) wh-˙who's that
13	Ph	(1.1) he's the man who takes me on ˎholiday
14	S	ˎoo::ːh ˎriːːght=
15	Ph	= °o::h ´right°

Ph4

1	S	(2.2) and 'who˙else did you 'go with
2	S	(4.7) and 'whoˇelse did you go with
3		(1.6) ↑ ´Phoebe↑
4		(3.3) ↑ˉPhoebe↑
5		(.) 'who`else did you go on 'holiday with
6		(7.3) did you 'go with your˙ daddy
7	Ph	(.) °yea I did° *fast*

Ph5

1	S	(1.4) have you 'got some ˎmoney to 'get some
2	Ph	yeah I have
3		(4.6) °got some 'money to 'buy some°
4	S	ˉgood
5	Ph	(0.6) °good°

In line 15 of Ph3 and lines 3 and 5 in Ph5 above Phoebe uses a reduced amplitude to repeat the researcher's immediately prior turn. The repetition in line 3 of Ph5 is lexically reformulated since "*get*" is replaced by "*buy*". Such repetition as occurs in these two utterances may be termed echolalic although reformulation does occur in all of Phoebe's three above echoes: in Ph3 and line 5 of Ph5 Phoebe's echoes have prosodic alteration, while in line 3 of Ph5 there is lexical alteration of the model. Echolalia and repetition are dealt with in more detail below, but here it is important to note the use of reduced amplitude accompanying immediate echolalic utterances.

Reduced amplitude is also noted in Ph4, where the researcher has made 6 attempts to elicit a response from Phoebe. The successful interrogative form is the one which enables Phoebe to give a minimal response. Reduced amplitude here may be an indication of unwillingness to co-operate in the dyadic structure of question and answer routines. Interestingly, Paccia and Curcio found that yes-no questions were more likely to be echoed than wh-questions or sentence completion items (1982: 25). Here, it is the yes-no interrogative which elicits a non echolalic, though minimal, response.

As mentioned above, the quality of Phoebe's speech can cause her interlocutor problems due to a lack of clarity. In Ph1 at lines 1, 9 and 13, and in Ph2 at line 4 her speech is incomprehensible due to imprecise articulation in company with reduced volume. At times,

though individual syllables may be distinct, Phoebe's phonemic rendering of lexemes causes confusion for her co-participant: for example, in Ph1 at line 9 and throughout Ph3. In particular, the target utterance at line 13 in Ph1 is unrecoverable. Phoebe's rendering of " *liquorice allsorts*" in Ph2 is consistent throughout the transcription. Here, she has inverted the /ʃ/ and /s/ segments. The target "*with daddy*" in Ph3 has her realising both /ð/ and /d/ segments as the tap [ɾ] in a process whereby all non-initial consonants are harmonised. The /a/ segment in "daddy" is also raised to become [ɛ]. Phoebe's third attempt at the target at line 7 is more successful in realisation of the alveolar segments, but harmonisation continues to operate so that the /ð/ segment fails to appear, while the vowel continues to show a lack of contrast with /ɛ/.

It is noted that the researcher tends not to make her difficulties in comprehension explicit to Phoebe through the use of clarification requests. When this does happen, however (as in Ph3), Phoebe makes repeated phonetic and prosodic modifications to her original utterance. Such alterations would suggest a degree of awareness of her interlocutor's conversational difficulty as well as an awareness of the nature of her responsibility to increase phonemic clarity in response to such expressed difficulty. However, while her prosodic alterations are useful to her co-participant, for example, increasing volume and raising the pitch of stressed syllables, the nature of her phonetic alterations is less so, and confusion continues to ensue.

A similar yet interactionally more successful sequence occurs in Ph6 below.

Ph6

1	S	(.) what's your 'favourite 'thing in the`world
2	Ph	(12.9){tsv ɪmɪn}
3	S	(0.9) spinning
4	Ph	(0.6){swɪmɪn}
5	S	(1.3) 'what's ‚that
6		(4.9) 'what is ͏it
7	Ph	(2.5){sʃɪmɪn}
8	S	(.)̀swimming
9		(1.3) are you 'good at`swimming
10	Ph	{mjɛp}

Phoebe concentrates her modification efforts correctly this time; that is, on the first two segments of "*swimming*", initially produced inaccurately by her. Phoebe's second attempt is an accurate production despite the researcher's continuing difficulty in identifying the target. Interestingly however, Phoebe continues to modify the first two segments in response to the researcher's repeated repair request.

The speed and blurring of word boundaries is a further cause of conversational difficulty. Had Phoebe made the word boundaries evident in Ph3, comprehension would have been

significantly aided. This articulatory characteristic also occurs in Ph2 at line 3 and below at line 6 of Ph7 , line 2 of Ph8 and line 3 of Ph9:

Ph7

1	S	(6.5) who`lives in this ʰhouse
2		can you 'tell me who 'lives in this‚house
3		(8.5)´Phoebe
4		(2.0) ↑can you 'tell me who 'lives in this`house with you↑
5		(5.6) 'quite a 'lot of‚people aren't‚there
6	Ph	(0.7) {ɛəːpiplnǒə}

Ph8

	(3.6) ↑what 'else do you 'like‚doing‚sweetheart↑
Ph	{gəuntɔːlət}

Ph9

S	(0.6) ˈwhat d'you‚do
	(1.8) can you 'do (.) the 'front` craːwl
Ph	(.) {fɹʌnʔkɹɔː}

In Ph7 and Ph9 the speed and blurring of word boundaries within the relevant contributions may be attributed to their echolalic nature. In Ph8 and Ph2 as well as throughout Ph3, the reasons for this rhythmic distortion seem less clear. It is noted however, that "*liquorice allsorts*" occurs frequently throughout the transcriptions (see, for example, Ph10 below) which suggests that, here at least, the speed and concomitant loss of a perceptible word boundary may be due to over-familiarity of usage. The other mispronunciations have a less clear source however. Ph2, Ph3 and Ph6 suggest phonological difficulties since consonant inversion, harmonisation and inaccurate cluster production are reminiscent of developmental production difficulties. However, loss of contrast between phonemes, as occurs with the vowel segments in Ph3, may be suggestive of systemic confusion and hence of a difficulty that is more linguistic in nature. In particular, Phoebe's continuing adjustment away from a correct pronunciation in Ph6 is not indicative of a firmly established system.

5.3.2. Consistent phonetic and prosodic production
Certain lexical items occur throughout the transcriptions with remarkably consistent phonetic production. It has already been noted above that "*liquorice allsorts*" is an oft used lexeme for Phoebe. Examples of its phonetic rendering on four different occasions are shown below.

Ph10

a. Ph (1.2){lɪkʌɪs ˋsɔlʃɔts}=

b. Ph (2.9) {lɪkʌɪs‿sɔːlʃɔts}

c. Ph d'you know what˘ sweets I'm 'buying to'night (.) some {lɪkʌɪˋsɔlʃɔts} (.)ˊall right

d. Ph [have aˋcoke (.) an] {lɪkʌɪˋsɔlʃɔts}

"*yes*" also occurs frequently with the same segmental structure (this item is discussed at length below):

Ph11

Ph {mjɛpˈ}

" *all right*" also tends to occur with the same intonation contour on all occasions of its use. Its sentence function on these occasions is as a tag. On one of the two occasions below (Ph12c, line 3) where "*all right*" occurs with a different contour, both the syntactic function of "*all right*" and the context of Phoebe's surrounding talk are also somewhat different. Indeed, here, Phoebe seems to have taken on the voice of one of her carers in a burst of self-regulatory delayed echolalia. Ph12g shows the only other occasion throughout the transcripts of Phoebe's use of "*all right*". Here the phrase functions not as a tag, but as a response to a wh-question. It seems, therefore, that the consistent prosodic production of " *all right*" is linked not to the lexeme but to its syntactic function. A further possibility is that prosodic consistency may be due to clause final position rather than syntactic function. In any case, "*all right*" seems to have a formulaic aspect within Phoebe's repertoire of use.

Ph 12a

Ph (3.2) I 'might buy a big {'paxʊʔ ə}‿fudge to'day (.) ↑ˆall right↑

Ph12b

Ph I need to 'buy a { 'paxʊʔ ə 'tʃɒxlʊ} ëclairs to'day =
(.) just being a 'baby *cow* (.)ˆall right   *fast*

Ph12c

Ph   [I need to be‿have my]'self if I want
to ˏgo (1.1) all˘right (.) 'you be'have yourself i you want tòˈgo (.) dunno if we're
ˏgoing 'yet (3.3)((*drinking tea*)) I got my ((3sylls))ˆall right =

Ph12d

Ph (4.4) just having that 'laːːstˏbit (.) ˆall right   *from the kitchen*

Ph12e

Ph (2.0) nah (.) m (.) m (.) m you 'musn have another oneˆjus yet (.) because it's 'not
ˏtime f'a'nother oneˆall right

Ph12f

Ph   d'you know what`sweets I'm 'buying to'night (.) some {lιkɹῐ sɔlʃɔts} (.)`all right

Ph12g

S   (2.2)what do they‚ taste of

Ph   all right

In a similar way, Phoebe's use of the lexeme "*yes*" can be considered formulaic when its realisation is taken into account. There are two fundamental realisations of this item: one which has a closed syllable structure, "mjɛpˑ", and one which has an open syllable form, "*yeah*". The actual realisations are shown at Ph13 and Ph14 below.

Closed syllable forms

Ph13a

Ph   (1.2){mjɛpˑ}

Ph13b

Ph   (1.6){jɛpˑ}

Ph13c

Ph   (1.0) °{mjɛpˑ}°

Open syllable forms

Ph14a

Ph   yeah

Ph14b

Ph   {ᵐjɛ}

Ph14c

Ph   °{mjɛ}°

Ph14d

Ph   (0.7) m

Thus there are seven different possible realisations of "*yes*". With the exception of "*yeah*", all the tokens of the item only ever occur as the single component within a turn. "*yeah*", discussed further below, sometimes occurs as part of a longer utterance which tends to have some dependence on the immediately prior turn.

The breakdown of occurence of the tokens in Transcription One (23.8.95) is shown in the table PhT: ii below.

PhT: ii - Realisations of "*yes*" in Phoebe's talk

Realisation of "*yes*"	Percentage of total number of "yes" tokens (n =53)
mjɛpˀ	62.2%
jɛpˀ	9.4%
°mjɛpˀ°	3.8%
yeah as single turn component	7.5%
yeah as part of longer utterance	9.4%
mjɛ	3.7%
°{mjɛ}°	3.7%
m	1.8%

When these numbers are collapsed into the two broad category types mentioned above, they appear as below:

PhT: iii - Realisations of "*yes*"as closed or open syllables in Phoebe's talk

Realisation of "*yes*"	Percentage of total number of "yes" tokens (n =53)
Closed syllable form	75.5%
Open syllable form	24.5%

By far the most frequently occuring realisation of "*yes*" is, then, as [mjɛpˀ], while the closed syllable category accounts for over three quarters of all tokens. Sequential environment to the token categories shows a slight tendency for prior-production pausing to be longer for the open syllable forms: pauses in excess of 1.6 seconds never occur immediately prior to production of a closed syllable "*yes*" form, whereas pauses in excess of 2 seconds may occur prior to open syllable forms. Both form-types occur as latches and overlaps to roughly the same degree (0.15% of closed forms are latches or overlaps, as are 0.175% of open forms). There is, then, a suggestion that the closed syllable form and in particular the [mjɛpˀ] realisation, is formulaic in its usage. Not only does it occur far more frequently than any other realisation and never occurs as part of an utterance, but it also tends to be produced relatively quickly, post eliciting-interrogative. Functionally, with only three exceptions (and, of course, with the exception of the "*yeah*" forms which form part of a longer utterance), all the tokens are minimal responses, often produced after a prolonged interrogative series by the researcher. There is, therefore, little likelihood that particular realisations have any functional basis.

The "*yeah*" tokens which are part of longer utterances are shown below at Ph15.

Ph15a

S   (7.3) did you 'go with your˄ daddy

Ph   (.) °*yeah I did*°   *fast*

Ph15b

S   and then d'you 'go and 'get some˄ more

       (0.9)hhhhhhhh.h.h.h.h

Ph   (2.1) go and get some˄ more˄ yeah

Ph15c

S   (1.4) have you 'got some ˏmoney to 'get some

Ph   yeah I have

Ph15d

S   (1.0) 'make a 'mug of ˏtea

Ph   yeah 'make a mug of tea

With the exception of Ph15b, the "*yeah*" form occurs as the first component of the turn. Ph15a and Ph15c both involve repetition of the auxiliary but correct re-casting of the pronoun to make the utterance acceptable. Ph15b and Ph15d involve only slight modification of the model other than the addition of "*yeah*": this is tonal in both cases and is more extensive and hence more suggestive of communicative intent in Ph15b than in Ph15d. Interestingly, three out of the four exemplars of this type of "*yes*" token occur during a sequence on one of Phoebe's favourite topics. The single case where the topic was not one of Phoebe's obsessions, Ph15a, is uttered with low volume and at a fast rate. These features are associated with non-interactive sequences in Phoebe's talk and also occur in the transcripts of other study partipants (cf. Tom, Chapter 8). Conversely, the sequential environment of favourite or obsessive topic is shown to elicit comparitively more productive forms and structures in other study participants below (cf. Tom and Penelope). Ph15b, Ph15c and Ph15d, then, represent the most productive turns containing a "*yes*" token: they function beyond the level of minimal response and involve greater use of linguistic resources than any other token types.

Hence, formulaic productions can be seen to occur in Phoebe's talk. While there can be no association with function made in connection with formulaicised pronunciations, the less formulaic "*yes*" variant, "*yeah*" as part of a longer utterance, can be seen to have an association with a tendency towards greater productivity at discourse and clausal levels.

5.3.3. Prosody and echolalia

Phoebe makes a great deal of use of echolalia. As with "*all right*" and to a certain degree with "*liquorice allsorts*", immediate echolalic utterances often occur with a predictable

intonation contour. In Ph16 below, the contour is identical to that of the model utterance:

Ph16

S (1.7) d'y- are you allowed to`buy 'sweets

Ph are- are y'allowed to`buy 'sweets

On occasion, Phoebe bases an utterance on the researcher's immediately prior turn but modifies it by the addition of words. Local and Wootton refer to this type of echoing as "mitigated" (1995:156), following Fay (1967) and Paccia & Curcio (1982), while Schuler and Prizant talk about "structural changes" to the model utterance (1985: 167). An example of Phoebe's mitigated echoing is shown in Ph17:

Ph17

S `do yer(1.0)

   and then d'you 'go and 'get some`more

   (0.9)hhhhhhhh.h.h.h.h.h

Ph (2.1)go and get some´more´yeah

Here it is noted that not only does the echo represent a reformulation of the model in the addition of a lexeme, but the intonational structure is also modified. Note that insertion of "*yeah*" is outside both the tone unit and the syntactic unit of the model. Ph5 (reproduced again below) shows two such modifications of a model utterance; in the first instance, lexical, intonational and prosodic, and in the second, intonational and prosodic:

Ph 5

S (1.4) have you 'got some˛money to 'get some

Ph ye*a*h I have

   (4.6) °got some 'money to 'buy some°

S `good

Ph (0.6) °good°

In both echolalic utterances above, Phoebe deviates from the intonational contour of the model utterance. Both utterances also occur with reduced amplitude.

A further type of echolalia is shown in Ph18.

Ph18

S (3.7) d'you˛like 'cups of 'tea

Ph yeah

   (.) 'like 'cups of 'tea

Again, Phoebe's intonation is not an entirely faithful reproduction of the model on which it is based. Some truncation of the model has occured here which makes the echolalic utterance more pragmatically acceptable. However, it is noted that truncation of (not necessarily echolalic) utterances occurs in the conversation of other autistic language users

in the study. The intentionality of the pragmatically acceptable reworking is then called into question. It should not, then, be assumed that the omission of the auxiliary and subject reflects a conversationally competent use of an other-model.

It will be further noted, in this as in the majority of the utterances in this section, that Phoebe's intonational reformulation of model utterances may in some sense be seen to be a 'diluted' version of the original. That is, Phoebe's intonation contours may be reflective of the autistic tendency of intonational flattening (as described in Baltaxe & Simmons, 1985; Fay, 1969; Rumsey, Andreasen, & Rapoport, 1986; Tager-Flusberg, 1981) rather than a conscious reformulation of the model. Despite the association of intonational reformulation with functionally more interactive echoing (Prizant & Duchan, 1981; Prizant & Rydell, 1984; Schuler & Prizant, 1985), one should beware here of ascribing an intentional element to this type of reformulation. Throughout the transcripts of Phoebe's conversation, utterances occur with flattened intonation, and often a complete absence of tone movement altogether. Ph19 below is one example of this type of utterance, but they occur with regularity throughout the transcripts.

Ph19

Ph   easter eggs

Ph20 below, meanwhile, shows Phoebe making clear use of the preceding turn as a model in a functionally highly interactive way; that is, there is appropriate syntactic reworking, but with intonational restructuring which is not concomitant with normal conversational expectancies:

Ph20

S   = are 'they your 'best` sweets

Ph   (.) they're my 'best ˏsweets

It would appear then, that while Phoebe's echolalic utterances may show evidence of comprehension and communicative intent in their non-prosodic reformulations, her prosodic competence is questionable. Whether this is indicative of the operation of a reduced level of comprehension and/or communicative competence or merely a production issue is difficult to decide. That Phoebe has disordered use of intonation is clear however.

Phoebe's use of other-turns as models need not be immediate. We have mentioned the possibility of delayed echoes with a self-regulatory function occuring within Phoebe's conversation. It is notoriously difficult to be conclusive about autistic use of delayed echolalia since the model may have occured at any time prior to the suspect utterance and is highly unlikely to have been captured on tape (Prizant & Rydell, 1984). Below, however, we see Phoebe apparently making delayed use of the researcher's turn as a model, again with appropriate syntactic modification, and again, with intonational restructuring of a flattened type similar to that discussed above.

Ph 21

S   (1.5) did you 'walk by the˘sea

seven lines intervene

Ph   (2.0) walked by the˛sea=

A similar phenomenon occurs within the same transcript:

Ph22a

S   'which˘one

(1.6) 'what ˛colour was it

(4.3)↑ 'what ˛colour was it ˛Phoebe↑

(4.7) Phoebe (.)

'what˘colour was it

Ph   it was a ˛red colour

and 50 lines later:

Ph22b

S   he 'looks like a ˛boy

(1.6) what 'colour˘hai::r has he 'got

Ph   (2.3) red colour

Importantly, Phoebe here does not use the researcher's turn as a model but her own turn. This is the only occurrence within the transcripts of Phoebe using her own rather than an other-turn as a model for repetition. Again, there is both syntactic and intonational reformulation. The syntactic reworking is however not completely acceptable; the utterance in Ph22b is distinctly telegraphic in its lack of an indefinite article, while once again, the prosodic reformulation may be best described as intonational flattening. This phenomenon may be related to that of stress equalisation as noted in acquired apraxia of speech and foreign accent syndrome (Kent & Rosenbek, 1983).

In summary then, it has been seen that Phoebe's intonation is different to that of normals and to a large extent conforms with the conventional expectancies that autistic language users may flatten intonation contours within their speech. This flattening occurs even in echolalic utterances and may even include the omission of stress (as in Ph9 for example). Often Phoebe's echolalia shows evidence of structural reformulation and hence, since this is often appropriate to the local context, seems to indicate competence at pragmatic and syntactic levels. Phoebe's use of intonation is not so clearly competent however. While we have seen that she is able to respond to expressed interlocutor difficulty in comprehension by making segmental and prosodic alterations to an utterance, it is not always the case that she is successful in these attempts. Prosodically speaking, while the more gross features of volume and main stress may be altered, the more subtle and complex alterations which need to be made to indicate, for example, word boundaries, are often not attempted. In company

with this, we find that with regularly used items, for example *"all right"* and the *"yes"* realisations, there is a strong tendency for the same intonation contour to be used.

The picture that is forming thus far, then, indicates a fairly passive interlocutor who rarely initiates conversation. Speech is sometimes inaccurately produced and suggestive of underlying systemic difficulty. Reformulated echoic forms are pervasive. Consistent phonetic and prosodic productions occur with some lexical items and there seems to be a disordered use of prosody throughout. The next section takes a further look at echolalia and echolalic-type utterances in Phoebe's conversation.

5.4. Echolalia and Repetition

That Phoebe makes a great deal of use of non-productive language will by now be evident. In Transcription One (23.8.95) Phoebe makes 78 utterances. The breakdown of their discourse functions can be seen in PhT: iv below.

PhT: iv - Phoebe's discourse functions in Transcription One

Turn Type (n=78)	Initiations	Topic change/ continuer	Prior turn dependent	Echoes	"yes" tokens	Minimal responses	Responses
	1	2	3 (3.8%)	7 (8.9%)	26 (33.3%)	6 (7.6%)	33 (42.3%)

The utterance functions are defined as below.

Initiations are utterances that begin a talk sequence by introducing a topic which is taken up by the interlocutor in the next turn. The only initiation that is made by Phoebe is the opening turn of the transcript.

Topic continuers progress the topic by moving on from current topic in a clearly relevant way, while **topic change** alters the current topic by moving on in a non-relevant way.

Prior-turn dependent utterances have at least two lexical items or one complete phrase identical to the immediately prior other-turn. At least one turn component must be new (this may be a change in person for a pronoun), and there is a clear sequential relation to the prior turn.

Echoes are defined here as turns which are exact repetitions of whole or part of an immediate prior other-turn, and which contain no new items. 'Mitigated echoes' belong in the category of prior-turn dependent utterances. The sequential relation to the prior turn is not clear.

"yes" tokens are utterances whose only component is a *"yes"* token.

Minimal responses are single word utterances, where the information given represents the minimum possible provision of information requested.

Responses are utterances where a response is made which is longer than a single word.

The breakdown of discourse functions is at first glance surprising, given the non-productive nature of Phoebe's talk discussed thus far. In particular, there are more utterances that fall into the category of response than into any of the more repetitive categories. However, when the length of turns is calculated in morphemes (using Brown's 1973 method for calculating mean length of utterance), it becomes clear that Phoebe's responses have the shortest length of any of the functions (disregarding the single component functions of course). Responses average a morpheme length of 3.2 (107 morphemes in 33 turns); prior-turn dependent and echoes, calculated together as a collapsed category, have an average length of 3.8 morphemes (38 morphemes in 10 turns); initiations, topic changers and continuers (also collapsed into a single category) have an average length of 5.66 morphemes (17 morphemes in 3 turns). Responses are, then, typically brief. However, since the intention here is to investigate only the discourse functions of Phoebe's talk, the categories used above cannot be sensitive to the influence of self-models, non-immediate prior turns, and formulas, hence while a 'response' function seems to be productive compared with categories such as 'echo', the extent of such productivity is in fact not necessarily dependent on function. A further issue arises as to how far such brief utterances can be considered to be productive.

A further implication of the lengths of the function categories, is that Phoebe is at her most productive at critical discourse points (initiations, topic continuers and changers). However, these last functions are achieved by utterances which take the theme of sweets as their topic. Hence, and as explored further below in this chapter (in section 5.5.: *Favoured structures and themes*), topic initiators, changers and continuers are far from productive. Indeed, the low number of such turns would seem to indicate their sequential location is unlikely to be primarily linked to discourse function. Topic and form may well be more salient categories for Phoebe herself.

Since the categories of prior-turn dependence and echo used above are not sensitive enough to the variety of echo-forms that occur in the transcripts, Prizant and Duchan's functional categories of echolalia may be usefully applied to the data (Prizant & Duchan, 1981; Prizant & Rydell, 1984). From a total of 134 utterances, 11 can be categorised as immediately echoic, that is:

"The child's[sic] echoic response must have occurred subsequent to the interlocuter's utterance, and it must have consisted of segmental and/or suprasegemental similarities to the utterance of the previous speaker, involving either rigid echoing of the model utterance (pure echolalia) or selective repetition of elements occurring within two utterances of the original utterance." (Prizant & Duchan, 1981): 243.

It will be noted here that the focus of Prizant and Duchan's study is the language of autistic children. There is, then, a likelihood that Phoebe's echoic utterances may not fit neatly into the given categories, and indeed, we find this to be the case. Utterances such as those shown in Ph23 below seem to be candidates for inclusion in either the functional category of rehearsal or that of turn-taking. The functional/non-functional category of non-focussed echoing may also present a possibility for these utterances.

Ph23

a. S   ˌoo:::h ˌri::ght=
  Ph   = °o::h ´right°

b. S   (5.6) 'quite a 'lot of ˌpeople aren't ˌthere
  Ph   (0.7) {ɛəːpiplŋǒə}

The following utterances seem to be clear members of Prizant and Duchan's functional category of "*yes* "answers. Note that the researcher treats them as such:

Ph 24a

S   (1.7) d'y- are you allowed to`buy 'sweets
Ph   arɛ- are y'allowed to`buy 'sweets
S   (2.4)d'y'how 'often d'you 'have sweets °then°

Ph24b

S   (1.8) can you 'do (.) the 'front`craːwl
Ph   (.) {fɹʌnʔkɹɔː}
S   (1.0) and what 'else can you`do

Ph24c

S   (.) did you 'have a 'lot at`easter
Ph   n'a lot at easter

An interesting feature of Phoebe's echolalic tendency is shown in Ph24a above, where both the researcher producing the model utterance, and Phoebe echoing it begin their utterances with a dysfluency. A related type of echolalia to "*yes* "-answering and one which has the appearance of a later stage function than those described by Prizant and Duchan is illustrated below:

Ph25a

S   and then d'you ˈgo and ˈget someˋmore
(0.9)hhhhhhhh.h.h.h.h

Ph   (2.1) go and get someˊmoreˊyeah

Ph25b

S   (3.7) d'you ˌlike ˈcups of ˈtea

Ph   yeah
(.) ˈlike ˈcups of ˈtea

Ph25c

S   (.) d'you have to ˈclean yourˌbedroom

Ph   (.) {mjɛ} clean my bedroom

Here the apparent function of the echoic utterances is again that of *"yes"*-answering, but Phoebe makes this more pragmatically acceptable by the addition of *"yeah"* inserted at one or other end of the echolalic string. This type of utterance therefore seems to both support Prizant and Duchan's functional category of *"yes"*-answering as well as suggesting that a later developing structural realisation may exist for this function. An even clearer exemplification of this type of utterance is shown in Ph25d.

Ph25d

S   right (.) youˆready then =

Ph   =yeahˆready then yeah =

Related to the category of *"yes"*-answer but not mentioned by Prizant and Duchan are the following utterances:

Ph26a

S   (0.9) d'you ˈeat them ˈaːll atˋonce or do youˋsave some

Ph   (0.6) eat em all aˋonce

Ph26b

S   (1.6) do you ˈmake ˈmugs of ˈtea forˌeveryone orˌjust you

Ph   (1.2){tə} ˈeveryone

These utterances fall into the category of echolalia simply because they meet the structural requirements of echolalia given above (Prizant & Duchan, 1981). However, within a non-autistic conversation, these utterances could easily be seen as cohering the discourse and, further still, as indicators of a high degree of interpersonal involvement between conversational participants (Tannen, 1989). Within the framework of autistic discourse however, this type of echolalia is perhaps best regarded as having the function of expressing a choice when presented with a range of options in a preceding utterance. Automaticity is not an explanation of the repetition here, since the part of the model utterance which is

echoed is the first rather than the last part.

From this somewhat limited sample of Phoebe's immediate echolalia it would appear that Prizant and Duchan's functional categories do have some relevance to adult autistic echolalia. Since no studies have been noted which explore the echolalic feature within *adult* autistic language, it may only be hypothesised here that aspects of immediate echoing in Phoebe's language suggest continuing development of echolalia. The function of "*yes-*" answering may be achieved by simple echolalia at an early stage, whilst later the same function is achieved by the addition of "*yes*" to an echolalic string, the utterance thereby becoming more pragmatically acceptable. The development of pragmatic ability asynchronously with non-social development has been discussed in the literature (by Tager-Flusberg, 1989; Wetherby & Prutting, 1984) and would seem to provide some foundation to such a hypothesis as is suggested here. That echolalia may develop rather than merely disappear is however not suggested in the literature.

5.4.1. Delayed Echolalia

As mentioned above, the difficulties involved in identifying delayed echolalia present researchers with obvious problems. Studies on delayed echolalia are therefore few, although attempts have been made to categorise delayed echoes in a similar way to immediate echoes (Prizant & Rydell, 1984) (see also Chapter 2: *Repetitive and echolalic language in autism*). Phoebe's data provide us with some apparent instances of delayed echoing, one of which appears at Ph22 above, although, since here Phoebe uses her own turn as a model, this utterance does not conform to the original definition of echolalia (Kanner, 1943; Kanner, 1946) as the "rote and literal repetition of the speech of others" (Schuler & Prizant, 1985: 164). However, utterances such as those at Ph27 below have the appearance of prototypical delayed echoes:

Ph27a

| Ph | [*there's more] in th `kitchen* | *fast* |

S   (0.9)´sorry

Ph   s 'more in the ˎkitchen if you`want it (.)
      and you got to 'drink´that one 'fiːːrst

Ph 27b

S   I 'don't know if we're ˎgoing to the 'sweet 'pla[ce sis ˎafternoon]

Ph   [I need to beˎhave my]'self if I want
      to ˎgo (1.1) all`right (.) 'you be'have yourself i you want tò go (.) dunno if we're
      ˎgoing 'yet (3.3)((*drinking tea*)) I got my ((*3 sylls*))´all right =

Ph27c

Ph   (2.0) nah (.) m (.) m (.) m you 'musn have another one´jus yet (.) because it's 'not
      ˎtime f'a'nother one´all right

These utterances are suggested as instances of delayed echolalia since they all make inappropriate use of the second person pronoun given the conversational context. Interestingly, all three seem to have the same non-interactive function of self-direction (Prizant & Rydell, 1984: 186): that is, Phoebe seems to be regulating her own behaviour with these utterances. Ricks and Wing (1975) suggest that such utterances are produced since those with autism lack an inner language with which to covertly regulate their behaviour. Phoebe's self-directive delayed echoes all serve to regulate Phoebe's compulsive interests in sweets and drink.

The possibility does of course exist that other instances of delayed echolalia are present in Phoebe's transcripts. However, since much of Phoebe's talk is either repetitive or brief it is suggested that there are likely to be only very few of these.

5.5. Favoured Structures and Themes

As noted above, Phoebe rarely initiates conversation or topics within conversation. Indeed, Phoebe's lack of willingness to talk is so marked as to make maintenance of topic characteristically the occupation of her interlocutor. Exceptions to this taciturnity occur as noted above with relation to the topic of sweets or drink. The instances where Phoebe makes topic initiations of this type are shown below in Ph28 (Ph28a is the topic initiator mentioned in PhT: iv above):

Ph28a

Ph   d'you know what˘sweets I buy n eːrr {lɪkɹɪsˋsɔlʃɔts}

Ph28b

Ph   I need to 'buy a { 'paxɪʔ ə 'tʃɒxlɪt} e˘clairs to'day =

Ph28c

Ph   = I need to buy some 'sweets sis ˏafternoon

(.)

        d'you wanna˘buy en(.) some ˏfudgːe

Ph28d

Ph   d'you know whatˋsweets I'm 'buying to'night (.) some {lɪkɹɪˋsɔʃɔts} (.)˘all right

Similar structures sometimes occur as topic changes in the sequential environment of questions:

Ph28e

S   (16.7) what's 'good aboutˋswimmingˋPhoebe

Ph   having sweets later

Ph28f

S	'what do we 'have to ˌdo ˋPhoebe
Ph	(2.5) buy 'sweets s'afternoon

Ph28g

S	(0.9) and what's the 'lady 'called who 'lives ˎhere
Ph	{ɡə} buy some sweets {sɪs}afternoon

Ph28h

S		= ↑d'you
	know how many p- (.) 'pennies make a ˋpound↑	*quite fast*
Ph	(3.2) I 'might buy a big {'paxɪʔ ə}ˎfudge to'day (.) ↑ˊall right↑
	(.) if I getˋfudge

Ph28i

S	(0.9) in what 'way are they àlike
Ph	(2.5) I think I'll buy { ˊswʌs}some 'sweets {sɪs}afterˋnoon (.)ˊall right

These abrupt topic changes in response to questions occur subsequent to at least two repetitions of the same question by the researcher on all but one occasion above (Ph28g). It will be noted that Phoebe favours particular structures and lexis to introduce the topic of sweets. Structures of the above examples are shown in PhT: v, PhT: vi and PhT: vii below.

PhT: v - Structure of abrupt topic changes in Ph24b and Ph24c

Subject	VP (modal+buy)	Object	Adverbial (time)
I	need to buy	a packet of chocolate eclairs	today
I	need to buy	some sweets	this afternoon

PhT: vi - Structure of abrupt topic changes in Ph24a and Ph24d

Main Clause			Relative Clause			
Aux	Subject	Main Verb	Obj (Rel Pron+sweets)	Subject	Main Verb	Adv (time)
do	you	know	what sweets	I	buy	
do	you	know	what sweets	I	m buying	tonight

PhT: vii - Structure of abrupt topic changes in Ph24e , Ph24f and Ph24g

Verb	Object	Adverbial (time)
having	sweets	later
buy	sweets	s'afternoon
buy	some sweets	this afternoon

The lexis used to accompany these structures is significantly restricted; for example, Phoebe does not talk about " *getting*" sweets, only "*having*" or "*buying*" them. The time adverbials which she uses are all related to the current day: "*today, this afternoon, tonight*". Further, in all but one of the above utterances, if the reference to sweets is expressed as "*some sweets*", then they will be obtained "*this* (or "*sis*") *afternoon*". We also see consistent phonetic production of "*packet*" and possibly "*this*" in "*this afternoon*". It is important to emphasise here that these utterances are considered to be repetitive rather than echolalic and that the repetitiveness, whilst not precise, suggests the existence of a limited repertoire of syntactic structures in company with restricted lexis, from which utterances on the topic of sweets may be constructed. This is less surprising for lexis than it is for syntax since within processing models, syntax is not normally considered to remain in storage beyond a few seconds (Harley, 1995). Studies have shown however that under particular conditions syntactic strucures may persist in production frameworks (Bock, 1986), and certainly we should note that, although the turns in question are by no means adjacent to one another, for the most part Phoebe's syntactically similar utterances do occur within a local context to one another. The possibility cannot be dismissed therefore of some type of syntactic priming mechanism, perhaps operating here in a similar way to lexical priming mechanisms. Processing implications aside, this type of repetitiveness suggests that within Phoebe's conversation, favourite topics seem to occur with restricted syntactic possibilities in company with limited lexis.

5.6. Syntax

5.6.1. Syntactic errors

Phoebe's more productive language can show some aberrant syntactic features although these do not seem to be systematic. The extent of Phoebe's syntactic competence is, however, likely to be disguised by her preference for short utterances. Given an average turn-length in non-repetitive structures of around 3 morphemes, the syntactic possibilities are extremely limited. The extracts below exemplify typical errors made by Phoebe.

Ph29

auxiliary omission

S   how many`ears d'you 'have

Ph   I got 'two 'ears

Ph30

preposition and determiner omission

Ph   e got 'one(.) 'two (.)' free:: (.) an he's going`toilet (.) he`wants to 'go: (.) an`I 'use it
      sometimes as`well

In Ph30 above the omission of the preposition "*to*" and determiner before "*toilet*" may
be acceptable as a dialect form.

Ph31

progressive inflection omission

Ph   (1.2) he's 'bend ˏdown like a (.) gi`raffe

Ph32

Determiner omission

Ph   I 'love` fudge (.) ↑ˏI do↑ (.) fro[m 'sw]eet ˏshop

Below (Ph33), Phoebe makes a syntactically non-acceptable response to the researcher's
question by missing out the verb phrase and its complement object (assuming a target
similar to "*put it in a kettle*"). Communicatively speaking, it is, however, possible for a
listener to reconstruct Phoebe's meaning from the isolated adverbial phrase which she gives
as her response, but whether her answer is acceptable semantically is not at issue here.
When a question is phrased "*what must you do to VP*", the response structure must
conform to that of the question, that is "*you must VP*" with a potential and acceptable
elision of everything but the VP, including the verb in its non-finite form with its requisite
complements and (optional) adjuncts. For example, syntactically acceptable responses to
" *what must you do to ski?*" could be anything from "*learn how*" or "*be mad*" to "*wear
big sticks on your feet and move quickly down icy slopes*". Phoebe's response is then not
syntactically acceptable here despite having a recoverable meaning.

Ph33

S   (2.0) o´kay
      (1.2)what 'must you ˏdo to make 'water`boil
Ph   (2.3) mm mm m (.) e::r (.) in a`kekkle

In Ph34 below the intonation contour of Phoebe's response has a final fall on "*cats*"
indicating that the clause is complete. Syntactically, though, this is not the case, although the
target here is not clear. There is a possibility that Phoebe intended that the noun "*cat*"
should be nominative despite the clear production of the genitive morpheme and the lack of
an attempt at self-repair. A second possibility is that the article may be superfluous and the
target involved a plural noun, despite the picture to which the utterance refers being of a
single cat. Finally, it is possible that a degree of affrication on the final segment of "*cat*"
could result in the audible realisation of "*cats*".

Ph34

S   (0.6) o´kay (.) now you ˛look at 'this 'one (.) and tell me what im'por

    [tant 'part's ˋmissing]

Ph   [ˆmmh ri::ght   ]

    ((mumbles - inaudible))

    there's a ˋcats

5.6.2. 'Scrambling'

Phoebe's utterances in the conversational transcripts from the administration of the WISC-R intelligence test are longer than in the purely conversational transcripts, and she is less inclined to allow lengthy pauses to occur within her turns. Some of these longer utterances have a 'scrambled' appearance, meaning relatively intact phrases are combined in confusing ways. For example:

Ph35

S   (2.9)n´o

    (.) ↑know how many ˛days (.) 'make a ˛week↑ =

Ph   = that's saying ˋhere (.) ts-(.) i s(.) a

    ˋweek (.) innit s⁺well

Ph36

S   (0.6) what's 'missing ˛there

    (1.2) in 'that ˋpicture

    (.) 'look at the 'picture ˛Phoebe

Ph   (1.0) a:r (.)i -it's (.) ˛funny those (.) they're ˛standing 'up (.) n see if they 'are

    'standing up (.) cn .hhh (.) can ˋwee wee *((4 sylls (.) 2sylls))* (.) ˋall right

Ph37

S   o˛kay (2.7) 'hard ˛questions ˛aren't they (.) right (7.2) 'put that 'back a ˛minute

    (7.4)((*3 sylls*))(4.1)

Ph   'hope you're 'going some 'coca cola to' night =

In the three above extracts, Phoebe's targets are unclear. These types of utterance are reminiscent of the kind of language which occurs within thought-disordered talk (Barr, Bilder, Goldberg, Kaplan, & Mukherjee, 1989; Bender & Fareta, 1972; Cantor, Evans, Pearce, & Bezzot-Pearce, 1982). A scrambled string which includes a snatch of self-regulatory delayed echolalia is given separately below, but if the extracts above include phrases with a similar source then this was not evident at the time, since, with the possible exception of Ph37, none of the individual phrases occur as echolalia elsewhere in the transcripts.

Ph 38

S   I 'don't know if we're ˛going to the 'sweet 'pla[ce sis ˛afternoon]

Ph   [I need to beˌhave my|'self if I want

to ˌgo (1.1) allˋright (.) 'you be'have yourself i you want toˋgo (.) dunno if we're

ˌgoing 'yet (3.3)*((drinking tea))* I got my ((*3 sylls*))ˋall right =

Since, with the exception of utterances which are echolalic or repetitive in some way (for example, Ph37 above), Phoebe's scrambled utterances represent her longest utterances within the transcripts, they may be indicative of an impairment in clause and discourse cohesion. It is tentatively suggested here that the scrambled appearance may result from an attempt to convey a sequence of related ideas in a manner beyond Phoebe's linguistic competence. Indeed, it is noted that, with the repetitive exceptions mentioned above, Phoebe consistently makes use of very simple sentence structures involving single clauses only.

The occurrence of scrambling is then, suggestive of impaired competence at the clause and discourse levels of Phoebe's language. Syntactic errors may also fit into this framework of restricted competence at higher linguistic levels. As mentioned above, Phoebe's errors are not systematic in that they are not associated with attempts at particular problematic constructions. For example, in contrast to Ph31 and Ph32 above, the progressive morpheme and determiner are used correctly by Phoebe in Ph39 below:

Ph39

Ph   (.) just being a 'baby *cow* (.)ˆall right   *fast*

Given that Phoebe's longer utterances are all either of the scrambled type identified above or are repetitive, and that while the first transcript has no examples of the scrambling feature, the WISC R transcript includes several, and further, that the first transcript has noticeably more pauses of greater length than the WISC-R transcript, there may be some kind of trade-off operating in Phoebe's talk. When Phoebe's talk features fewer extended pauses, there is a greater tendency for errors and scrambling to occur. The existence of fewer pauses suggests that Phoebe is taking on more of the conversational work than previously, which in turn suggests an increase in cognitive load. This, coupled with the effort required to respond to the questions of the WISC-R, may result in an increased number of errors as well as the feature of scrambling. In short, it is suggested that Phoebe's competence at both clause and discourse level is fragile and, under pressure, this weakness may manifest in the occurrence of both syntactic errors and scrambled utterances. While scrambling represents an attempt to combine linguistic units beyond Phoebe's competence, errors in syntax result not from attempts at problematic constructions at a local level, but as a result of the increased cognitive effort required by the type of discourse in which Phoebe finds herself involved.

5.7. Summary

Phoebe is, then, a language user of considerably restricted competence. We have seen evidence of a high level of repetition within her talk, both in the occurence of echolalia as well as that of repetitive structures occurring in company with restricted lexis. The formulaic

use of consistent phonetic productions of particular lexical items also occurs in Phoebe's talk. Further to this preference for non-productive language, particular problems with complex constructions and discourse maintenance and cohesion have been identified. Conversationally competent activities such as topic changing and initiation are carried out infrequently and with the invariable assistance of repetitive structures. Typically, Phoebe exercises avoidance of anything but the most simple of structures, often avoiding speaking altogether. Phoebe's language manifests as very different to that of Tina despite comparable WISC-R scores.

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6. Gary

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6.1. General Background

Gary is a young man with autism resident at Forest House in South Yorkshire. Conversations were audio and video recorded between Gary and the researcher between May and September, 1995. The WISC-R Intelligence Test was also carried out but was not video recorded, since it was felt that this might be distracting for Gary and hence a fair assessment of his cognitive ability would not be obtained. Gary was 24 at the time of the recordings.

6.1.2. Social and behavioural

Gary is a sociable young man who enjoys the company of others. Thus, within an autistic condition, he falls into Wing and Gould's third category of social subtypes within autism of active but odd (1979). It should be noted that whilst deviant social development and behaviour as a defining feature of autism (APA, 1994) have been correlated to mental age, the degree of social impairment typically measured in autistic individuals is not attributable to mental age alone (Volkmar & Klin, 1993: 45). These points are of special relevance to Gary's case since his measured intelligence quotient is below the baseline for obtaining a scaled intelligence quotient score (see below), and yet the 'active but odd' definition is more often associated with the highest mental age of the three subtypes.

Gary has a generally friendly and outgoing appearance and exhibits a willingness to co-operate with others. He is interested, and can be pro-active in social interaction. However, Gary's confusion as to the 'rules' of social life is evidenced within the transcripts as it is throughout conversation with him:

G1
S   (0.6) 'my 'doctor is a˛woman (.) a˙la::dy
G   (.) 'she my˙friend

Gary's carers report that he has consistent problems in ordering his social world into friends, acquaintances, carers and those who have a more long-term relationship with him, and his behaviour as well as his conversation exemplifies this confusion. Despite this, Gary seems fascinated by social relationships and regularly reverts to it as a topic of talk.

In a perhaps related manner, Gary also seems interested in social events, particularly those which have some element of ceremony or ritualised activity. For example, in Transcription One (25.5.95) he brings up the subject of Remembrance Services and seems particularly fixated by the observation of a minute's silence. In a similar way and with relation to one of Gary's other interests, Gary regularly mentions the activities of preparing for the arrival of and introducing a comedian in Transcription Two (23.8.95). Gary also has what may be termed obsessive interests in people (although see comments in Chapter 5: *Phoebe* relating

to obsessions in autism). At the time of the recordings, he made frequent reference to Duncan Novell, a local comedian. Carers report that recently he had a similar interest in the wrestler Big Daddy.

Gary is a great mimic of others. He can imitate the voices of co-residents with a high degree of accuracy and can convincingly adopt a variety of regional accents. This ability is exercised at intervals throughout his conversation and is perhaps interesting when viewed alongside Gary's more general tendency towards linguistic and conversational repetitiveness.

At times Gary's behaviour has given his carers cause for concern. Whilst not violent, his approaches towards others have sometimes been inappropriate and have necessitated his separation from his peers. Gary apparently suffers a great deal of anxiety during such episodes, which at least in part appears to be caused by an awareness of his difference to non-autistic people and the concomitant limitations to his social experience.

6.2. WISC-R Analysis

A similar methodology to that described above (in Chapters 4: *Tina* and 5: *Phoebe*) was adopted for the administration of the WISC-R. The test was administered in a closed room in the day centre at Forest House during the early afternoon. The researcher and the research participant were the only people present throughout the administration of the test, although a carer employed by Forest House was present immediately before the session began. An audio-recording was made of the complete session. As with Phoebe, the test was not video recorded in order that the environment be as minimally distracting for Gary as possible. Gary was happy to take part in the test though he seemed to find the later parts of it somewhat taxing and at this stage became quite distractable. In common with both Phoebe and Tina, Gary failed to score sufficiently high to obtain scaled scores for either the performance or verbal subtests.

Interestingly, both Phoebe and Gary obtained similar raw scores on the test; Phoebe scoring 27 and Gary scoring 24 overall. However, their profiles were not particularly similar, as can be seen when the two sets of scores are compared. A breakdown of Gary's raw test scores is given below

GT: i - WISC-R: Gary's raw scores

Verbal Subscale	Raw score	Performance Subscale	Raw score
Information	4	Picture Completion	0
Similarities	0	Picture Arrangement	0
Arithmetic	0	Block Design	0
Vocabulary	2	Object Assembly	11
Comprehension	6	Coding	0

No score was achieved on the subtests of similarities, arithmetic, picture completion, picture arrangement, block design or coding. It can also be seen that Gary performed slightly better on the verbal than performance subscales, although, as was the case for Phoebe, any discussion of these scores should be conducted only with the greatest of caution since the scores obtained are raw rather than scaled. However, it is possible to sketch a 'cognitive outline' of Gary by listing the features associated with the subtests on which he scored whilst removing those features associated with the subtests on which he failed to score. The resulting set of cognitive abilities is given below:

holistic processing

verbal conceptualization

demonstration of practical information

evaluation and use of past experiences.

It must be remembered that these skills are relative to Gary's general range of abilities and should not be compared with the abilities of non-autistic people in these areas.

Taking just intelligence quotient score into account, Gary fits into DeMyer et al's category of "low autism" (Schopler & Mesibov, 1992: 31) which is defined as "having little communicative speech beyond infrequent communicative words" and "globally impaired" intellectual and perceptual-motor performances. This definition fits in with the common association of low functioning autism with the presence of few or even complete absence of verbal skills. Since Gary is clearly more verbally able than this description would suggest, we should perhaps view his WISC-R profile as suggestive of globally impaired intellectual and perceptual-motor performance together with better than expected verbal abilities.

6.3. Speech

6.3.1. Voice quality

Gary has peculiarly distinctive speech characteristics, some of which have been given a very cursory, generalized description above. In terms of voice quality, Gary makes fairly frequent use of whisper and breathy voice. Within the transcriptions, the notation 'voice quality' is

also used without further definition to indicate that the voice quality has been altered from that of surrounding utterances and is peculiar to that utterance. In these cases, an alteration of voice quality can be taken to mean an alteration of more than one of Gary's speech features, for example, pitch, vocal range and vowel quality may all be changed within an utterance. These utterances, as well as the scope of their modification, will be looked at in more detail below.

6.3.2. Whisper and breathy voice

As mentioned above and dealt with at greater length below, Gary has favoured utterances which recur throughout his conversation. *"tickly feets"* or *"tickle [X's] feet"* is perhaps the most frequent exemplar of this feature of Gary's speech within the transcripts used here. The argument for considering this utterance to be formulaic is made below. Often it is produced in a whisper as shown below.

G2

S	(0.8)you 'tell me 'what 'silence 'means		
G	(.) t- t- *tickly feets°*	*whisper*
	(1.1) silence ((3 sylls)) in the 'war	

G3

1	S	(.) oo:h° ye:s (1.1)you're gonna be really strong	
2	G	(3.0) FIT (.) ↑FIT↑	*voice quality*
3	S	(.) yes =	
4	G	= *tickly fee ɪs :ʹ*	*whisper*
5	S	(.) tickly feets (1.4) (hhhhhh) .hhhhhh	
6		who 's ays 'tickly 'feets	
7		(1.6) who 'says 'tickly 'feets	
8		(2.2) who 'says 'that (.) 'Gary	
9	G	(.) what (.) tɪklɪ: fɪtsssss:: =	*voice quality*
10	S	= yea:h	
11	G	°tɪklɪ: fɪtsssss:: °	*voice quality*
12		(1.7) tɪkɪ məlkmz ↓°fɪ˘tʰʳ↓	*voice quality*
13		(.) tɪkɪ məlkmz ↓fɪ˘tʰʳ↓	*voice quality*
14		(.) tickle ↓feet↓° (.) ° tic[kle°]	*voice quality*
15	S	↑[you] 'too ↑(.) 'tickle 'Malcolm's feet	

G4

S   [ɡo::]h (.) ‾Gary (.) could you 'tell me (.) 'what (.) 'does (.) the
       ˋstomach(.) 'do

G   (1.1).hh˚ mmh˚

       (0.9)

S   hhhhhhh

G   (.) makes you 'ill

       (2.8) *shushee .::.* (0.6) *tickly feets .:.*   *whisper*

G5

G   [tell] ˏAdrian 'come in here

S   (1.3).hh ↑ˏrright ↑

       (1.1) 'put those aˏway 'no:w

G   (0.8) *put aˏway 'no .:w*   *voice quality*

S   *'put them aˏway 'now*   *voice quality*

G   *tickly feets (.) tickly feets*   *whisper*

S   (hhhhhhh)

G   *tickly feets*   *whisper*

The "*tickly feets*" phrase may also occur with peculiar voice quality as it does at G3 above. "*tickly feets*" at G3 line 9 occurs with a globally higher pitch than Gary normally uses, that is, the phrase occurs within pitch parameters higher than those typically in Gary's range. Vowels are also closer than usual and the final consonant of the phrase [s] is extended. At G3 lines 11 to 14, the phrase occurs as a variation of the original as "*tickle Malcolm's feet*". The pitch is however globally raised as with the earlier utterance and the vowels are again closer than usual with a further degree of centralisation and reduction on the first vowel of "*Malcolm*". This time an abrupt descent in pitch occurs on the final syllable "*feets*" which effectively takes the phrase into the more usual parameters of Gary's range. Accompanying this is a reduction in volume on the final syllable. Lines 12 and 13 are pronounced with exact auditory similarity.

"*tickly feets*" never occurs unmarked within the transcripts. Even at line 9 of G3 where Gary's use of the phrase is incorporated into a clarification request, the phrase is separated from the surrounding discourse by unusual voice quality. The origination of this phrase as a feature in Gary's repertoire is unclear (Gary's caregivers could provide no explanation for it). However, it certainly seems possible that this is an example of delayed echolalia and that the voice quality may also be echolalic, although the degree to which modification may have occurred can obviously not be reckoned. When the phrase is used with whisper however, the degree of markedness from surrounding discourse is even greater. While in G3 lines 11-14 above, the topic of talk is directly concerned with the "*tickly feets/ tickle X's feet*" phrase, at G3 line 4 as well as G2, G4 and G5 the phrase is not linked by topic to the surrounding discourse at all. That the phrase is whispered on all of these occasions of use

would then seem to be indicative of its status as an utterance unconnected to the surrounding discourse. That is, whisper marks the phrase as an aside to the topic of talk. Further, the phrase at G3 line 4, G4 and G5 occurs at a topic boundary: at G3 and G4 this is marked by a long pause preceding the phrase during which the researcher may have chosen to speak, and in doing so would have continued the topic. At G5, the phrase occurs between question sequences where the researcher's contributions indicate that talk is secondary to other activities at this point. Finally, at G2, the phrase occurs as part of a response to a question that has clearly caused Gary difficulty in immediately preceding turns. It may be suggested then, that the *"tickly feets"* phrase occuring with whisper tends to be indicative of a problematic stage in the discourse: either at a point between topics where the new topic has not yet been initiated, or at a point where there is uncertainty about the next contribution, as in the questioning sequence.

Whisper also occurs with other phrases:

G6

S	(3.11) errr (.) yeah
	(.) did it 'thunder 'here ⌄yesterday
G	(.) it⌄ did⌄ didn't it(.) ((*makes thunder noise*))
S	ooh ⌄dear(1.6) what did you⌄ think of⌄ that
G	*thu.::nde.::r* whisper

G7

G	(3.8) ((2 syllables)) (2.1) I 'want to - I 'want to ⌄ma::rch
S	(1.?)you 'want to ⌄what
G	*˙ma.::rch˙* whisper

G8

S	what's ´appening (1.4)
	↑´what↑
G	(1.0) °ˋwhat°
S	what's áppening to´night
G	*°come dian°*

                                         whisper

G9

S	(0.6) 'ow did you ⌄do it (.) 'what did you- (.) 'what did you 'do: (0.7)ˋfi::rst
G	(1.8)ˋspo::nge
S	(2.9) n ⌄then 'what did you 'do
G	hhhhhhh *°it's 'ot in thisˋ*pla::ce° whisper

G10

G	(0.7) all the chairs 'move out the 'way for 'him

S   ˆmhm

      (.) who for

G   f'the coˋmedian

S   aa:::h ˌri::ght

G   *f'the come ˋdian*   *whisper*

      (.) would th- would they alˌlow it (.) would they alˌlow it   *fast*

G11

S   (0.7)ˌno (.) we can- we an't (.) 'really gotˌti:me 'now

      (0.8) cos we're doingˌthis 'nowˌaren't we

G   (0.6)*after*   *whisper*

G12

S   (.)have you been on anyˌwalks

G   (3.4)n- no::

S   (0.9) ↑haven'tˌyou↑

G   (2.4) hhhhh (5.9) *coˌmedian*   *whisper*

G13

S   (.) how many (.) how manyˋlegs does a 'dog 'have

G   *two*

S   (0.7) oˌkay

G   ().7) { ˇsuʃi::::::}   *almost whisper*

G13 and G9 are comparable to the G2-G5 examples above, in that whisper marks the phrases as asides to the surrounding talk. The phrase in G9 occurs in the slot where a question response is expected while G13 occurs within a WISC-R questioning sequence. G6, G7 and G10 are all examples of repetitive utterances based on self-models from immediately prior turns. Perhaps most interestingly however, G8, G10, G11 and G12 all relate to the comedian topic. In this case, whisper can be seen as having a cohesive effect, since the utterances in question are not immediately sequential. As mentioned above, the comedian topic is one of Gary's current favourites, and as such, the utterances above are all used by him to maintain or introduce this topic in the face of evident unwillingness from his co-participant. These utterances may then be seen as non-contiguous contributions in the context of the surrounding talk.

Breathy voice is also used by Gary on occasions, though not as frequently as whisper:
G14

G   (1.4) I had doˌtrai:::ning 'straight 'after and it's reaːːlly 'hard to ˙do training

      (1.0) .hhhh ((4 syllables)) *'miles anˌhour*   *breathy*

G15

      (0.7) in 'what˘ way (.) are a 'candle and a‚ lamp a‚ like

G   (2.7) twenty 'four

      (4.5) *put the ‚lights on (.) ↑please↑*   *slightly breathy voice quality*

Once again, voice quality here seems to be indicative of topic change, since both of the above utterances are located at topic boundaries. However, with so few examples, conclusions about the structural significance of breathy voice can only be tentative.

6.3.3. Speech errors

Gary has a predilection for lengthening segments, particularly in utterance final position and in oft-used (formulaic) items. The latter also demonstrate vowel raising (for example, in G3). Further examples of final position and formulaic-item segment lengthening can be seen in G6, G12, and G13 above. In addition, Gary's pronunciation is not always accurate as G16 below illustrates.

G16a

G   (3.6)((*5 syllables*)) {'saɪə?nt‿s}

S   (1.0)˘science

G   (1.2) {'saɪlənt‿s:}=

G16b

G   'what's the {tə} re‚corder gonna 'do

S   it's just gonna ˉsit 'the:re (1.5)

G16c

      (2.0) hhhh mmm (.) can you 'name the‚month (.) that 'comes after˘ march

G   (1.5)˘{tsɛtsɛmbə}˘

G16d

G   (2.3) it's a‚ shi::rt (.) and a (.)˘˘tardigan˘

G16e

G   (0.7) jus-(.) m-(.) 'answering‚ questions bout .hhhh (.) {baʊtʰʰ} (1.4)

      {‚wɛldə‚spɔt}

Gary's errors include segment omission (G16a, G16b), vowel neutralisation (G16b) and segment substitution (G16c, G16d and G16e). The substituted segments in G16c show harmonisation in that the targets /s/ and /pt/ have been realised identically. The substitution that occurs in G16d is reminiscent of the developmental process of fronting, or may be a case of harmonisation of the target /k/ to /t/ due to the syllable final alveolar, while that at G16e (/ɛ/ for /ɜ/) suggests vowel neutralisation. Gary's speech errors show, then, the

operation of similar processes to those of other study participants (cf. Phoebe and Penelope).

6.3.4. Unusual voice quality

G3 above exemplified the use of unusual voice quality to mark off an utterance from surrounding discourse. A further example of distinctive voice quality occurs in G5 above. Here the utterance is best described as having a sing-song intonation and is heavily dependent on the prior other-utterance, both lexically and prosodically. The researcher's turn also has a slightly 'sing-song' tone which is 'amplified' in Gary's turn. Both G3 and G5, then, seem to incorporate a degree of echolalia (possibly delayed in G3) with special attention paid to prosody. There is certainly prosodic exaggeration in G5 but it is not possible to be conclusive with regard to G3, due to the uncertain status of the utterance. G17 below is a further example of unusual voice quality accompanying a repetitive utterance.

G17

G	(1.3)I 'know
S	(1.9)[who]
G	[John] ˏMaːjor
S	(.)ˆnaːːːː
G	(.)'JohnˋMaːːjor=
S	='John ˋMaːːjor
G	(.) ↓*John* ˋ*Ma jlo:r*↓	ʤɒm meuːːʤɑːːː *voice quality*

Here the pitch is globally lowered beneath Gary's usual range and there is vowel lengthening on the final two syllables. The final vowel is also more back and open than in the preceding three model utterances. The model for G17, unlike G3 and G5, is self rather than other. In G18 below, the model is, however, other.

G18

S	(.) 'that'sˋbeautiful
G	*that's beautiful Sush* ˋ*ie* ːː꞊ *voice quality*

The above utterance is echolalic according to the more strict definitions of the term (outlined above) although the addition of "*Sushie*" and the intonation contour would make it mitigated rather than pure, even if the voice quality were not distinctive. Once again, the vowels are made closer in Gary's utterance and a rhythm is imparted by lengthening the first, fourth and final syllables.

Finally, G19 below is an example of two turns spoken by Gary 'in character'. Here the pitch is again lowered and the syllables are blended into one another through the loss of peripheral consonants. The effect is indeed reminiscent of a nightclub compere speaking through a microphone:

G19

G   (3.2)la: - (.) we'll get ˌeverybody in e:re(.) right (.) and getˌeverybody in ne:re

       (0.8) gonna say ↓'*ladiesˌgenleman*↓   *unusual voice quality*

S   (1.0) (hhhh) and 'then ˏwhat

G   ↓*coˏme:dian*↓   *unusual voice quality*

Modification of voice quality can then be seen as indicative of utterances which are inconsistent with the surrounding talk. This inconsistency can take the form of a non-contiguous-to-topic contribution, an instance of repetitiveness, or a movement 'into character', as is shown immediately above. A further occasion where voice quality may be modified, as with whisper, is at a problematic stage in the discourse. Here the modified contribution is less itself an example of inconsistency, but rather reflective of perceived inconsistency in the talk. In this sense, Gary's modification of voice quality, whether it be through the use of whisper, breathy voice or unusual voice quality, can be seen to mark simultaneous or immediately prior intances of movement away from talk that is more routine.

6.3.5. Reduced Amplitude

The use of reduced amplitude may be associated with uncertainty and repetitiveness in Gary's talk. G20 - G24 below are all instances where Gary is required to respond to a question. G22 and G23 require factual answers to which Gary clearly responds incorrectly. G20 and G21, rather than instances of incorrect factual provision, are perhaps better represented as confabulations, since these are inaccurate accounts of Gary's own personal experiences. G24 represents a return to an earlier topic in which the participants tried to establish Gary's age when it became clear that Gary was uncertain of this information. In all of these cases, Gary's turn occurs as the second part of a question-response routine. The assumption that the reduced volume which accompanies his answer is indicative of uncertainty seems reasonable given that the responses he provides are all incorrect in some way. It would also seem that on this basis and in a Gricean framework, willingness to co-operate in the conversation and fulfil an obligation to provide the second-part response is prioritised by Gary over any disinclination to give incorrect information. We may relate this to Gary's relatively well-defined interest in sociability.

G20

S   what's´appening (1.4)

       ↑ ´what↑

G   (1.0) °`what°

S   what's´appening to´night

G   °come:dian°   *whisper*

S   (0.8)´who is

G   °co´median°

G21

S   'who did you ˛go with

G   (1.1)˚malcolm˚

S   (0.8)˚malcolm

G22

S   (.) how many (.) how manyˋlegs does a 'dog 'have

G   ˚two˚

G23

     (2.0) hhhh mmm (.) can you 'name the˛month (.) that 'comes afterˋmarch

G   (1.5)˚{tsɛtsɛmbə}˚

G24

S   (1.2)I 'think you might be twenty˛four

     are you twenty˛four 'Gary

G   ˚ye:s I am˚

Repetitiveness may also be a feature associated with reduced amplitude. G25 -G27 below are all instances where Gary models his reduced amplitude turn on a prior utterance. The model in G25 and G26 is other, whilst in G27 it is self. G25 and 26 are both relatively echolalic, G26 especially so since, here, there is no lexical or prosodic modification of the model at all. Instances of "pure" echolalia such as this are quite rare within Gary's repertoire (as is discussed further below), but that this particular utterance is both echolalic and low amplitude makes it comparable to similar utterances in Phoebe's repertoire. G27 is somewhat different, in that the model for the repetitive utterance here is self. Further, this extract may also be equated with the uncertainty issue discussed above, since Gary's response is clearly incorrect. Indeed at this point in the conversation, nearing the end of this section of the WISC-R, Gary's responses have become somewhat rigid and there are more frequent attempts to initiate abrupt, unnegotiated topic changes.

G25

S   (1.0) they ˛might 'do

G   (.)˚they ˛might doˊwoun't they˚

G26

S   (1.9) did 'very well on tĥat 'test Iˊmust say

G   (2.3)˚Iˊmust say˚

G27

S   (1.1) ʾwhat is aˋhaːt(.) ˈGary

G   (1.7)˙ˊstitches˙

S   (0.6)ˊ˙stitches˙

        (.)oˌ kaːːy

        (1.2) and ʾwhat is aˋbicycle

G   (4.0) ˊ˙stitches˙

S   (1.7)˙ˇhm˙ (3.8)˙aːːːnd˙(.) ʾwhat is (.) aˋnail

A final type of reduced volume utterance is shown below in G28- G30. Here, there appears to be an association with the lexeme "*what*" and reduced amplitude, however, line 3 in G28 demonstrates that it is certainly not always the case that "*what*" is uttered with low amplitude. " ˙*what*˙ " is a somewhat perplexing item in that it recurs frequently throughout Gary's conversation. Possibly this item can be linked to uncertainty as with G20-G24 above, or possibly here " ˙*what* ˙" is used by Gary with the minimally communicative but interactive function of turn-taking.

G28

G   (1.3) I ʾwant to ˌleaːːve

S   (3.2) have you ˌheard somebody ʾsay ʾthat

G   (1.2)ˌ whaːt

S   (.) haveyou ˌheard somebody ʾsay ʾthat

G   ˌwhat˙

G29

S   (1.3) ooh I don'tˌ know (.) my ʾdoctor's aˌwoman

G   (1.3)ˊˊwhat˙

S   (0.6) ʾmy ʾdoctor is aˌwoman (.) aˋlaːːdy

G30

G   (1.2)ˌoːːh

S   (.) ʾDoctorˋWaːde

G   (1.0)ˊˊwhat˙

S   ʾDoctorˋWaːːːde

6.3.6. Consistent phonetic productions: "*tickly feets*", "*Sushie*", "*I want to leave*"

6.3.6.i. "*tickly feets*"

We have already seen how this phrase in Gary's conversation always occurs with some kind of modification to voice quality. G3 above also exemplifies how this phrase can occur with a high degree of phonetic and prosodic similarity to a preceding self-model utterance. In fact, the phrase has a certain degree of phonetic similarity whenever it is used, this manifesting as a close sequence of vowels and a degree of affrication on the penultimate

consonant with an extension of the final sibilant on *"feets"* and velarisation of the lateral consonant: [tɪklɪ: fɪt‿sːː]. The processes which are affected on it are then similar to those which are described in Gary's speech errors above. The auditorily phonetic similarity on each occasion of use does not extend to the item's prosodic production however.

6.3.6.ii. *"Sushie"*

The tendency to lengthen final segments recurs here; the favoured pronunciation for this item being to retract the initial consonant and lengthen the final vowel: [ʃuʃiːːː]. Once again, the vowels are made closer and the consonants harmonised. However there is one occasion where the utterance occurs with a different realisation:

G31

G   ().7) { ˇsuʃiːːːːː}   *almost whisper*

Here the initial segment is not retracted, although the vowels are raised as usual. A possible explanation for this realisation may lie in the location of the utterance very close to the opening of the session. This realisation also conforms to the accepted pronunciation of the name. Gary's later realisations may then represent his 'customisation' of the word to conform to his preferred pronunication strategies. That is, the *"tickly feet"* and *"Sushie"* examples seem to indicate a general tendency to harmonise segments whenever possible within certain well used items. In both utterances all the vowels are raised and some conflation of consonant segment features occurs; for example, the affrication of |t| preceding |s| in *"feets"*, and to a lesser degree, the velarisation of |l| in *"tickly"*, as well as the realisation of [s] in *"Sushie"* as [ʃ]. The pronunciation strategy here could be then described as formulaicised, in that particular operations, for example, raising vowels and harmonising consonants, are carried out on different tokens.

Both *"Sushie"* and *"tickly feets"* recur throughout the conversations as asides to the current topic of talk (see above), and as such, these items do not have a primarily communicative significance. The similarity of pronunciation on each occasion of use as well as their formulaicised pronunciation is then perhaps relative to their common functional identity as topic asides.

6.3.6.iii. *"I want to leave"*

This item is somewhat different to the two above since it is probably best categorised as a frame (Hickey, 1993) and hence is dealt with at greater length below. Although one of the variants of the utterance tends to occur with the same final vowel lengthening as was noted above, the utterance is mainly interesting for its prosodic rather than phonetic form. The utterances are only located in Transcription One (Appendix 4.1.) and exist with the following tone contours:

G32a

G   (1.6) I 'want to ˌlea:::ve me(.)

G   (1.3) I 'want to ˌlea:ve

G   (2.8) I want to ˌlea::ve

G   (1.6) I want toˌle::::ave

G32b   (proximal to one another)

G   (1.0) I want to 'leaveˌnow

G   (3.5) I want to 'leaveˌnow

G32c

G   (1.3) I want to 'lea:ve he- I want - I want aˌleaving 'present

G   (2.1)I 'want toˌleave cos I 'want to leave- 'want aˌleaving 'present

It will be noted that the syntactic and lexical variants of the phrase seem to have associated recurrent intonation contours. While " *tickly feets*" and "*Sushie*" are functionally best described as topic asides, the "*I want to leave*" frame appears to be more like a communicative utterance, although the likelihood of it having an echolalic source must be acknowledged, since the declared reason for wanting to leave is to find another job (Transcription One: line 71): an unlikely possibility given Gary's circumstances.

The association of echolalic utterances with phonetic similarity has been made by Local and Wootton (1995), and is relevant to "*Sushie*" and "*tickly feets*". However, the "*I want to leave*" utterance has a degree of lexical and syntactic fluidity which makes it appear to be less echolalic. The prosodic identity that exists between separate tokens is however indicative of an utterance that is 'frozen' to some extent, while its content is indicative of an echolalic genesis.

Hence the examples we have looked at of consistent phonetic productions in Gary's repertoire seem to indicate two processes at work in Gary's speech:

(a) that Gary has items with a functional similarity (that is, the function of topic aside) which recur in his talk and which have a high degree of phonetic similarity. This similarity is evident even *between* the different items with the same conversational function, in the form of formulaicised operations or processes that are enacted upon the segmental structure of the different items. Such processes may be the result of over-use of the items, but in any case, items with the same function of topic-aside may be identified by noting the phonetic processes that have occurred;

(b) other items exist in Gary's repertoire which, whilst possibly having an echolalic source, now take the form of 'frames'. That these utterances should be categorised as frames rather

than fully productive speech, is indicated by the association of a particular syntactic and lexical variant with a specific intonation contour. These utterances, whilst containing an echolalic element, have a more interactive function than the topic asides mentioned in (a).

Echolalic phonetic similarity is thus by no means a simple feature in Gary's talk. Some light can be shed upon it by noting the interaction between features of speech and conversational function, but there are undoubtedly issues which need to be taken account of concerning the cross-over between echolalia and repetitiveness as well as, as has been seen, a type of repetitiveness in which identical phonetic processes are enacted upon items which are different, but have a similar conversational function. Some of these issues are taken up in the section below.

6.4. Echolalia and Repetitiveness

Unlike Phoebe, Gary does not make use of immediate echolalia. With the exception of G26 (shown again below) there are no echolalic utterances of this type recorded in the transcripts.

G26

S   (1.9) did 'very well on ˆthat 'test Iˆmust say

G   (2.3)˙Iˆmust say˙

It is, however, noted that there is a large amount of repetitiveness in Gary's talk as well as, as mentioned above, some utterances which it would seem reasonable to assume have an echolalic genesis. If the definition of linguistic repetitiveness can be taken away from the more usual content-based one, then it will be clear that many of the extracts above exemplify repetitiveness of various types that exist in Gary's repertoire. G2-G5 show the use of whisper recurring in association with the utterance "*tickly feets*" at similar discourse structural points. The use of whisper in association with dispreferred contributions to talk is shown in extracts up to G13. The utterances at G16 demonstrate the same phonetic processes operating on different utterances which once again, have a comparable conversationally structural significance. Finally, reduced amplitude is shown to have a similar function whenever it is used to mark utterances throughout the talk in G20-G30. When features become associated with functions to an extent that the association becomes predictable, I would suggest that the feature has in a sense earned communicative significance. Since all of these extracts indicate that repetition of features or processes at the phonetic and prosodic levels in Gary's talk are associated with particular functions, this low-level repetition should be seen as a linguistically and communicatively important device for Gary.

6.4.1. Formulas and formulaic frames

Since prosodic and phonetic process repetition seem to have a significant status within Gary's talk, it would seem likely that lexical and syntactic repetitiveness may also be

important. As mentioned above, immediate echolalia is rarely used by Gary. Far more common are formulas or formulaic frames: terms used by Hickey (1993) to describe the movement of an utterance into full productive usage by a normal child acquiring her first language. Hickey developed the notion of formulas in language following on from Bolinger (1976) and Wong Fillmore (1976, cited in Hickey, 1993: 28). A formula is an unanalysed chunk of language "whose elements are not productive" (Hickey, 1976: 27), while the term formulaic frame is "a formula which has been partly analysed, so that there is some substitutability in a grammatical slot within the formulaic construction"(ibid: 28). While the notions of formulas and formulaic frames are used within Hickey's work to assist in the description of the language acquisition process, Bolinger uses the terms to assist in the description of adults' complete linguistic systems. Bolinger's contention is that formulas and frames facilitate fluency in adult speech by minimising the amount of time spent in formulating productive utterances.

Hickey identifies formulas by means of a preference rule system, such that criteria for formulas can be necessary, graded (where a continuum of formulaic-productive language is presumed to exist and where the more evidence of a condition that exists, the more formulaic the language is seen to be), or typical (that is, there may be exceptions to these conditions, although in the majority of cases they will obtain). Hickey's system is given below (ibid: 32):

1. the utterance is at least 2 morphemes long (necessary , graded)
2. the utterance coheres phonologically (necessary)
3. the individual elements of an utterance are not used concurrently in the same form separately or in other environments (typical graded)
4. the utterance is grammatically advanced compared to the rest of the child's language (typical, graded)
5. the utterance is a community wide formula or one which occurs frequently in the parents' speech (typical, graded)
6. the utterance is an idiosyncratic chunk (typical, graded)
7. the utterance is used repeatedly in the same form (typical, graded)
8. the utterance is situationally dependent (typical, graded)
9. the utterance may be used inappropriately, either syntactically or semantically (typical, graded)

Two candidates for inclusion in the formulaic frame category in Gary's language are "*I want to leave*" and "*move all the x*". Gary's use of these constructions as formulaic frames is illustrated below.

6.4.1.i. "*I want to leave*"

G33a

G   (1.6) I 'want to ˌle::ave me(.) I 'want to ⁻leave

G33b (immediately sequential to (a))

G   (1.1) I don't ˌlike it (.) I don't - (.) I want to ˌlea::ve 'somewhere

G33c (three turns from (b))

G   (1.0) I want to 'leave now

G33d (three turns from (c))

G   (3.5) I want to 'leave, now

G33e (eight turns from (d))

G   (1.3) I 'want to ˌleaːːve

G33f (six turns from (e))

G   (1.3) I want to 'leaːve he- I want - I want a ˌleaving 'present

G33g (14 turns intervene: another topic taken up)

G   (2.8) I want to ˌleaːːve

G33h (immediately sequential to (g))

G   (2.1)I 'want to ˌleave cos I 'want to leave- 'want a ˌleaving 'present

G33i (eight turns from (h))

G   (1.6) I want toˌleːːːave

G33j (five turns from (i))

G   (5.7)I want toˌleaːve (.)somewhere niːːce

The identification of "*I want to leave*" as a formulaic frame derives from noting the structure of the utterance as having a stable section and a slot into which items can be inserted. "*I want a leaving present*" utterances are included, since the pronunciation of "*to*" and "*a*" are indistinguishable in the conversations, both forms having the unstressed [ə] pronunciation. These utterances were categorised in terms of their intonational identity in G32 above, where it was noted that there were three basic variants of the construction, each with its own intonation contour, suggesting unanalysed formulaic language. The unanalysed nature of this construction is further implied by the existence of G33j and, to a lesser extent, G33b, where it is presumed that the phonological similarity between "*leave*" and "*live*" gives rise to the resulting utterances. G33b and G33j, whilst not strictly unacceptable, are certainly pragmatically odd.

6.4.1.ii. "*move all the x*"

G34a

G   °yes°

        (0.9) can I m'move all theˌchairs out the 'way for im

G34b

G   (1.4) can I (.) aˌrraːːnge (1.0) me and ˌyou (1.7) can I s- (.) at Forest ˌHouse (.) w-
would they move all theˌchaːːirs (.) d- get ˌorganised for im

G34c

G   (0.7) all theˌchairs 'move out the 'way for 'him

G34c is interesting in that, here, "*all the chairs*" is preposed, yet the tone movements are as for the other two examples. Untranscribed examples of this frame also exist where the " *chairs*" slot is filled by "*doors*" and "*buses*" .

Formulas in Gary's language include "*arrange it*" and "*tickly feet*". "*Tickle X's feet*" can also be categorised as a related formulaic frame. The "*tickly feet*" examples are given at G2-G5 above, while "*arrange it*" examples are given below.

6.4.1.iii. "*arrange it*"

G35a

G   (.) cos I want to r-a̠ rrra::nge it

G35b

G   (0.6) a̠ rra::nge it to 'come.he::re

G35c

G   ara-would they a̠ rra::nge it for me

All of the above examples fit quite neatly into Hickey's criteria for formula and frame identification, such that it is clear that Gary has an extensive use of non-productive, unanalysed language. In the case of the "*I want to leave*" frame at G33, there also appears to be a local influence at work, since the construction does not appear elsewhere in the transcripts, and all of the examples occur within a maximum of 8 turns from each other, with the majority being much closer or even immediately sequential to one another. To continue with an earlier point regarding this particular construction, a delayed echolalic influence may well be in operation with these utterances. What may be evidenced here, then, is a possible means whereby new constructions enter Gary's repertoire. An initially echolalic utterance continues life as a formulaic frame, the range of substitutions becoming gradually greater. What can not be known is whether such items can ever attain full productive usage. Certainly within the formulas and frames we have looked at thus far there seems to be a noticeably high degree of contextual limitation on their usage: "*arrange it*" and "*move all the Xs*" are always used with reference to Gary's future time projections of social events, while "*tickly feets*" is so formulaicised that even its pronunciation is pre-set. Despite situational dependence being a Hickey criterion, the interpretation of this within non-autistic language is considerably more dynamic than it is within Gary's (see, for example, Hooper, 1995).

The extent of this lack of productivity can be further illustrated by looking at a construction which exists towards the more productive end of the formulaic continuum: "*can I/we*". Examination of this construction is limited to Transcription Two (23.8.95: Appendix 4.3.) for the sake of conciseness:

6.4.1.iv. " *can I/we*"

G36a

G   (4.6) can I intro̊ duce him

G36b

        (0.9) can I m'move all the ˷chairs out the 'way for im

G36c

G   (1.4) can I (.) a rra::nge (1.0) me and ˏyou (1.7) can I s- (.) at Forest ˏHouse (.) w-
would they

G36d

G   (0.6) can we ʹdo it ˏnow

G36e

G   (0.6) can I: e::m (0.9) can I:: (1.0) can I have a ˏmicrophone in ˏhere

That "*can*" only occurs in interrogative structures and with first person subjects is immediately apparent. An argument can be made that Gary's communicative needs within such conversational contexts do not require him to use the modal in other types of clause. As such, it may be possible that Gary does have competent control of "*can*" but finds no occasion to use it in the circumstances in which the transcriptions were made. However, the fact that there are zero occasions of its use in any other construction than the first person interrogative makes "*can*" seem a likely candidate for a degree of formulaicity, albeit much less so than the items in G33-35. A further point to note here is that Gary's use of "*can*" is suggestive of the pattern of children's first acquisition of modals (Garton & Pratt, 1998).

An argument for the existence of a continuum of productivity in Gary's language can then be made. Further, there is a suggestion from an examination of Gary's formulaic utterances that different formulaic items are productive to different extents. A possible corollary of this is that individual utterances may move along a continuum of productivity such that delayed echolalia may move into more formulaic usage. Whether such utterances eventually become fully productive seems unlikely, given the large amount of formulaicity which seems to exist within Gary's language. The existence of such a continuum of productivity is, of course, difficult to validate without longitudinal data. Whatever the case, Gary's use of formulaic language certainly enables him to produce more fluent language than would otherwise be possible. Whether formulaicity in language enables him to preserve cognitive resources which may then be diverted to other tasks, or whether it derives from a damaged acquisition process and hence is a necessary component of his functioning linguistic competence is impossible to know. Perhaps the most fruitful perspective to take at this point is to look on formulaicity as a linguistic resource to which all language users, autistic and non-autistic, have access and to which Gary is inclined to turn more frequently than most. Given the expectations we might have had of Gary's language on the basis of his WISC-R predictions however, formulaicity has perhaps a more enabling function for him than might otherwise be the case. In comparison with Phoebe for instance (whose WISC-R score it will be remembered, was comparable to that of Gary), Gary's conversational competence and expressive abilities are particularly surprising.

6.5. Syntax

6.5.1. Syntactic errors

Aside from repetitive or formulaic utterances, Gary's conversational utterances have a typically telegraphic quality. G37 below gives examples of Gary's telegraphese.

G37a

S   (.)‿ye::ah (0.8) it 'sometimes 'thunders when it's ‿hot though ‿doesnt it

       (1.7) ´yea:h

G   no no` thundering to'day

G37b

G   (.) 'thunder ‿lightning=

G37c

G   (2.7)‿got (1.2) got to ‿sta::nd cos (.) 'people 'die in the ‿wa::rs

G37d

S   what's ´appening to´night

G   °come:dian°   *whisper*

G37e

G   (2.9) I was (0.5) 'Coli:n (.) to‿day

G37f

S   (2.0) 'what did you 'do‿fi:rst

G   (0.7) 'clean the‿buses

S   (1.0) 'what did you ‿get (.) be'fore you 'started ‿cleaning em

G   (0.7) get- (.) a 'bucket of` wa::ter

G37g

G   (.) course I've ‿drinking 'lo::ads

G37h

G   (1.4) can I (.) à rra::nge (1.0) me and ‿you (1.7) can I s- (.) at Forest ‿House (.) w- would they move all the ‿cha::irs (.) d- get ‿organised for im

G37i

G   (0.6) a‿rra:::nge it to 'come ‿he::re

G37j

G   (1.6)` what 'me:::: 'doing

G37k

G   [tell] Adrian 'come in here

G37l

G   (1.2)that-(.) that 'corders ‿me

G37m

G   (2.2) .hhhh HHHHHH (.) it like a ·‿stitches·

G37n

G   (4.0) ˈwho to-(.) ˈwho ˈtwenty˴ fouːːr

G37p

G   (.) ˈthey ˴might doˊwoun't theyˈ

G37q

G   (0.7) all the˴chairs ˈmove out the ˈway for ˈhim

Telegraphic speech necessarily implies constituent omission. The range of omissions in Gary's talk is fairly wide and not particularly consistent. For example, the copula is omitted in G37n but is used in G37r below:

G37r

G   (2.4)ˈ tin't my ˈbirthday to˴ day˴ is it that's t-twenty ˈthree to˴ dayˈ   *to himself*

Often, Gary omits items that occur early in the clause, as in G37a and G37c. As with these two examples however, it is generally not the case that complete consituents are left out: in G37a, assuming the target to be something similar to G37aa below, the omitted items are existential subject, *"there"*, and the verb phrase auxiliaries. As with children's telegraphic language, the lexical items are present while the function words are not.

G37aa

Target: *no there has been no thundering today*

In G37c, similarly, the subject and auxiliary have been omitted leaving the later sections of the clause relatively intact.

The pattern of incomplete verb phrases recurs throughout Gary's conversation. G37g is a further example of this. In fact, Gary's verb phrases often have errors as G37c, G37f, G37g, G37j and G37l all exemplify. Omission of morphological tense markers (G37c, G37f) and aspect auxiliaries (G37g) is common throughout the transcripts. G37l is unusual in that, here, although the verb is marked correctly for tense and person, the syllables of the lexeme appear to have been transposed. It would seem fairly clear from the pattern of errors and omissions, then, that Gary has difficulty with verb phrases. In fact, Gary rarely expresses tense or aspect at all, most of his past time references being understood only by inference from the sequential environment of the talk, for example G37f where past tense is conveyed by the researcher, while Gary makes use of the simple present.

Further errors include incorrect case marking (G37j), omission of phrasal conjunction (G37b), omission of preposition (G37e) and errors of clause combining (G37i and G37k). These final two errors seem to derive from a difficulty in correctly marking infinitival dependent clauses (note that the target in G37i is *"arrange it for him to come here"*). Clause combination often seems to cause problems for Gary. The verb in the tag in G37p does not agree with that in the main clause, and G37h is fairly representative of Gary's

attempts at multi-clause utterances; that is, marked by dysfluencies and frequent pauses. A lot of retracking occurs in this utterance, implying that a major difficulty exists with the ordering of elements. Order problems also sometimes occur within single clauses as in G37q where the object takes subject position.

Gary's syntactic errors are so frequent throughout the transcripts that it is clear he is using language with a severely restricted competence. Further, the errors occur at all syntactic levels: morphological, phrasal, clausal and inter-clausal, such that Gary appears heavily dependent on lexis and formulaicity in order to intentionally communicate ideas. Often, it is not possible to judge an utterance as syntactically erroneous only because it consists of a single word. Despite the comparisons that have been made above with Gary's restricted language and the telegraphic utterances of children, Gary's language and error patterns are not particularly child-like, since he attempts complex utterances (for example, G37h), makes use of fairly tricky modals (G37p) and has an unchild-like tendency to truncate utterances by missing the first few words. Furthermore, the pattern of errors is developmentally uneven, in that utterances like G37m occur where the copula is omitted, yet we also find utterances like G37s below:

G37s

G (0.8) .hhhhh (1.0) no I 'aven't been to 'seaside for ˎlong 'ti:me

where a complex verb phrase correctly marked for polarity, tense, person and number occurs. Indeed, this utterance is also internally indicative of such uneveness in that the complex verb phrase immediately preceeds a noun phrase lacking a determiner.

It would be surprising to find that Gary at the age of 24 was indeed functioning with a linguistic system comparable to that of a child in any case. The errors he makes with complex (and sometimes simple) constructions are perhaps exactly what we should expect from someone who has acquired language to a limited extent and who has then had to make use of it on a daily basis. One should note, however, the heightened importance formulaicity and repetitiveness are likely to have within a system such as this, in which communicative requirements outstrip linguistic compence to a high degree.

6.6. Conversation

6.6.1. Topic

As will be clear by now, Gary is a willing communicator and does not avoid talk as Phoebe does. As such, conversation with Gary is not characterised by long other-turns and frequent, lengthy pauses. Although such turns do occur, they are much reduced in comparison to the extended other-turns that take place within the Phoebe transcripts. G38 is a good example of this type of turn in conversation with Gary.

G38

S   hhhhh.hh

    (1.8)'what were you 'doing with ˎSimon this 'morning

    (2.0)'what did you ˎdo::

G   *wash the ˎbuses*   *mumbled*

In comparison with talk with Phoebe, the number of first-part pairs which occur with no take-up in this utterance is limited to one. The pause is also fairly short relative to those which can occur with Phoebe. Relative to non-autistic conversation however, such turn constructions are still rather odd. Thus, while Gary is prepared to supply second-part responses to questions, he may do so in a restricted way. G38 also marks an attempt by the researcher to initiate a new topic. Thus Gary's turn in G38 line 4, as well as being a response to an interrogative, is also an acceptance of a new topic. G39 gives the complete segment of conversation wherein the topic initiated by the researcher and accepted by Gary in G38 is maintained by both participants and eventually terminated. G39 follows immediately from G38.

G39

1 S   (.)ˌo:::h ˎyeah

2   (3.3)whatˋelse have you been 'doing

3   (.) ↑have you been on ˎholiday↑

4 G   (1.6)ˌn::o(.) I ˎhaven't

5 S   (2.4) haven't you ˎbeen any'where

6 G   (1.0) 'drinkingˋpi:::nts

7 S   (.) ↑'drinking ˎpi::nts↑

8 G   (1.1)ˎfou:r

9 S   ↑ˋwhe::re↑

10 G   (0.9) in theˎp(hhh)u(hh)b

11 S   (0.8)youˋhaven't been 'drinking 'pints haveˎyou

12 G   (.) course I'veˎdrinking 'lo::ads

13   (1.1)hhhhh

14 S   (1.1)wha- what 'pub we- did youˎgo to

15 G   I don't 'kno::w

16 S   'who did youˎgo with

17 G   (1.1)ˋSimon˙

18 S   (0.8)ˆSimon

19 G   (2.0)˙know what˙

20 S   (.)ˎwhat

21 G   (1.4) can I (.) àrra::nge (1.0) me andˎyou (1.7) can I s- (.) at ForestˎHouse (.) w-

22   would they move all theˎchai::rs (.) d- getˎorganised for im

23 S   (1.0) theyˎmight 'do

24 G   (.)ˋtheyˎmight doˆwoun't they˙

25	S	(.)˘mmmh
26	G	(0.7) all the chairs 'move out the 'way for 'him
27	S	ˆmhm
28		(.) who for
29	G	f'the co͡median
30	S	aa:::h ˛ri::ght
31	G	*f'the co͡median* *whisper*
32		*(.) would th- would they a͜llow it (.) would they a͜llow it* *fast*

Thus, it takes 17 turns for Gary to initiate a return to the topic which the researcher had originally moved away from in G38, though it only becomes apparent that the comedian topic has been re-introduced by Gary 8 turns after it actually has, if *"know what"* (line 19) is taken as the starting point of the re-introduction. As mentioned above, low volume marks a point of potentially problematic conversational transition immediately before the point at which the topic is abandoned by Gary, which continues through the new topic initiation until line 19. It is notable that, throughout the topic initiated by the researcher, the question-response format typical of these types of sequence is followed rigidly, with the researcher asking the questions and Gary providing second part responses without exception. The researcher's repetition and the subsequent two second pause at line18 immediately preceeds Gary's low volume initiation of topic-return. As the re-introduced topic is approached and taken up through lines 19 - 32, Gary takes over the questioning role and the researcher takes on the role of second part responder, although this time, roles are not characterised so rigidly (an exception occurs with S asking a question, albeit a clarification request, at line 28).

This pattern of topic maintenance and termination is typical of conversation with Gary. Abrupt movement away from topic is also seen, particularly when Gary has been subjected to long sequences of questioning:

G40a

| S | (1.4).hhh 'what 'must you ˛do::: (.) to 'make˘water boil (.) 'Gary |
| G | (2.4)˘tin't my 'birthday to day is it that's t-twenty 'three to day˘   *to himself* |

G40b

| | (.) .hhhh and 'how 'many ˉda:ys make a ˉweek |
| G | (5.1)˘oh˘ (0.8) was ˛Alec said (.) wa-was-it was Alec 'looking for me |

Gary again takes on the role of questioner in G40b to initiate a move away from a current topic. Gary also uses questions to initiate a topic after an extended pause:

G41

S   (0.7) o̩ ka::y

        (1.1) that's ˎfine

G   (9.8) where'd'you get this- (.) little̩ microphone ˎfrom

The use of questions to introduce and maintain topics is strategically enabling due to their two part structure. G42 below, however, is interesting, in that it demonstrates how Gary is able to initiate a topic without the use of question and in a more step-wise fashion (Button & Casey, 1985).

G42

1	S	(.) have you had e'nough of ˎtraining
2		(.) it's̩ hot to'day any'way ˎisn't it
3	G	it's gonna 'thunder toˆnight
4	S	(.) d'you 'think ˎso (2.5) d'you ˎthink so
5	G	ˎwhat
6	S	(.) d'you 'think it's gonna 'thunder tò night
7	G	(0.9)̀ no::
8	S	(.)´ no:
9	G	(1.5) it won't 'thunder toˎnight cos it's 'hotˎweather̩ innit
10	S	(.)ˎyea::h (0.8) it 'sometimes 'thunders when it's ˎhot though ˎdoesnt it
11		(1.7)´ yea:h
12	G	no nò thundering to'day
13	S	(.) 'no` thundering to'day
14	G	(.) 'why has it` gone 'now
15	S	(0.5)ˎwhat
16	G	(.)ˎthunder
17	S	(3.11) errr (.)` yeah
18		(.) did it 'thunder 'hereˎyesterday
19	G	(.) it̩ did̩ didn't it (.) ((makes thunder noise))
20	S	ooh ˎdear(1.6) what did you̩ think of̩ that
21	G	*thu::nde::r* *whisper*
22	S	.hhhhhh (1.1) 'what did you 'think of the̩ thunder
23	G	(3.9) what's` thu̲nder
24	S	(.) ¯yeah
25	G	(.) 'thunder ˎlightning =
26	S	= yeah
27		(.) what [d-]
28	G	ˇ↑[s] cared of it ↑
29	S	(.) ↑ ˇwere you ↑(1.1)
30		whÿ::
31	G	((makes thunder noise and gestures))

32   S   oo::h dear (1.4) was it 'really ˆloud
33   G   (1.1) ti˙:s 'loud it i˙:s
34   S   (0.8) and did it 'make you jump
35   G   (0.7) say shut up 'thunder
36   S   (.) ↑ˊdid you↑ (2.5) andˊdid it
37   G   (2.4)[I:-] I didn'tˇhear it
38   S   [n-]
39   (0.7) you didn't 'hear it
40   G   (1.0) bang
41   S   (.) youˋdidn't hear it 'bang
42   G   (2.0) .hhh hhhhhhhhh
43   S   (0.6) 'what you been doing to'day then 'Gary=

Here, the topic has emerged generally from the talk. Gary's contribution at line 3 easily relates to the researcher's prior turn on the theme of weather. Note that the researcher's next turn at line 4, which marks topic uptake, is nearly missed as such by Gary who requires repair at line 5.

The researcher's turns are often repetitive in this extract, possibly due to difficulties in mutual comprehension. Gary contradicts himself, for example at line 7, where he no longer believes that it will thunder later, and again at line 37 where he says he didn't hear the thunder after all. Such contradictions are immediately followed by repetitions by the researcher. Interestingly, at line 9 where the contradiction-repetition sequence occurs, Gary's next turn sees him providing an explanation, thus maintaining the topic. This does not happen in the sequence beginning at line 37. Gary's next turn at line 40 instead provides further material for the researcher to repeat at line 41, though this time there is no subsequent explanatory take up by Gary at all. The two second pause at line 42 marks the rather abrupt end of the topic, which obliges the abrupt introduction of a new topic at line 43.

As well as repetition, the topic in this extract is also maintained by question and answer routines. The sequence discussed above beginning at line 7 is the closest the participants get to moving away from this pattern, with Gary's explanation at line 9 and the researcher's counter at line 10. However, both participants choose to present their opinions in the form of tagged statements so that the question - response routine is maintained.

It has been shown, then, how topic can emerge naturally from talk or be introduced in a gradual manner by Gary (G39). Topic can also be introduced abruptly as can be seen from examples above and G43a below:

G43a

G   (1.4) I had do ˎtrai::ning 'straight 'after and it's ˎrea::lly 'hard to˚do training˚

        (1.0) .hhhh ((4 syllables)) *'miles an ˌhour*   *breathy*

S   (0.8)↑ 'how many ´miles ↑

G   (1.6) I 'want toˎle::ave me(.) I 'want to ¯lea:ve

The leaving theme is one that is frequently returned to throughout this transcription and is always introduced abruptly:

G43b

S   (0.6)↑ˎyeah↑

        (2.3) that was ˎstra::ngeˎwasn't it

G   (1.6) I want toˎle::::ave

The possibility of "*I want to ....*" being a frame (see section above) arises, when, 10 turns after the occurrence of G43b, G43c takes place:

G42c

S   (1.5)´why:

        (3.9) 'what 'makesˎnoise

G   (3.8) ((2 syllables)) (2.1) I 'want to - I 'want toˎma::rch

The similarity in prosody between the two utterances is suggestive of a formulaic structure. Structural similarity at a conversational level also exists in that both utterances are introduced abruptly with no relationship to the ongoing topic. While these abruptly introduced topics may be considered favourite themes of Gary's, they are not so in the same way as the comedian topic is. The comedian topic recurs throughout conversations with Gary while "*leaving*" and "*marching*" belong to this particular transcription only. Further, while the comedian is associated with formulaic language (for example ("*can I introduce*", "*arranging it*" and "*moving all the chairs*"), the range of types of formula is far greater than is the case with "*leaving*" and "*marching*", where, as is discussed above, the limits of productive usage seem confined to around three lexically and syntactically closely related variants. In short, Gary seems to have little to say about "*leaving*" and "*marching*" other than he wants to do them. Further, the comedian topic is almost covertly introduced in G39, with Gary taking eight turns to fully initiate the topic: "*leaving*" and "*marching*" are introduced within a single turn.

Conversation with Gary is then characterised by question-response routines and favoured topics, though the definition of 'favourite' has to be somewhat fluid. Gary will initiate talk in response to extended pauses, and will also initiate topic change. Generally, this is accomplished abruptly and arises in inappropriate places and without negotiation. There may also be a formulaic character to such initiations. However, when the introduced topic is a cross-conversational favourite (for example, the comedian), initiation may be extended and

complex. Question and response routines are so prevalant within conversations with Gary that it is impossible to find a topic that is not majorly maintained by them. Finally, topics, however they are initiated, are generally terminated without negotiation. An important factor here is undoubtedly cognitive limitation.

6.7. Summary

Gary is an autistic language user with particular competencies that, with some success, conceal fundamental limitations of his linguistic system. The section on syntactic errors clearly delineates the restrictions that operate on his productive language. I would suggest that Gary's use of repetition and formulas at all linguistic levels enables him to make best use of this system and, obvious cognitive limitations aside, to appear as a relatively able conversational participant. The extent to which repetitiveness and formulaicity support Gary's limited linguistic system is so far-reaching that it is difficult to find examples of his language that are not in some way dependent upon them. Having acknowledged this, it is perhaps surprising that Gary makes such little use of echolalia. Such an observation leads to the notion of competency within Gary's language. While we are used to productivity being at the core of non-autistic competence, the scope and variation that characterises Gary's repetitiveness is surely indicative of a degree of competence. While Gary is unable to move on completely from the linguistic input to which he is exposed, he is at least able to manipulate it and tailor it to his communicative requirements to some degree. At the very least, Gary's capacity to initiate and maintain talk suggests communicative intent to a level approached by neither Tina nor Fiona, whose WISC-R scores it will be remembered, were comparable to those of Gary.

7. Mary

7.1. General Background

Mary is an autistic woman who is resident at the same autistic community in South Yorkshire as Tina, Gary and Phoebe: Forest House. At the time that the research was conducted, Mary was twenty-six years old and had been resident at Forest House for eight years.

Conversations between her and the researcher were audio and video recorded. These sessions were intended to be as informal as possible with topics arising naturally from the talk. Occasionally, other participants were present besides Mary and the researcher, though they were never focal to the interaction. The setting for the taped interactions varied from rooms in the residential unit's day-centre, which is used by the residents for structured activities, to the living room and kitchen of the satellite house where Mary sleeps and has most of her meals.

In order to obtain background information about Mary, both her parents and her principal caregiver at Forest House were interviewed and the WAIS-R (Wechsler, 1981) was administered.

7.1.1. History

Mary was diagnosed as having autism at the age of 6 years. As a young child, she was placed in both playschool and mainstream school, despite a strong sense on her mother's part that Mary was suffering from deep-seated psychological problems. Indeed, Mary's mother reports that she had been worried about her daughter from around the time of her third year. Mary's problems during these early years were manifested in late global development including delayed spoken language development and delayed walking. Mary is remembered as an infant who cried a great deal and was considered overly anxious. Fitting in with a classically autistic profile, Mary did not play, preferring to perseveratively "waggle" objects such as tissues. She showed no ordering or spinning behaviours. When overcome with anxiety, Mary preferred to sit on her potty rather than approach her mother for comfort. Social aloofness was further manifested by a lack of interest in her peers or elder sibling. Mary is remembered as having imaginary friends as a child, though these were simply present rather than taking on the role of passive interlocutor.

Mary can read with comprehension and was taught by her mother to write before she began attending school. This was achieved using a system involving association between specific letters and colours.

Mary is considered by her carers to be a talkative individual. Much of this talk involves lengthy monologues on particular favoured topics. At times, Mary takes up such topics obsessively. Topics have included the dates of birthdays of friends and relatives, the British royal family and politics. Often such obsessive interests decline gradually over time. Mary keeps a diary which she often uses as a means of expressing her troubles and anxieties. She likes music and sometimes sings though in a monotonous fashion. Her spoken language also exhibits a restricted use of tone and pitch movement.

7.2. WAIS-R Analysis

The WAIS-R (Wechsler Adult Intelligence Scale-Revised) (Wechsler, 1981) was administered to Mary by the researcher in a private room in the day-centre at Forest House. WAIS-R intelligence quotient measurement showed Mary as having a full scale IQ of 66: verbal sub-score 70; performance sub-score 65. A diagnosis of mental retardation is given to those with a full scale IQ of less than 70. It will be noted that there is only slight disparity between verbal and performance sub-scale scores. Mary's performance on the verbal tests was fairly even, though subtest analysis indicated relatively good short term memory skills for number sequences: a common finding in Wechsler profiles of people with autism (Venter, Lord, & Schopler, 1992).

The performance sub-scale measurements showed a similarly even pattern, though it should be noted that a higher verbal than performance IQ is not generally considered to be a typical Wechsler feature for autism (Mottron, Burack, Stauder, & Robaey, 1999; Siegel & Minshew, 1996; Venter, et al., 1992). In relation to the issue of 'typical' profiles, however, we should note Gillberg's comments on diagnoses of pure or "classic" Kanner's autism as opposed to diagnoses of "autistic-like conditions" (Gillberg, 1992: 816-817). Autism is not a condition characterized by homogeneity, thus one should be wary of describing Mary's Wechsler profile as atypical of autism. Further, Siegel and Minshew's findings (1996) urge caution in identifying a particular profile pattern with autism, especially as a diagnostic tool. With these provisos acknowledged, the profile most often associated with autism in the literature is a higher performance than verbal IQ, with lowest score on comprehension and highest on block design (Siegel & Minshew, 1996): 390.

Mary's Wechsler profile is shown below:

MT: i - Mary's Wechsler profile

Verbal Subscale	Scaled Score ( ) show rank order	Performance Subscale	Scaled Score ( ) show rank order
Information	5 (3)	Picture Completion	5 (3)
Similarities	5 (3)	Picture Arrangement	4 (2)
Arithmetic	2 (1)	Block Design	4 (2)
Vocabulary	5 (3)	Object Assembly	3 (1)
Comprehension	4 (2)	Digit Symbol	4 (2)
Digit Span	6 (4)		

Venter et al's follow-up study of high-functioning autistic children (HFA) (1992) enables us to compare Mary's Wechsler profile with other studies which have examined profiles of autistic children, adolescents and adults. Venter's inclusion of previous research gives a total of five studies of this type with which to compare Mary's profile:

MT: ii - Mary's Wechsler verbal profile comparison

Mary's Verbal Scores: ranked 1 (lowest) - 4 (highest)	Venter et al's Composite Verbal Scores (five studies): ranked 1 (lowest) - 5 (highest)
Arithmetic (1)	Comprehension (1) 100% of studies
Comprehension (2)	Vocabulary (2) 80% of studies Similarities (2) 20% of studies
Vocabulary (3) Information (3) Similarities (3)	Arithmetic (3) 60% of studies Vocabulary (3) 20% of studies Similarities (3) 20% of studies
Digit Span (4)	Similarities (4) 40% of studies Digit Span (4) 40% of studies Arithmetic (4) 20% of studies
	Digit Span (5) 60% of studies Similarities (5) 40% of studies

Siegel and Minshew (1996), taking sixteen studies into account, had comparable findings (note, that since Venter et al's study presents findings in more detail, their figures are given here. However, four of the studies incorporated in Venter et al's scores above are also incorporated in the Siegel and Minshew data, hence the two studies should not be regarded cumulatively). In total, 14 studies had recorded Wechsler scores. Of these, on the verbal subscale, ten had digit span, one had arithmetic and three had similarities as the highest scores, while thirteen studies showed comprehension as the lowest and one, similarities. Mary's highest verbal score (digit span) accords with these, while her lowest score

(arithmetic) is not mentioned in other studies. Comprehension is second lowest for Mary, however, and this fits better with Siegel and Minshew and Venter et al.. Mary's arithmetic score is somewhat out of line with the other studies mentioned. This may simply be an idiosyncratic feature of her profile or may be as a result of lack of educational exposure.

Whilst there is no official definition of the term high-functioning autistic, it is generally taken that those who meet the DSM criteria for autism while achieving a full scale IQ of above 70 fall into this category (Ghaziuddin, Leininger, & Tsai, 1995: 313). Although Mary's IQ is slightly lower than this, she is certainly the most cognitively able participant of the Forest House residents who took part in the study, and hence the comparison may be deemed justifiable though tentative. Further, 'lower functioning' autistic participants present us with the problem already encountered in this study with the participants Gary, Phoebe and Tina: obtaining a Wechsler score high enough to scale systematically. Two of the Siegel and Minshew studies have mean full scale IQ's lower than 70 (Allen et al, 1991; Narita and Koga, 1987, cited in Siegel & Minshew, 1996: 390- 391). Unfortunately, both of these studies used the WISC-R and had a mean chronological age of participant of around ten years, and in both cases, performance IQ was higher than verbal IQ. These studies are therefore hardly comparable with Mary's data. Siegel and Minshew suggest that autistic persons with full scale IQs lower than 70 are generally more likely to show significantly higher performance than verbal score than is the case with persons with full scale scores > 70 (1996: 401), who, it is suggested, tend to have more even profiles. If this is indeed the case, then Mary's profile, despite the provisos above, does suggest a case of atypical autistic ability.

A marked difference exists between Mary's performance subscale scores and those referred to in the Venter et al study, as is shown below.

MT: iii - Mary's Wechsler performance profile comparison

Mary's Performance Scores: ranked 1 (lowest) - 3 (highest)	Venter et al's Composite Performance Scores (five studies): ranked 1 (lowest) - 4 (highest)
Object Assembly (1)	Picture Arrangement (1) 100% of studies
Block Design (2) Picture Arrangement (2) Digit Symbol (2)	Picture Completion (2)100% of studies
Picture Completion (3)	Object Assembly (3)100% of studies
	Block Design (4)100% of studies

Mary's worst performance score is on the subtest which ranks as second for the HFA group (object assembly), while her best score is for the test ranked second from the bottom

for the HFA group (picture completion). Since the performance scores for the HFA group are ranked identically for 100% of the studies, Mary's deviation here would seem to have a significant implication. Comparing Mary's score with the Siegel and Minshew data, we find that all fourteen of the studies with recorded data rate block design as the highest performance subtest score while seven have lowest scores for picture arrangement, six for coding and two for digit symbol (one study has digit symbol and coding as equal lowest). Mary's scores therefore suggest a quite different cognitive profile. Scoring highly for picture completion suggests a relatively good ability "to grasp the meaning of details within a complete picture" as well as having a comparatively good visual memory, (WAIS-R Analysis Worksheet, 1981). Such a skill suggests an ability to integrate local information into higher level processing (that is, central coherence); an ability which has long been reckoned as deficient in autistic persons (Frith, 1989; Mottron, et al., 1999). Conversely, the subtest of object assembly necessitates an awareness of separate parts of objects.

Mary's WAIS-R subtest scores then are suggestive of a cognitive make-up quite unusual within an autistic diagnosis. Her best and worst performance subtest scores suggest abilities not often associated with autism as does her elevated verbal subscale score within a full scale IQ of less than 70 (although we should note here that a difference between verbal and performance subscales of less than ten points is not considered significant for the WAIS-R). Mary may then be regarded, in so far as heterogeneity within the disorder permits (see comments above), as having a Wechsler profile which is somewhat atypical for autism. In particular, her verbal ability is greater than her outline cognitive profile would suggest.

7.3. Speech
Mary's speech can be characterised by a restricted vocal range, a nasal voice quality and a tendency for both cluttering and dysfluency. Prosodic abnormalities are also noted as occurring. Since acoustic measures are not available for Mary's data at present, intonation abnormalities will be discussed only briefly.

7.3.1. Intonation
Mary's intonation contours vary, in that while at times they are comparable to those of non-autistic speakers, at other times, tone units have no discernible pitch movement as in M1 below:

M1a

M   (0.7) when you going 'home again

M1b

M   (2.4) would you 'show me

M1c

M   [no would you show me h]ow to get that off

The general impression of Mary's speech is rather automaton-like, so that, pre-analytically, one may imagine that each syllable is given equal weight and that nuclear tones are completely absent. As with Tina, this feature may be related to the phenomenon of stress equalisation in apraxic speech (Kent & Rosenbeck, 1983). Utterances like those in M1 are however fairly rare. The impression of equally-weighted robotic speech is more likely to arise from Mary's treatment of non-nucleic syllables. While the transcription does not capture this level of detail, it is clear from the original data that there is very little tone movement besides that which may occur at the nucleus, so that individual syllables of the pre-head, head and coda appear to have equal prominence. Since Mary has a restricted vocal range besides this, the overall impression is that tones hardly vary. Typically, vowel lengthening is used to mark a nucleus, as well as pitch movement and amplitude. However, this is not always the case. In fact, vowel-lengthening is the only feature which reliably identifies a nucleus.

7.3.2. Dysfluency

Mary stutters at times. M2 below exemplifes this:

M2

M (.) 'no 'children (.) they had 'three

  ‚miscarriages [(.)two in 'nineteen n- 'nineteen (.) |

S |aa::h that's what you were telling me |

M 'ninety ˉtwo (0.7) they had 'two in nine- (.) 'miscarriages in 'nineteen 'ninety 'two and
  'one 'miscarriage in (.) 'nineteen 'ninety`three (0.9) mum says I got some s - 'sad
  (0.8) when she 'came up- (.) to 'fetch me-(.) my 'twenty 'fifth ˆbirthday in 'nineteen-
  (.) eigh- (.) 'nineteen 'ninety`three (.) she 'told 'me that (.) Mary I got some 'sad
  ‚news to‿tell you (.) I'm a'fraid that 'Tina has had a ‚miscarriage

These dysfluencies generally involve segment, syllable, word or phrase repetition (Crystal & Varley, 1993). On occasion, blocking may also occur though there is no visible indication, through facial expressions or grimacing for example, that Mary's extended pauses are due to dysfluency. Since Mary's conversation is replete with extended pauses, blocking is suggested as only a possible cause for some pauses; extended pauses are discussed further below. Excessive prolongation of segments, the introduction of extra words, unfinished words and circomlocutions do not occur.

7.4. Conversation

Conversational features of interest discussed below are topic movement, topic maintenance and repetition, repairs, interference from earlier structures and common collocations (repetitiveness), overlaps (interruptions by one participant during another's turn), latching (where no gap or switching pause occurs between participants' turns at talk), and pauses.

7.4.1. Topic and topic movement

As mentioned above, Mary has favoured topics which tend to recur across conversations. Within conversational sessions, however, topics which occur naturally in the talk become favoured, such that they recur frequently throughout the course of the conversation. This is achieved by means of a circular topic movement. We can see this type of topic shift exemplified in M3 below.

Any discussion of topic movement within conversation is bound to be problematic, since our usual perception is that topics flow easily into one another with no definitive boundaries between them. Although it is of course possible for bounded topics to succeed one another discretely, so that one topic is closed before another is initiated, this type of movement is exceptional, and hence we tend to mark such an event by means of an overt utterance, signalling a conversational management activity is taking place; for example, " *by the way* ... " or "*to change the subject a moment* ...". In an unmarked context, the mechanisms by which we achieve topic shift, or conversely, topic maintenance, are so complex that providing a principled account of their dynamics is a huge undertaking. As Heritage says: "everything is, in principle, both potentially related - and unrelated - to everything else" (Roger & Bull, 1989: 28). Nevertheless, Button and Casey (1985) have suggested that transition between topics can sometimes be traced in a 'stepwise' fashion. We may begin with one topic which is moved out of gradually by the introduction of an ancillary topic. The ancillary topic must be accepted by the participants if it is in turn to become topicalized. A further ancillary topic may then be proposed and topicalized, and so the process continues until the original topic seems very distant from the final one.

In the conversational extract with Mary in M3, stepwise movement apparently underlies topical progress. Mary and the researcher are discussing Mary's participation in the mini-olympics during the opening phase of the extract (lines 1 - 4). At lines 3 - 4, Mary moves onto an ancillary topic: badminton. The relation between the mini-olympics and badminton is clearly a likely one. In lines 5 and 7, the researcher attempts to topicalize the badminton issue, receiving minimal responses in lines 6 and 8. Mary then moves back to a restatement of her ancillary movement turn component (lines 3 - 4), before making an abrupt topic shift at line 9, with only a brief pause between the two. Note that there is a connecting factor between the two topics of badminton and the advocacy meeting: Elly. However, the jump at line 9 certainly seems to be beyond the distance of an ancillary topic. The lack of connection between the two topics is partly reflected in the syntax of the turn component beginning in line 9. A full clause occurs before Elly is mentioned at all. Instead, the first clause marking the topic movement away from the mini-olympics contains the non-antecedented pronoun " *they*". "*Elly*" only occurs in the second clause construction as indirect object, a functionally less foregrounded position than subject or direct object, and thus of only peripheral importance within the construction. Further, as indirect object,"*Elly*", is the third-mentioned noun phrase in the construction. Thus "*Elly*" is afforded prominence neither

syntactically nor through order of mention. This makes the topic movement problematic for the interlocutor, since the two topics can only be related through *"Elly"* .

Following the topic shift made by Mary in lines 9 to 13, the researcher attempts to move onto an ancillary topic through mention of the ages of Mary and Elly at lines 14, 16, and 18. It should be noted that, while Mary's larger topic shift was made without negotiation between participants, the researcher seeks cooperation for the movement onto ancillary topic through the structuring of turns as questions. The researcher's attempts to move onto an ancillary topic are, however, not successful. The long pause in place of topicalization of the ancillary at line 21 signifies this, whereupon the researcher moves back to the topic initiated by Mary in line 9. Mary apparently accepts this return and, after some difficulties (evidenced by brief question and response sequences in lines 14-21), the subject of birthday parties is topicalized in line 23.

It can be seen, then, that the process of moving from topic to topic, rather than progressing stepwise in a uni-linear direction, is accomplished in a circular fashion. The researcher makes stepwise movements onto ancillary topics and seeks to negotiate these by means of questions. Mary moves either abruptly to topics, which can be categorised through the examination of their syntax as too distant to be acceptable as ancillaries without negotiation, or prefers to return to previous topics. In most cases these are topics which have been initiated by herself in an earlier turn.

M3

1	S:	what happens at͵ tho:se͵ then (.) what will happen at͵ them
2	M:	we- well(.) you 'choose the e:r (3.6) you 'choose the e:r (0.8) the e͵vent (.) that you
3		'want to͵go in (1.8) the eve- it depe- 'pending on what you're 'good enough(.) but I
4		'want t -to 'learn how .hhh (.) to get 'better at 'badminton so I can 'play with͵ Elly
5	S:	(0.8)͵aa:h (.) does͵ Elly 'play 'badminton [(2 syllables)]
6	M	['yes she] 'does
7	S	(1.2) is she͵good at it
8	M	(.).hhh yes but I've got to get a lot a got to (.) 'get a 'lot͵better (.) a 'lot 'better .hhh
9		and 'last͵ night they 'went to the er 'speak͵up͵advocacy 'grou:p .hhh and e:r (3.2) we
10		'signed (.) a 'birthday 'card(.) f- for 'Elly (.) from the͵ speak up .hhh 'advocacy
11		'speak up`grou:p .hhh and {ə}(.) a-and {ə}(.) Elly was (2.9) cutting her cake-
12		'cutting he:r (.)`birthday cake.hhh (.) and we sang(.) and we 'all 'sang 'happy
13		͵birthday to 'Elly
14	S	(.)↑´no:h 'that's ↑ lovely (.) how ͵o:ld was she
15	M	she was 'twenty 'ni:ne (0.9) she'll be`thirty next`year
16	S	she´`will (0.6) is she ͵older than you
17	M	yes she is
18	S	(0.6) how [ôld are] you=

19	M	[two year-] (.) = .hhh two years old-(.) she's 'two years 'older than me(.)
20		'I'm twenty 'six(.) I'll be twenty, seven in e:r (.) 'september=
21	S	= aa::h ⌐right (1.1)
22		so (.) you had a, birthday, party ˏthen
23	M	(1.2) .hhh we sa- (.) we 'sang (.) 'Elly 'took her 'birthday 'cake to the sp- (.)
24		'advocacy, speak up ˏgroup for 'everybody to 'have
25	S	(1.2) ma- 'who 'made her ˏbi:rthday 'cake for [her]

7.4.2. Topic maintenance and repetition

The extract shown in M4 below enables us to see how a topic is maintained once it has become accepted.

M4

1	M	[e:r](.) 'Julie went down to the (1.0)
2		'cake 'shop toˏorder it for her (.) and 'Patsy (.) 'brought it up to the erm (.) the
3		`day centre for her
4	S	(1.6) that's, lovely that was ˏkind of themˏwasn't it =
5	M	= 'ye:s
6	S	and was it a surˏpri:se
7	M	it was a surˏprise 'yes (.) .hhh
8		(1.2) it was a- (.) it was a 'very 'nice 'birthday ˏca:ke
9	S	(0.6) what was it, li:ke
10	M	(1.2) I had aˏlook at it (.) and it was, pink and it was very 'ni:ce (.) and 'Gladys (1.1)
11		wh gl-(.)gl-(.) 'Gladys came 'do:wn .hhh to the 'day centre she says to me 'what's
12		'that (0.7) she says to 'Elly wh- 'what's, that is that -is that a -(1.0) is that aˏca:ke o:r
13		(.) is that a pi- (.) is that- (.)ˏcake or piece o- or -or -is it a 'rabbit
14	S	(1.0)(hhhhhh) .hh 'why was it- 'why did she 'say, that
15	M	just a 'jo:ke
16	S	(.)why- (.) what was- (.) [why-]
17	M	[when] I was 'walking up with 'Katy ˏPortman
18	S	(2.0) aa:h, right 'why did she 'make a 'joke like, that
19		'why [was that]
20	M	[she was just]ˏsaying it
21	S	(1.7)'what did the 'cake, look like
22	M	.hh it looked very 'ni::ce
23	S	(1.1) wh- 'what ⌐shape was it
24	M	(1.1) it's like aˏhea:rt 'shape (.) but she still got some, left for to ⌐ni:ght
25	S	⌐aa:h (1.3)
26		what [colour]
27	M	[en we-] en we 'had that (.) its 'pink (.) en we had 'that e:r (.) 'chocolate gateau

28		for- (1.0) that we- (.) we 'bought with Clare- (1.0).hhh (.) 1 - (.) last 'ni::ght (.) with
29		Katy, Portman that we 'bought with 'Cla re 'Bentley the day .hhhh from the Lo-Cost
30		(.) the e:r the 'night be'fore .hhh the 'Elly's birthday (1.3) that we 'had after 'tea last
31		(.) we 'had it after 'tea last 'ni:ght
32	S	(0.9) 'chocolate gateau
33	M	'ye:s
34	S	was it ⁻ni:ce

M4 follows immediately on from M3. In the first place, it is clear that the topic has been accepted by Mary's turn initiated in line 1, which is composed of two fairly lengthy turn components. Turns comprising a low number of brief turn components by Mary occuring successively (for example, M4 lines 15, 17, 20, 22) are suggestive of trouble with topic maintenance. The researcher's contribution to the maintenance of the accepted topic is almost exclusively in the form of questions (for example, lines 14, 18, 21 and 23). A further point to note is that Mary is dependent on repetition in maintaining topic, for example, the use of the phrase *"very nice"* in lines 8, 10 and 22. This type of cross-turn repetition of phrases is fairly common in autistic conversation and similar phenomena exist within the transcripts of every study participant examined thus far. Within Mary's turn at M4 line1 - 3 there is, however, evidence of repetition of another type. Tables MT: iv and MT: v below illustrate repetition which occurs at the syntactic level: notably, between the two turn components there is an association between clause function at level 2 and thematic relation at level 3.

MT: iv- Association between clause function at level 2 and thematic relation at level 3: example 1

	Julie	went	down	to the cake shop	to order	it	for her
1.	MAIN CLAUSE				DEPENDENT CLAUSE		
2. Clause Func-tion	SUBJECT	VERB	ADV.	ADV.	VERB	D.OBJ	ADV
3.Them-atic Relation	AGENT	DYN.	LOC.	LOC.	DYN.	PATIENT	GOAL

	Patsy	brought	it	up	to the day centre	for her
1.	*MAIN CLAUSE*					
2. Clause Func- tion	SUBJECT	VERB	D.OBJ	ADV.	ADV.	ADV.
3. Thematic Relation	AGENT	DYN	PATIENT	LOC.	LOC.	GOAL

Syntactic repetitiveness also occurs in lines 28 - 31 of M4 where we see repeated use of "*that*" relative clause constructions.

Further evidence of repetition at the syntactic level can be found in the series of monologues which occur towards the end of Transcription Three (31.8.95: WAIS-R), where Mary is recounting the incidents that took place while she was on holiday. M5 below gives the section from which illustrative utterances are taken.

M5

1 M I went (.) 'last week (1.1) er (1.0) e:r (0.7) tuesday (.) we 'went to er (1.8).hhh we

2 went to`Mistycrag an a- (.) an- (.) an- we ad- an we ad a cup of ͺco::ke (0.9).hh (.)

3 an - (.) an I 'bou:ght (.) some 'postcards an I 'wrote them to (0.6) 'mum and ͺda:d (.)

4 Finewood ͺAvenue:: (1.1) 'Andrea ͺJo:nes (1.0) Grandma ͺHolly (1.0) and Tina- an-

5 (.) an-ͺMichael and I ͺposted them (.) but I 'run out - (.) I 'run short of e:r (.)

6 ͺstamps (.) so Dar ͺleen had to give me some stamps (.) an I po-.hh (.) gi - (.) 'gimme

7 a stamp and I`posted it

8 S that's ͺbrilliant =

9 M = and then e:r (1.7) we went - (0.8) we sa- we sat outside the`pub at

10 'Mistycrag (0.7) an I- an I had a glass a ͺlemonade (.) [but e:r   ] (1.8) .hh

11 'Jane says

12 S [that's brilliant]

13 M to: to 'Max ͺLowther (.) .hhh you've had your 'tablets haven't you ͺMa:x (.) an I

14 said I- (.) I've ͺad my 'tablets and she just ig ͺno::red me and Darleen ͺsaid to me

15 .hhh 'yes you ͺave ad your 'tablets 'Mary (0.7) so I:: (1.6) she ͺsaid to me: (.) Mary

16 (.) shut up (.) so 'I:: er (1.7) .hhhh (.) so I 'said to er (.) no I won't` shut up so she

17 took me 'straight back to the ͺcoa:ch .hhh and then e:r (5.0) a-(.) an I 'pushed er

18 (1.1) an I 'pushed 'Jane into - onto the ͺroa::d (.) an I 'pushed two ͺother 'ladies onto

19 the 'road as 'well (.) .hhh an I go er- (.) Jane ͺsaid to me (2.6) Mary (.) shut up (.)

20   `now (.) 'just`shut up (.) .hhh so e::r (6.6) on a we-(.) on a`wednesday (.) we e:r

21   (1.8) .hh we 'went down to the ˏbeach

For the purposes of this type of analyis, it is necessary to 'clean up' the transcribed speech so that hesitations, dysfluencies and false starts are disregarded. Reported speech is also left out of the analysis. This leaves 22 clauses, which are shown below in the sequence in which they occur along with their respective functional breakdowns.

M5i

1.	I went last week	SVA
2.	tuesday we went to Mistycrag	ASVA
3.	and we had a cup of coke	and SVO
4.	and I bought some postcards	and SVO
5.	and I wrote them to mum and dad ....Michael	and SVOA
6.	and I posted them	and SVO
7.	but I run short of stamps	but SVO
8.	so Darleen had to give me some stamps	so SV^{mod}V$_{l}^{ex}$O^{i}O^{d}
9.	and I posted it	and SVO
10.	we sat outside the pub at Mistycrag	SVA
11.	and I had a glass of lemonade	and SVO
12.	but Jane says to Max Lowther "_"	but SVAO (saying)
13.	and I said "_"	and SVO (saying)
14.	and she just ignored me	and SAVO
15.	and Darleen said to me "_"	and SVAO (saying)
16.	she said to me "_"	SVAO (saying)
17.	so I said to her "_"	so SVAO (saying)
18.	so she took me straight back to the coach	so SVOA
19.	and then I pushed Jane onto the road	and then SVOA
20.	and I pushed two other ladies onto the road as well	and SVOAA
21.	Jane said to me "_"	SVAO (saying)
22.	so on a Wednesday we went down to the beach	so ASVA

Of the 22 clauses, only two do not begin with subjects: 2 and 22. These two have a similarity comparable to those analysed at MT: iv and MT: v above:

MT: vi - Clause functions and thematic relations of sentences M5i: 2 and 22

sentence M5i: 2	tuesday	we	went	to Mistycrag
sentence M5i: 22	on a wednesday	we	went	down to the beach
1. Clause Function	ADV.	SUBJECT	VERB	ADV.
2. Thematic Relation	TEMPORAL	AGENT (pronoun)	DYN.	LOCATIVE

Just as with MT: iv and MT: v, clauses 2 and 22 show identity between clause function and thematic relation. Indeed, the similarity between 2 and 22 is such that the analysis for each is identical at both levels. These two sentences contain the only examples of clauses which do not begin with subjects, and, in all cases, the clause function of subject corresponds with the thematic relation of agent. Further to this, of the twenty sentences with clause initial subject, seven have (conjunction +) SVO structure. Conjunctions with the SVO clauses, as for all other clause types in M5i, are taken from a restricted range which includes *"and"*, *"but"* and *"so"* with one occurrence of *"and then"*. Clauses which deal with *"saying"*, with just one exception (13), also have identical structure: SVAO. Lexically, reported speech is always referred to using the verb *"say"*, despite the sometimes vitriolic nature of its content.

It is clear from the brief analysis above that Mary, whilst relatively adept at intentional communication of her message, uses repetition as a resource, both lexically and syntactically. Further, the clauses in M5i suggest that Mary has a preference for canonical structures. Approximately a third of her utterances have SVO structure; all but two begin with a subject, and only one (14) allows an adverbial to interrupt the subject + verb sequence. The clauses which deal with *"saying"* are reminiscent of Phoebe's utterances wherein a limited repertoire of syntactic structures occur in company with restricted lexis when the favoured theme of sweets is mentioned. *"saying"* is always dealt with syntactically, and to some extent lexically, in the same way for Mary. While Mary is undoubtedly more linguistically able than Phoebe, it appears that, in common with Phoebe, the issue of repetition is one which cannot be easily separated from that of restricted range of available items, whether these be at the level of syntax or of lexis. Frequent use of canonical structures is likewise implicit of a restricted repertoire.

Topic is then maintained by the two participants, Mary and the researcher, in very different ways. The researcher uses questions while Mary makes use of repetition. The decline of the topic in M4 begins with the researcher's turn in line 32 which is brief and structured as a statement, giving rise to a series of brief low component turns before another topic is found. Line 32 is a repetition of the new information given as direct object in the first component of Mary's previous turn. As such, it is interesting that the researcher elects to use a feature more closely associated with Mary's style to indicate that the topic is exhausted. A convergence of styles in this case precludes continuation of the topic.

7.4.3. Prior-turn dependence

Despite the tendency to use repetition as a linguistic resource in this way, Mary does not typically rely on prior other-turns to model her own. Using Transcription Two as a data set, Mary was found to use a prior other-turn as a model in only 6 out of 89 turns (giving a percentage of 6.7%). Other modelling was reckoned to occur if the turn had two lexical

words or a complete phrase identical to an immediately prior-turn. The percentage of minimal responses, that is, turns consisting of a single word, was 21.3% (19 out of 89 turns), while the percentage of utterances which showed no prior turn dependance was 71.9% (64 out of 89 turns). Prior-turn-dependent turns were typically much shorter in length than non-prior-turn-dependent turns. Using Brown's method for calculating mean length of utterance to calculate turn length (1973), prior-turn dependent utterances were 8.16 morphemes in length, compared to 19.4 morphemes for non prior-turn dependent (the latter calculation is based on the first 10 productive utterances from Transcription Two: 25.5.95). Other-modelling for Mary is, then, a seldom-used resource. Further to this, when it does occur, mean length of turn indicates that it is not used to overcome syntactic deficiency, since non-prior-turn dependent turns are considerably longer.

7.4.4. Overlaps and repairs

Within conversation between non-language-disordered participants, overlaps and latching are frequent occurences. Overlaps are defined as speech occuring simultaneously between participants. Latches can be defined as the simultaneous start and finish of talk of two or more speakers, such that no interval exists between turns. Examples of these features in the extracts above can be found at M3: lines 5 and 6; lines18 and 19; lines 20 and 21; M4: lines 4 and 5; lines 16 and 17; lines 19 and 20; lines 26 and 27; M5: lines 8 and 9; lines 10 and 12. Although both Mary and the researcher latch and overlap in the extracts above, both tend to be features of which Mary more typically makes use. Indeed, there is only one example of the researcher overlapping in these extracts: M5 lines 10 and 12. M6 below gives further examples of overlaps occuring, both with the researcher and Mary acting as the overlapping turn-taker. Extracts M6a and M6b show two typical occurrences of Mary's overlaps.

Mary typically overlaps the researcher in environments where it is clear that she is in fact completing an earlier turn. The length of the pause in M4, line 4 and the fact that Mary had apparently dealt with the researcher's question leads the researcher to assume that the conversation has topically progressed. Mary's overlaps then, seem to occur as either delayed turn completions, or as a type of delayed self-initiated repair, as in M6b, where the original response is evidently construed by Mary as being informatively deficient. It is tempting to consider these delayed turn completions in a cognitive context as evidence of excessively slow processing time. However, the overlap in M6c indicates that Mary has processed the researcher's utterance before its completion, thus making a cognitive account less likely in extracts M6a and M6b. Within the context of the conversation it is notable that Mary is only superficially departing from the normal turn-taking conventions during the overlaps in M6a and M6b. Since her earlier turns are not perceived by Mary to be complete, an overlap is 'not really' an overlap. Her intention is not to take over the researcher's speaking turn to make a new contribution, but to revise an earlier contribution. Thus, Mary's use of overlap indicates that she looks backwards in the conversation as well as forwards.

The researcher's overlaps by comparison occur in somewhat different environments. In Sample M6d the researcher is apparently confirming that she has made an utterance re-interpretation following the additional information provided by Mary in line 2. The researcher's overlap here has more in common with supportive back-channel responses, since she does not seek to continue with it in line 4.

Both speakers, then, have a tendency to overlap simply to carry out conversational maintenance. With the researcher, the infrequency of overlap is perfectly in accordance with her role as facilitator of the conversation (also evidenced earlier in her support of topic maintenance by the use of questions). Mary's overlaps suggest that she too is engaging in maintenance of the conversational mechanisms, although her perspective is different, in that it is her own previous utterances which trigger the overlaps. The environments in which Mary's overlaps occur also indicate that she is not employing a bounded notion of turn-taking. The researcher's turns occurring between Mary's original utterances and their delayed completion appear to be effectively ignored by Mary. An overlap occurring in this context should not then be interpreted as a straightforward flouting by Mary of a current speaker's right to turn-completion. Since Mary has herself not completed her original turn, repair of her own utterance is rather prioritised by Mary over her interlocutor's right to turn complete.

M6a

1	M	(1.1) it's like a ˎheaːrt ˈshape (.) but she still got someˌ left for to ˉniːght
2	S	ˆaaːːh (1.3)
3		what [colour]
4	M	[en we-] en we ˈhad that (.) its ˈpink (.) eːn we had ˈthat eːr (.) ˈchocolateˌ gateau

M6b

1	S	(.) ˉmhm (2.0) why- ˈwhy d'youˌ feel ˈlike you ˈdon't ˈwant to goˌ swimming
2		someˈtimes
3	M	(.) I justˌ do someˈtimes
4	S	(.)ˈdon't you want to getˆwet (2.9) ds- does it ˈnot [ˈfeel]
5	M	[bec] ause I ˈwant to ˈdo the
6		ˈsame ˈthings as what ˈMaxˌ Lowther and ˈPeteˆ Sanderson ˈdo(.) [

M6c

1	S	(.)ˆ aːːːːh (.) is ˈthat (.) ˈone of thoseˌ pools that's ˈgot (.)ˌslides [and]ˈthings
2	M	[ˈyes](.)
3		ˈslides and ˈthings (0.9)

M6d

1	S	but ʹEllen and ʹHazelˋ didn't
2	M	(0.7) ʹno she just ʹsaw ʹEllen and she- (.) [told- (1.0)ˋtold] ʹEllen
3	S	[oh sheˋtold ʹE:llen]
4	S	(0.8) ˉyeah (1.3) that'ṣ <u>brilliant</u>

7.4.5. Latching

Latches have a similar distribution to overlaps within the conversational context. M7d - e show instances of these occurring at the juncture between the researcher's and Mary's turns, with the researcher's turn being latched by the early onset of Mary's turn. Latches occurring between Mary's turns with the researcher as latcher are found far less frequently in the transcripts, although they do occur (for example M3 lines 20 - 21). Such occurrences, as with the researcher overlaps, tend to be have a supportive function: M7a below is a typical example of this type of latch. Indeed, throughout the transcription from which this extract is taken (Transcription Two), the researcher's latches, with the single exception of M3 lines 20 - 21, always begin with a *"yes"*-form utterance, indicating supportive function. Transcription Three (31.8.95: WAIS-R) has far more examples of researcher latching than either of the other two transcriptions. M7a and M7c give examples. Again, the latches appear to have supportive function. The context of the test environment may explain the more frequent occurrence of this type of utterance in the WAIS-R transcription. The researcher has a structured format with which to proceed and latches may be employed in order to move the interaction along.

M7a

1	M	[it] was just being ʹfunny =
2	S	= ˉyea::h (2.4) what
3		does ʹeverybodyˋelse do at the ʹswimming ʹpool(.) do they ʹa:l[l]

M7b

1		
2	M	[b]ut erm (.) an- (.) an theˋnose bit is ʹmissing =
3	S	=ˈvery good (0.7)º yea::h º

M7c

1		
2	M	(4.1) a guiˋta::r(1.2) a- a ˎviolin ˎthere =
3	S	=ˈhhmhmmn
4	M	(2.0)with somethingˋmissing (3.1) with theˎthi::ng thatˎgoes over it
5		that's ˎmissing =
6	S	=ˈri::ght
7		(3.1)º that's ˉright yeah º

M7d and M7e show Mary latching her turn onto an incomplete turn of S. S's immediate relinquishment of her turn is again indicative of her role as facilitator of the conversation

rather than interlocutor of equivalent status to Mary. S's turns are not always ignored however. M7d shows Mary providing a response to S's question before moving on to complete her turn with information related to the present topic, that is, the mini-olympics. In both examples of latching, it is apparent from the content of the turn that Mary has a wish to make a contribution on or related to the present topic. In both cases, the information that she gives can be perceived as a moving forward of the topic. Although in M7e there is a repeat of information which she has already disclosed, this is included at the very end of the turn, with the new information relatively foregrounded by early mention.

Although latches and overlaps are, then, in some sense similar in distribution, there is an important distinction between them. While overlaps can be indicative of reflection on the talk that has taken place and can be seen sometimes to be signals of a turn initiated for the purpose of repair, latches seem to indicate a movement forward of the talk in terms of topic.

The researcher's overlaps and latches are functionally quite different to Mary's. Within S's repertoire however, they are functionally alike, in that they tend to be supportive. The somewhat specialised environment of the WAIS-R administration gives rise to a slightly different distribution of latches, although their function remains, as elsewhere, broadly supportive.

M7d

1	M	(2.5) and I'm 'thinking of 'training for 'badminton as 'well (.) and 'table ˎtennis
2	S	(1.5) 'which- (.) 'which- (.) of ˎthose do you like -=
3	M	= I'm getting a 'progressing at
4		ˎbadminton an (.) s- so I can 'play with 'Elly E-ˎGarrick (.) .hhh in the e:r(1.0) m-
5		mini ly- 'mini `lympics
6	S	

M7e

1	M	I 'liked (.) dressage doing the dress - I 'did the ˎdressage last 'ti:me .hhh (.) and I
2		came 'third with the 'bronze medal (.) and 'Darren 'Harris [(.)] 'came e:r (1.0) ca-
3		ca- 'came 'first with
4	S	[wow]
5	M	a ˎgold cup ˎgo:ld cup .hhh (.) cos 'Darren's 'dad (.) 'Darren ˎHarris's 'dad 'came to
6		-(.) .hh watch Darre- 'Darren 'Harris (1.0)ˎri:de in the 'dressage (1.0) and er (.) m-
7		(.) my 'mum and 'dad 'came to 'watch, me (.) r-'ride in the 'dressage .hh (.) and
8		they thought I was very, good
9	S	I bet that was- =
10	M	= I got an 'awkward 'horse called`Cha:rles (.) who wouldn't 'trot so I
11		had t-to have a .hhh have a 'stick to make it 'trot [(0.8)] and I came 'thi:rd

7.4.6. Pauses

As mentioned above, conversation with Mary contains many lengthy pauses. Since these are so numerous, only those exceeding one second in length are considered here.

There is a general inclination within the literature to regard pauses as markers of "some kind of increase, delay, or disruption in the cognition underlying the otherwise fluent generation of speech" (Thurber & Tager-Flusberg, 1993: 310). Pauses are normally divided on the grounds of grammaticality or non-grammaticality. A pause is grammatical if it falls between phrases and non-grammatical if it should fall within a phrase. Non-grammatical pauses are presumed to indicate increased cognitive demand on a speaker while grammatical pauses are construed as reflecting effort spent in making syntactic choices (Thurber & Tager-Flusberg, 1993).

Pauses known as 'switching pauses' may also occur between speakers' turns. Thurber and Tager-Flusberg (1993) note that typically within conversations involving autistic participants, these pauses are asynchronous, giving an impression of disjointed, arhythmic talk. This finding is replicated in the extracts of conversations with Mary, where there are often extended pauses between speakers (for example, M4: lines 10, 14, 18, 21, 23).

In Mary's data, there are non-grammatical pauses, which according to Thurber and Tager-Flusberg's (1993) interpretation could be construed as being indicative of high cognitive demand. The location of such pauses is, however, significant, given that Mary frequently pauses before content words (M3: line 2; 11; M4 : line 1; 12; M8: lines 1; 2; 3). Perhaps a more likely interpretation of these non-grammatical pauses is that they signify difficulty in retrieval of specific lexemes. It appears from the data that lengthy pauses may sometimes indicate that Mary's difficulty in lexeme retrieval is related to interference from collocative phrases, whether these be common collocations or specifically related to the local context. The pause in M8, line 2 eventually ends with the utterance of the lexeme *"apple"*, rather than *"fruit"*; the more common collocation in British English being *"apple crumble"* rather than *"fruit crumble"*. Likewise, in M4, line 12, the pause is succeeded by production of the word *"cake"* which ostensibly Mary had been struggling to locate. However, her continuing dysfluency results in the hesistant production of the phrase *" piece of"*, which contextually has no meaning. *"piece of cake"* is, however, a common collocation. Again, it is feasible that Mary's lengthy pausing may indicate a struggle to inhibit production of these types of phrase, rather than a specific lexeme-finding difficulty.

M8

1 M   'ye:s (.) it was ˏvery 'ni:ce.hhh I'd made s -(1.6) {əv} 'yesteˏda:y (.) I 'made some er
2   (4.7) 'apple(.) fr- 'fruit 'crumble with er ↓ˏJane↓(.) then er -(.) 'Mike 'Losely
3   'hoovered the- the- the ˏlanding 'downstairs .hhh I 'hoovered the 'hallway (1.2)
4   downstairs (.) I 'hoovered the 'stairs and 'hoovered theˏlanding up⁻stairs .hhh and
5   then e:r (.) then I 'hoovered (.)the-(.) the 'lounge room and I p- 'dusted and
6   ˏpolished(.) the 'lounge room .hhh then I 'hoovered (.)th- (.) the 'dining room
7   then er (.) .hhh then 'helped 'Jane 'Brown to e:r (.) to 'mow the back- (.)the 'back
8   ˏla:wn with a ˏlawnmower (.) at Fineˏwood yesteˏda:y

Further evidence that Mary's conversation is prone to this type of interference in a local context is shown in M8: line 3-4. Here the repetition of *"downstairs"* is preceded by another lengthy pause. This time however, Mary's attempt to inhibit the perseveration of the lexeme is not successful and we are left with a semantically confusing construction.

It should be noted here, that at times Mary's non-grammatical pausing is almost certainly a result of cognitive load. M9 shows conversational data from the administration of the WAIS-R. The questions in the WAIS-R information subtest are arranged in order of difficulty, so that the easier questions are asked at the start of the test and gradually increase in difficulty. From lines 10 to 19 we see that the length of time required for Mary to respond to S's questions becomes greater with each question asked. This pattern does not continue, however. As the test progresses, it is clear that, unless the questions are connected in some way to one of Mary's particular interests, she either guesses or gives a *"don't know"* response. The turn in line 19 is particularly interesting since 6.9 seconds is an especially excessive pause length. Prime ministers are a special interest of Mary's and the time spent pausing may be indicative of increased cognitive activity.

M9

1 S   ´right (.) shall we 'start (.) with someˇquestionsˏthen
2 M   (.) 'yes
3 S   (.) oˇkay (.) what are the 'colours of the 'British´flag (4.2) d'you 'know
4   ˏwhat [they are]
5 M   ['red   ] 'blue and 'whi:te
6 S   (1.3) 'that'sˇri:ght (.) 'veryˇgood (4.6) 'what is the 'shape of aˇball
7 M   (1.2) a 'rou:nd ˏshape
8 S   (0.7) ᵒ↓that's ⁻right↓ (2.7) 'veryˇgoodᵒ (2.4) how many´months (.) are there in a
9   'year
10 M   (1.0) there are 'twelve 'months in aˏyear
11 S   (2.7) I've got to 'write down what youˏsay you see (3.6) um:: 'what's a thermometer
12 M   (2.2) dunno
13 S   ᵒdon't knowᵒ (.) oˏkay   *whisper*
14   (1.4) how many´weeks (.) are there in a 'year

15	M	(3.5) are there one 'hundred and`eighty
16	S	(4.2) o'kay
17		(2.4)º just put this book over`he::re (1.4)ˌri::ghtº (1.6) can you 'name a prime
18		mi`nister of 'Great 'Britain during the 'second 'world ˍwar
19	M	(6.9) was it 'John ˏAstley
20	S	(3.6) 'good ˍanswer (2.4)`right (1.3) okay (.) 'who wrote`Hamlet
21	M	(2.6) I don't 'know
22	S	(1.4)º ¯ri::ght º (2.1) a::nd (.) 'what's the 'capital of`Italy
23	M	(2.4) 'Rome
24	S	`very good (3.4) º` excellent º (1.6) d'you know 'who was Louis- 'Louis`A::rmstrong
25	M	(0.9) he was a ˍsinger
26	S	(2.1)`very good (1.2) º ˍexcellent º (2.2) e::r (.) d'you know 'who was 'Amy
27		`Johnson
28	M	(1.2)ˏno
29	S	(4.2) 'where does the`sun 'rise
30	M	(1.0) 'in theˍmorning

7.4.7. Summary

The experience of conversing with an autistic interlocutor is often described by non-autistic participants as unsatisfactory. There is a sense that talk is carried out at cross purposes and communication does not 'really' take place. The data above go some way to suggesting why this might be, in that it is clear that autistic and non-autistic participants appear to have quite different notions about conversational structure.

In order to make sense of the data, we should firstly look at the theme of circularity in Mary's talk. There is an implicit importance given to the precedence of linear construction in the talk of people who do not have autism, which is reflected in the concentration of Conversation Analysis practitioners on sequential organisation (Atkinson & Heritage, 1984; Langford, 1994; Psathas, 1995; Sacks, Schegloff, & Jefferson, 1974; Schiffrin, 1994; Wilson, 1991). Conversational interaction is seen as a progressive phenomenon. Mary's conversation, however, seems to focus not only on what is to come but what has already taken place. Her preferential return to earlier topics within a conversation, as well as her preference for favoured topics cross-conversationally, are a clear indicator that she relies heavily on what has come before in structuring her present talk. Her use of overlaps for the purpose of repair or completion demonstrates a conversational style not characterized by uni-directional linearity. In these cases, Mary is evidently ignoring the primary salience of current turns. This is not to say that conversation with Mary is exclusively backward-looking, since clearly, talk also moves forward. It is merely noted that, for Mary, a return to earlier phases is a more likely option than for a participant who does not have autism.

Linked to the theme of circularity is that of repetitiveness. At times, Mary has difficulty in disinhibiting collocative components. She also shows a tendency to repeat syntactic constructions and lexical items. Such tendencies are of course a feature of normal spoken language and are central to discussions and proposals of various models of sentence production mechanisms (Bock, 1986; Garrett, 1982; Harley, 1995). The tendency to repeat syntactic structures in non-autistic speech is less well-researched than the phenomenon of lexeme or phoneme perseveration. These features are more evident in Mary's speech than in that of her non-autistic interlocutor, and, to a certain extent, are exploited by Mary in the maintenance of topic. How far such perseverative tendencies are underpinned by cognitive factors is difficult to judge. However, the existence of a connection between good short term verbal memory (as evidenced by WAIS-R profiles for autism) and verbal repetitiveness of these types would seem to be an area deserving of further research.

Finally, the facilitating style adopted by S as the researcher is noted. S makes extensive use of questions, thereby involving Mary in the talk. S's talk also shows a restricted use of latches and overlaps, the latter being used mainly as supportive features. Mary's turns, however, are only very rarely constructed as interrogatives, while latches and overlaps occur with relative frequency. At times S's talk does take on features more akin to Mary's talk, for instance M4 line 32. Here, the repetition and non-interrogative structure co-occur with the lapse of a topic. The importance of difference in styles of interlocutors is thus highlighted, since, without the facilitation of S, the talk is seen to end. This leads to the paradoxical conclusion that, while difficulty in talk is seen to proceed from differences in expectation and ideas about the purpose of talk, difference also enables the talk to proceed.

7.5. Syntactic Difficulty

Occasionally Mary seems to exhibit planning problems within her spoken language. M10 below exemplifies this:

M10

M   = I'm getting a 'progressing at
        badminton an (.) s- so I can 'play with 'Elly E-ˌGarrick (.) .hhh in the eːr(1.0) m-
        mini ly- 'mini ˋlympics

Here, Mary appears to have blended competing structures (Fay, 1982). Unlike non-autistic speakers however, she allows the two structures to stand together. Non-autistic blends tend to contain components of competing structures rather than allow the co-existence of complete units. Also notable about this utterance is the lack of repair, repair attempt or pause in acknowledgement of a production error. Further evidence of planning difficulties can be presumed by M8 above where attempted inhibition of collocation production gives rise to extended pausing.

Planning is evidently also a problem in M11 below.

M11

M   I go (.) every`friːdoo (1.2) with 'Kevin (.) I 'used to go- go with Mi- (.) Michael to 'Shelby but I 'go with er (.) 'Kevin (1.0) g- (.) 'Michael to 'Shelby for 'horse riding .hhh but I 'go with er (.)'Kevin (1.9) naː-(.) 'every 'friday with er (1.9) .hhh 'horse riding to 'Shelby

Here, Mary's attempt to produce a complex utterance results in a turn, the components of which are difficult to disentangle. Mary's target is likely to be close to M11i below:

M11i

Target: I used to go with Michael to Shelby for horse riding but (now) I go with Kevin every Friday

This approximation of Mary's target indicates that, while its production has given her considerable difficulty, it is in fact not a particularly complex construction. Two-clause utterances are managed by Mary elsewhere (for example, M4 lines 1 - 3 and M3 lines 3 - 4). However, closer examination of Mary's complex utterances suggests that she does in fact have trouble with these types of construction. While M4 lines 1 - 3 is managed fairly fluently (that is, there are no pauses beyond one second and no retracking), M4 lines 27 - 31 contains more frequent extended pausing and extensive retracking similar to that in M11, such that recovery of the target becomes, once again, extremely difficult. That the source of Mary's difficulty is syntactic rather than lexical in M4: 27 - 31 is indicated by the distribution of the pauses, which do not suggest word-finding difficulty.

The above suggests that Mary has problems at the discourse level. Indeed, Mary's clause combining strategy appears to be limited to the use of rather basic devices. The simpler conjunctions typically associated with early acquisition " *and*" (M3 line 9; 11; M4 lines 2; 10), "*but*" (M3 line 3; M5 line 5), "*so*" (M3 line 4; M5 line 15-16) are used to combine clauses in preference to more sophisticated items. While Mary will attempt to use more advanced devices such as non finite dependent clauses (M3 line 3; M3 line 4) and nominal post-modification (M4 line 28), these tend to result in the sort of dysfluency as occurs in M11. A possible exception is infinitive dependent clauses (for example, M3 line 4) which, along with catenative constructions (M3 line 3), seem to be within Mary's competence. Despite this, it is perhaps significant that when Mary embarks on a narrative-type discourse (as in M5), she tends to confine herself to the use of the most simple cohesive devices. Indeed, M5i shows that this simplicity exists at both the clause and the discourse level.

7.6. Summary

Mary then presents us with a competence fairly familiar within the autistic literature for those with comparatively high verbal ability. This ability enables her to converse fairly fluently with interlocutors, although the role of repetition in her conversation has not been

documented elsewhere to any great degree. Her difficulty with complex constructions and concomitant use of simple cohesive devices can also be linked to repetitiveness, albeit syntactic. At the level of speech, prosodic repetition does not occur although Mary clearly has disordered intonation. Finally, Mary is dysfluent. Although the literature has not yielded any work on dysfluency in autism, that Mary's dysfluency should be characterised by repetition of syllables and segments rather than the prolongation of segments or introduction of extra elements is perhaps more than mere coincidence.

8. Tom

8.1. General Background

Tom is a man with diagnosed Asperger's syndrome, who is resident at an autistic community in West Yorkshire. At the time the recordings were made he was 33 years old.

Conversations between Tom and the researcher were audio and video recorded. The sessions were intended to be informal with topics arising spontaneously from the talk. The sessions took place in the resource centre of Tom's community which was located some miles distant from the residential units. They included only the researcher and Tom as participants.

Tom's parents were unavailable to give background information about Tom. The WAIS-R (Wechsler, 1981) was administered to provide cognitive context to Tom's talk.

8.2. Asperger's Syndrome

Asperger's syndrome is a relatively recent addition to the diagnostic tools, appearing in DSM IV (APA, 1994) and ICD-10 (WHO, 1993), but not in publications prior to these: this despite Hans Asperger's 1944 definition of the condition. Asperger's Syndrome had, however, been referred to as a subtype of autism by authors for some years previous to this: for example, Van Krevelen (1971), Wing (1981), Szatmari, Bartolucci, & Bremner (1989), Ozonoff, Rogers and Pennington (1991), Gillberg (1985), Delong and Dwyer (1988). Much of this work considers the distinction between 'classical' autism and Asperger's syndrome. The ICD-10 definition is shown below.

> ICD-10 Criteria (1993) for Asperger Syndrome
> A. A lack of any clinically significant general delay in language or cognitive development. Diagnosis requires that single words should have developed by 2 years of age or earlier and that communicative phrases be used by 3 years of age or earlier. Motor clumsiness is usual, although not a necessary diagnostic feature. Isolated special skills, often related to abnormal preoccupations, are common, but are not required for diagnosis.
>
> B. Qualitative impairments in reciprocal social interaction (as in autism).
>
> C. Restricted, repetitive, and stereotyped patterns of behaviour, interests and activities (criteria as for autism; however, it would be less usual for these to include either motor mannerisms or preoccupations with part-objects or nonfunctional elements of play materials).
>
> D. The disorder is not attributable to the other varieties of pervasive developmental disorder; schizotypal disorder; simple schizophrenia; reactive and disinhibited attachment disorder of childhood; obsessional personality disorder; and obsessive-compulsive disorder. (WHO, 1993)

The nature of the distinction between Asperger's syndrome and autism has been a contentious issue. Whether Asperger's syndrome represents the higher end of the ability range within the autistic continuum (as is suggested by Gillberg, 1989), or whether it is a qualitatively distinct condition (as is suggested by findings such as those made by Ozonoff, et al., 1991) has been the main point of debate between researchers. Such an issue is not of merely academic importance, but may have a crucial bearing on likely prognosis and treatment. Likewise, aetiology is of interest to investigators, although since autism and Asperger's syndrome are pervasive developmental disorders, their aetiology is unlikely to be simple in either nature or discovery. Further, it should be noted that distinct aetiologies in themselves do not necessarily suggest distinct classification, since behavioural criteria may have an equally valid claim in disorder classification (Szatmari, Archer, Fisman, Streiner, & Wilson, 1995).

Since publication of the DSM IV and World Health definitions, work has centred on trying to resolve the quality-quantity question by identifying reliable clinical differences between high functioning autistic people and those with Asperger's syndrome beyond the diagnostic criteria. Ghaziuddin and Gerstein (1996) summarise areas that have been researched. These range from theory of mind abilities and verbal memory capacity (Ozonoff, et al., 1991) to tendencies towards psychiatric morbidity (DeLong & Dwyer, 1988; Gillberg, 1985; Wing, 1981) and motoric clumsiness (Ghaziuddin, Butler, Tsai, & Ghaziuddin, 1994). Ghaziuddin and Gerstein themselves research pedantic speaking style in diagnosed Asperger's patients. While some of these individual studies find significant correlations between a diagnosis of Asperger's syndrome and a given trait, the contention is by no means resolved. Without question, a close relationship exists between autism and Asperger's syndrome. Recent studies, that is those published subsequent to the DSM and World Health definitions, are certainly less inclined to report that "no substantive, qualitative differences were found between ... AS and HFA groups"(Szatmari, et al., 1989: 717) than are earlier investigations. Indeed, the author cited here, reports in a later publication that "Subtypes of children with PDD [pervasive developmental disorder] can be identified that differ on variables relatively independent of defining characteristics" (Szatmari, et al., 1995: 1662). Such a trend almost certainly stems from the greater clarification provided by diagnostic classification, although residual concerns remain regarding inadvertently circular comparisons between clinical groups (Szatmari, et al., 1995: 1669).

Since the main concern here is language, it is pertinent to note that while the definition of autism includes the symptom of delayed and deviant language, that of Asperger's syndrome indicates spared linguistic ability. This however does not preclude the existence of 'Asperger's-type' features of language. Ghaziuddin and Gerstein (1996, following Wing, 1981) refer to a 'pedantic speaking style' in Asperger's syndrome. The term is defined lexically, structurally and conversationally. Szatmari et al (1995) tested productive and receptive structural abilities of Asperger's children and found that these were comparable to

normals and significantly better than those of autistic children. Szatmari, Bartolucci and Bremner (1989), in a study using parent and teacher recall, found that Asperger's children were not significantly different to autistic children in terms of repetitive speech or speech initiative, although significantly fewer Asperger's children exhibited echolalia and pronoun reversal than did autistic children.

8.3. WAIS-R Analysis

The WAIS-R intelligence quotient measurement showed Tom as having a full scale IQ of 76: verbal sub-score of 90; performance sub-score of 62. The breakdown of Tom's Wechsler scores is shown below.

TT: i - Tom's Wechsler profile

Verbal Subscale	Scaled Score ( ) show rank order	Performance Subscale	Scaled Score ( ) show rank order
Information	12 (1)	Picture Completion	5 (1)
Similarities	10 (2)	Picture Arrangement	4 (2)
Arithmetic	6 (4)	Block Design	3 (3)
Vocabulary	8 (3)	Object Assembly	1 (4)
Comprehension	10 (2)	Digit Symbol	4 (2)
Digit Span	6 (4)		

Tom's overall I.Q. places him in the borderline range of cognitive ability. Since, in general, clinicians suggest that Asperger's Syndrome sufferers should have scores within the normal range, Tom's score just about corresponds with the expected level of ability (Manjiviona & Prior, 1999). Further, the large discrepancy between verbal and performance scores such as is seen in Tom's profile has been associated with Asperger's profiles (Lockyer & Rutter, 1969). The large difference of 28 points between verbal and performance scales is significant (Lockyer & Rutter, 1969; Wechsler, 1974). There is little research reporting on intelligence profiles of the Asperger's group, however Manjiviona and Prior (ibid) suggest that one may expect to find relatively elevated similarities and comprehension subscale scores in comparison to autistic profiles, due to an increased social and verbal ability in the Asperger's group. Information, similarities and comprehension do indeed represent the highest peaks in Tom's profile. A concomitant trough on the block design subtest is also postulated by Manjiviona and Prior. This subtest provides Tom's second lowest overall scaled score. Hence Tom's profile corresponds fairly neatly with the expectations of the Manjiviona and Prior study. However, Manjiviona and Prior's own

findings did not. Their study results were only able to confirm that the Asperger's group had an overall higher I.Q. than the autistic group.

Tom's full scale score is closest to that of Mary amongst the study participants. Mary, however, has a far flatter profile than Tom. In particular, the discrepancy between verbal and performance subscales is not significant for Mary. Indeed, Mary's performance subscale is slightly higher than Tom's. Both have information, vocabulary and comprehension as high scores, but for Mary this is superceded by her digit span score. Overall, Tom has higher peaks and lower troughs than Mary. Tom's highest score is on the information subtest, suggesting good long-term memory for facts and alertness to the environment, as well as relatively superior crystallised intelligence (Wechsler, 1974). Tom's lowest subscale score is on object assembly. The suggested abilities tested here relate to awareness of spatial relations, visuo-motor co-ordination and persistence (Wechsler, 1974). This last factor is consistent with the impression of weariness exhibited by Tom and noted by the researcher during the performance subscale of the test. Thus, it is possible that Tom's performance subscale score may be artificially depressed. Tom showed no concomitant lack of interest in the verbal subscale tests.

8.4. Speech

8.4.1. Intonation

Tom has fairly flattened intonation contours in much of his speech, though this is by no means always the case. As with Mary, tone can be quite odd: some utterances have very little movement outside the nucleus, others contain stressed syllables but no syllable with primary tone movement, still others contain no tone variation at all. Tm1 below shows utterances with no tone movement, while Tm2 shows utterances that have stress but no perceptible nuclear syllable.

Tm1a

T   (.) ˙can't remember˙

Tm1b

T   ˙spose it is˙

Tm1c

T   (0.8)˙probably˙

Tm1d

T   (0.8)˙doubt it *now*˙   *whisper*

Tm1e

T   (.)˙*think so*˙   *whisper*

Tm2a

T   (0.9) ˌevery ˈweekend

Tm2b

T   (1.9) 'older than that' *(2 syllables)'*   *whisper*

Tm 2c

T   *'no(.) I don't think so*   *fast, whisper*

As with other study participants, there is an interaction between low volume or voice quality, specifically whisper, and 'reduced' contour. The utterances which carry these reduced intonation contours are always in other-initiated sequences, though it is not always the case that Tom's utterances in other-initiated sequences have reduced tone. In particular, Tom's negative utterances that are overt signifiers of a disinclination to talk (see Tm 3 below), tend to have reduced contours. The utterances below are all taken from the start of Transcription Two (Appendix 6.2.: 1.7.96), when Tom's attention was focused on copying a pattern onto a board with coloured pegs.

Tm3a

T   *' I can't remember'*   *whisper*

Tm3b

T   (0.6).hh I don't 'know

Tm3c

T   (.)*'don't know'*   *fast*

Tm3d

T   (0.8)' can't re'member'

Tm3e

T   (0.7)*'don't remember'*   *whisper*

During this part of the transcription, Tom's mean length of utterance, calculated in morphemes according to Brown's conventions (Brown, 1973), was 3.59 (44 utterances; 158 morphemes). Many of these utterances were of the type shown above.

Reduced intonation contours then, that is, utterances with either no pitch movement or no nuclear syllable, often occur in company with low volume or whisper. Such utterances never occur in self-initiated turns and seem to be, as with other study participants, indications of a disinclination to talk.

8.4.2. Voice quality and volume

Tom uses whisper and reduced volume in a similar way to other study participants. As mentioned above, sometimes this occurs alongside reduced intonational contours. As with other participants, reduced volume and whisper seem to indicate a disinclination to converse (Tm4b), or, on some occasions, a rejection of proposed topic (Tm4a):

Tm4a

S   (.) ↑ o:h is it jus- (.) just˘Germany ↑(.) I didn't 'notice˘that (0.7) so did they have 'East˘German 'players as 'well

T   (.)˘ *no :: I don't [know]* ˙   *whisper*

Tm4b

S   (1.3) so does ˌmi:ne (1.4) we 'ought to ˌchange them (.)ˌshouldn't we (3.6) d'you 'know how to ˌchange yours

T   (.)˙ no:: ˙

S   (1.4) spect you just have to ˉwi:nd it on

T   (1.0)˙yeah˙

S   (3.8) it's a 'bit aⁿ noying ˌisn't it =

T   =˙yea:h˙

As with reduced contour, there is an association between these features and the negative overt signifiers *"(I) can't/don't remember"* and *" (I) don't know"*. Thus, even in sequences on Tom-initiated topics, the association between negative signifiers and reduced volume/whisper can be seen:

Tm4c

S   [why | (.) 'why didˌthey 'want it

T   (0.7) I 'think they 'wanted it to: erm (0.8)˙I don't know˙ (1.1) they just 'hoping for a bit of ˌempire 'building *somewhere* (.) some[where tha]t =   *fast*

Note however, in Tm4c above, although the topic is Tom-initiated, the turn is not. Tom's self-initiated turns tend to have qute different features to other-initiated turns, regardless of the source of topic.

Reduced volume sometimes occurs towards the end of utterances:

Tm5a

S   (3.2)ˉyea::::h (.)↑ it's ˉcrazy ↑(6.3)ˌstra::nge (2.6) d'you 'know anything about the ˘english 'civil 'wa:r

T   (1.1) little bit (.) 'Oliver 'Cromwell came out 'best on˘his (.)[si   ]de

Tm5b

T   = 'cut off 'Charles the first's˘head ˙eventually˙

Tm5c

S   (.) they ˎhanged a 'lots of 'people˳didn't [they]

T   ['so] did theˎother 'people (.) you can't 'put 'him 'down˙to that par'ticular˙

Tm5d

S   what˙happened to it

T   (.) it's 'launched intoˍspace (.)˙it was aˋsatellite˙

This sudden dropping off of volume at the end of utterances, suggests the loudness declination associated with linguistic function in non-autistic utterances (Laver, 1995: 505), albeit somewhat exaggerated. The drop in amplitude in the Tm5 utterances is rather abrupt, unlike that of non-autistic speakers, where there is generally a gradual declination. Tom's loudness range is in fact rather broader than one would expect for a non-autistic male of his age and build (Laver, 1976). Tm6 below shows utterances with sudden increases in loudness.

Tm6a

S   =ˎyea::h (1.1) I 'mean it's quite 'nice to 'know (.) I ⁻meaːn (1.0) say if you 'knew-=

T   =JUST 'KNOWING 'KNOWLEDGE as an 'end in it˳self isn't a 'purpose in it˳self˳is it˙

Tm6b

T   (0.9)˙I didn't ˎweave˙

S   (0.7)ˎdidn't you

T   (0.9)˙no˙ (0.9)ˎnobody 'did (2.5) but 'say (.) is just (.) 'LEARNING something for the 'sheer hell ofˎlearning like (.) one 'sense would be all˳right d- even 'though it's ˋinteresting but

As with the utterances with sudden volume drops, these increases in volume have a comparable function to similar non-autistic utterances. Tom uses volume to compete for the floor in Tm6a and to signify the beginning of a self-repair sequence in Tm6b. Again, it is the abruptness of the amplitude shift which makes the utterances seem unlike non-autistic speech.

Volume in Tom's speech is in one sense then, the converse of pitch movement. While Tom's vocal range is rather narrow, his loudness range is relatively broad. Since there is a suprasegmental interaction between pitch and loudness in speech, it is perhaps not surprising that peculiarties within one dimension should necessarily co-occur with peculiarities within the other. Intonational irregularities in autistic speech are well documented, although the interaction between the prosodic features of autistic speech is

evidently not well understood. Since acoustic measures are not available for this data, the issue cannot be sensibly undertaken here. However, these brief observations suggest a promising area for further research.

8.4.3. Rate of Speech

At times throughout the transcriptions, Tom speaks very quickly. At the same time, and as with the other study participants, he is inclined to pause for extended periods during speaking turns. Thus, is an impression given of arhythmic tempo. In fact, this impression is likely to stem from a disjunction between Tom's speaking rate and articulation rate. Speaking rate is the rate at which speech is produced within a turn including pauses, while articulation rate refers to the speed at which only vocalised material is produced and is hence generally calculated using a turn component (Laver, 1995: 539). There is no preference in English for speaking rate and articulation rate to accord. However, Tm7 below exemplifies how the opposition between the two may be regarded as problematic in Tom's speech.

Tm7

T   (0.9) ˙no˙ (0.9) nobody ˙did (2.5) but ˙say (.) is just (.) ˈLEARNING something for the ˈsheer hell of learning like (.) one ˈsense would be all right d- even ˈthough it's ˋinteresting but (1.2) *in geography have to tell about ˈwhich ˈcountries have rainforests I mean the* ˈwhole (.) mè nagerie of ˈcountries that had˙them˙(0.8) .hh though the trouble is (0.9) at the ˈsame ˈtime *as I'm doing it* the ˈvery ˈsecond the ˙ *very ˙in*stant it's ˋhappening it's all going   *fast*

overall turn length	= 18.8 seconds
length of line 3	= 2.02 seconds
overall syllables	= 94
syllables in line 3	= 20

Tom's articulation rate for line 3 is 9.9 syllables per second, while speaking rate for the whole turn is exactly 5 syllables per second. This articulation rate is far beyond expectations for normal rates (Laver, ibid, mentions a top articulation rate as 8.2 syllables per second), while the speaking rate is equivalent to the average rate of a speaker speaking at a medium tempo. These periods of fast speech occur periodically; typically when Tom is engaged in turns arising from a self-initiated topic, but may occur in almost any conversational environment.

8.5. Conversation

8.5.1. Topic shift, topic maintenance and questions

Conversation with Tom proceeds quite differently according to context. Tm8 is an extract from the beginning of the first transcription (Appendix 6.1.: 24.6.96).

Tm8

1	S	so ˈwhat did youˋdo with your ˈdad this ˈweekend did you (.) go anywhere
2	T	(1.0) I ˈdon't think weˌdid (.) part from theˌpub for aˌmeal
3	S	(.) ˉriːght (.) what did youˌhave toˌeat
4	T	(.)ˊcan't rememberˈ
5	S	↑ ˈcan't you reˋmember↑
6	T	sirloinˌsteak ˈIˋthinkˈ
7	S	ˌoːhˌriːght (.)ˌthat sounds ˈnice
8	T	ˈspose it isˈ
9	S	(0.6) ˈwhat's yourˌdad like ˈTom
10	T	(1.1)ˈhe has the ˈsameˌthing (1 syllable) somethingˌelseˈ
11	S	(1.9) is heˌnice (.) yourˌdad
12	T	(0.6)ˈspose he isˈ
13	S	(.)ˊyeah (1.0) do you see himˋevery ˈweekend
14	T	(0.9) ˌevery ˈweekend
15	S	(2.5) have you ↑ ˈgot any ˈbrothers andˋsisters ˈTom ↑
16	T	(1.1) one ˈcalledˌNiːːgel (1.0) and one ˈcalledˋHannah (.) but they ˈliˌve ˈfar away
17		ˌnow
18	S	(0.8) ohˌriːght (0.8) how ˈold areˌthey ˌthen
19	T	(0.9) think Nigel's about thirty ˈfouːr (1.3) and I'm (1.8) thirtyˌthree
20	S	(3.1) and ˈwhat about ˉHannah
21	T	(1.9) ˌolder than thatˈ(*2 syllables*)ˈ *whisper*
22	S	(.) is ˈshe the ˈoldest (.)ˌthen =
23	T	= ˈborn in ˈnineteen ˈfiftyˌsevenˋHannah
24	S	ohˌriːght (1.0) so - (.) she must beːː (1.2) thirtyˊnine
25	T	(0.8)ˈprobablyˈ
26	S	(1.0)ˈyeah (.) thirtyˋnine
27	T	in that ˉyear(.)ˌsputnik ˈwent up *comparatively louder*
28	S	(1.2) didˊit =
29	T	=ˈyeahˈ
30	S	(1.6) wh- (.) ˈwhoːse (.) ˈwho did theˋspunik beˈlong to

This type of sequence is fairly common. The researcher asks 12 questions in 29 lines of talk. Turns which do not contain questions (for example, lines 7, 23 and 25) contain acknowledgements of Tom's contributions (for example *"oh right"* at line 23), or evaluations (as at line 7: *"that sounds nice"*). All but one of Tom's turns have the function of response to an S turn. These responses are often minimalistic in some sense. At lines 20 and 22 they have a truncated quality (subject omission at lines 4, 8 and 20; borderline acceptable pseudo-cleft construction at line 22). Some responses have a formulaic or repetitive character. *"can't remember"* is mentioned above as being a frequent response to questions with which Tom has no particular interest in engaging. The *"suppose"* type response (lines 8 and 12) can also be equated with formulaic responses as it recurs

throughout the transcriptions in similar contexts. Tom's responses are not always minimal. At line 2, there are two components to his turn, and at line 6 he takes up an earlier question to which his first response was minimal and formulaic. At line 16 there are three components to Tom's turn. Line 18 is a two component turn, the second of which is not a strictly relevant response. This component may in fact represent an attempt at topic shift, but is not taken up by the researcher, who uses the next turn to bring Tom back on current topic with, typically, a question. Tom's one turn not constructed as a response (line 26) is a more obvious attempt at step-wise topic shift. The ancillary topic arises from a legitimate connection between dates. Line 26 then breaks the pattern of question-response-acknowlegement/evaluation. The topic does in fact get taken up this time. However, the researcher accepts the topic (line 27) by means of another question, thereby re-establishing the question-response routine within the minimum possible number of turns. Perhaps not surprisingly, the new topic, continuing the original pattern, lasts for only a few turns.

Sequences such as this, with researcher taking the role of questioner/acknowledger/evaluator and study participant as responder, are common throughout the transcriptions of all the study participants. As with Mary, the turns have few components, many extended pauses, and topics tend to decay rather than progress naturally onto new ones, so that new topics have to be introduced overtly and abruptly. A more successful sequence is shown below at Tm9.

Tm9

1	T	(0.6) and we 'just that moment (.) thank 'goodness we had the (.) A'mericans (.)
2		ˌmade up for it (1.5) that ˌPershing ˌmissile which is 'nameˌnow (0.7) is 'named *after*
3		*a first world warˌgeneral* (.) 'he was the co'mmandingˌchief in the *first worldˌwar*
4		(.)[they makeˌnow] *fast*
5	S	[↑o;h ri::ght ↑]
6	T	(0.8)ˌPe:rshing (.)˙ they're called˙
7	S	(0.6) ↑ˌoh [ˌdid they]↑
8	T	['one ˌte] rrible 'thing we didˌafter the 'first world 'war which weren't
9		'anything to 'do with the 'Germans or ourˌallies *or anything like tha-* or the 'Turks or
10		*anything likeˌthat* (0.6)was the AmˌrisaˌMassacre *after the first world war* (.) that
11		was in˙ India (0.9) 'lots of˙ Indians who 'actually 'fought with theˌBritish (.) during
12		the first worldˌwar(0.8) 'GeneralˌDaimond 'shot a lot of˙ Indians 'dead = *fast*
13	S	= ↑ˌwhy::↑
14	T	(0.8) cos there's (0.7) civil unˌrest in Amrisˌa::(1.4) it was an un'luckyˌday *for them*
15		cos it was the 'thirteenth ofˌApril *fast*
16	S	↑ o::hˌnightma::re↑ =
17	T	= and they were 'a::ll (1.0) 'gathered in thisˌsqua:re (0.8) and
18		he'd 'told em 'not to beˌgathered 'the:re [(0.8) and] he 'took some 'armouredˌca:rs
19	S	[˙mmhm m]
20	T	(0.8) and some 'troops who were 'actuallyˌIndians (0.8) and 'Nepal Ghụrkas

21 S   (.)yeah =

22 T   = and lined em up (.) and he didn't give em any ʹwarning to dis perse cos it

23   were (.) the r- (.) un - (.) ʹlawfully (.) asʹsembledˋanyhow (.) so he just ʹordered

24   them to fire with maʹchine guns (1.1) and if heʹd been able to take his ʹarmoured car

25   in he wouldʹve taken the armoured ʹcars in (.) but it was too narrow for them to ʹget

26   in so he ʹdidn't ʹtake them in

27 S   (.) what wouldʹve happened if heʹd got thos:e in =

28 T   = ʹlots ʹmoreʹdʹve been dead ˚ (0.8)

29   he ʹkilled 37ʹ9 ʹpeople outˋright

30 S   (0.7) ↑that's outˋra:geous↑

31 T   (.) and ʹkilled ʹone thousand and ʹwounded ʹ1208ˋothers

32 S   (0.6) ↑that's out- (.) outˋra::geous↑ (0.6)h[ow many-]

33 T   [he was   ] ʹasked to reʹsign from the

34   ˋa::rmy (1.0) and ʹall he said after that (1.2) his reʹply (.) to the Jalamwalaba: (.)

35   massacre was it did a ʹjolly lot of ʹgood (2.2) and (.) to f:: huʹmiliate them he got

36   them on their ʹhands and knees they were ʹcrawling on this ʹpavement where this

37   ʹwoman (.) had been beaten up (.) and didn't (.) this Euroˉpean (0.7) they had to

38   get on ʹhands and ʹknees and ʹcra::wlˋalongʹ (.) ʹall ʹfou::rs this (.) ʹcrowd of

39   ˋʹIndiansˋ (.) and they ʹwhipped those who re fusedˋtied to a ʹwhipping ˉpostˋ they

40   was meant to reʹsign from the army (1.2) and he ʹdied in reʹtirement in ʹninetwenty

41   seven

42 S   (2.0) was there anˆuprising after he ʹdid that =

43 T   =ˋno ˋ

44 S   (0.9) cos everyone was ʹtoo::

45 T   (0.6) and a nother ʹterribleˋ*thing* that ʹhappened (.) the ʹman who inʹvented gas

46   during the *first war* ʹgot the ʹNobel Prize for chemistry (.) which is ʹfrightened he

47   might get ˉhung (.) or *something like that* (1.4) orˋexecuted (0.7) but in stead he got

48   the Nobel Prize he got honoured (.) for his work in scienʹtific circles   *fast*

49 S   (0.8) ʹwhat d- (.) ʹwhat did he inˆvent

50 T   (0.7) he disˉcovered the ʹpoisonous ʹgas =

51 S   = o::hˆri:::ght

52 T   (0.7) and he ʹgot (.) the ʹNobel Prize for ˉchemistry

53 S   (0.9) go:d (2.0) oh that's horrible (0.7) [who was] it (.) d'you know ʹwho: =

54 T   [the ʹreason-]   =

55   Frit z Herber

56 S   (.) ri:ght

57 T   (1.4) i- (.) iʹronically e nough he was one of the ʹfirst ʹtargets of the ʹNazi re gime

58 S   (0.7) ˋrea:::lly

59 T   (.) ˉyeah

60	S	(.) what (.) [they`killed him]
61	T	[he was a ˌJew] of 'all things (.) he *didn't* (.) he 'died in ˌSwitzerland in
62		'nineteen fif thirty`fou:r =
63	S	= yeah
64	T	(1.0) but erm
65	S	(1.4) ˌpeacefully you mean (.) ˌy[eah˙]
66	T	˙ [ˌpeac] efully (.) ˌyeah˙ =
67	S	=˙ˌyeah˙
68		(1.8) but (0.8) the - (.) ger- (.) the 'Nazis didn't want him ˌthere (.) was 'that because
69		he was a˙scientist
70	T	(0.6) a ˌJew
71	S	(.) a Jew- (.) oh (.) ¯yeah (.) ʃ cos he was a ˌJew˙
72	T	(1.0)˙and e:m˙
73	S	(.) god(.) that's bi ˌza::rreˌ isn't it (8.5) do you know ˌmuch about (.) what 'happened
74		to the ¯Jews
75	T	(2.3) yea:h but (1.1) in some re ˌspe:cts (.) em (0.8) 'chuck myˌcoffee out (.) 'odd
76		'taste in ˌmi:ne

In all, four topics are dealt with in this sequence. The Second World War is discussed in the opening lines. The researcher introduced this as a topic at line 295 of Transcription One (Appendix 6.1.: 24.6.96), while America's involvement in the conflict is introduced by Tom 10 lines into the sequence (Transcription One: line 305). Tm9 starts 19 lines after this. The pattern of question-response is evident during the lines prior to Tm9, although not quite as rigidly as it is in Tm8. In all, the researcher constructs 5 out of 9 turns as questions while Tom takes almost twice the amount of floor time as the researcher. The researcher's non-question turns are all minimal response units. Tom's first turn of Tm9 includes a topic shift from the issue of America's involvement in the war to Pershing Missiles and the commander after whom they are named. The shift is certainly acceptable in terms of relationship between topics and, as such, represents a legitimate 'moving-on' of the talk. Up to this point, then, all topic movement has been initiated by Tom. Topic shifts during this and the prior sequence are not only Tom-initiated, but tend to occur during the space of a single turn, that is without negotiation. Topic shifts also occur at line 8 and at line 45 of Tm9. Again, these are Tom-initiated and occur without negotiation during the space of a single turn.

It is noticeable that the researcher contributes little to the topic content during this sequence. Tom acts as the dispenser of information, while S's turns are almost entirely responsive. Just under half of the researcher's turns are again, questions, although during this sequence they are facilitative rather than attempts to steer the discourse. Indeed, 5 of these questions are latched or overlapped by Tom, and a further 2 are rhetorical. The extent to which the researcher's questions are dependent on the discourse can be evidenced by their anaphoric

content: 8 of her questions anaphorically link to the prior discourse, while only 3 do not. In these 3 questions (lines13, 65 and 74), the links to the prior talk are made through repetition of lexis (line 74), continuation of prior other-turn by addition of adverbial (line 65), and the use of a single wh-word (line 13), which necessarily coheres to the preceding turn. Hence Tm9 is very much Tom-led and, as such, clearly contrasts with Tm8.

Interestingly, topic shift in both sequences (Tm8 and 9) is managed by Tom rather than the researcher. S's questions in Tm8 are without doubt topic introduction attempts, none of which are successful. Her Tm9 questions have a different function as stated above. Whereas the Tm8 questions represent attempts by S to negotiate new topics, Tom manages topic shift in Tm9 without questions or negotiation. Instead he moves the talk along by means of declarative utterances (Tm9: lines 2, 8, 45). At lines 8 and 45 Tom makes it clear that he is introducing a new topic through the use of an evaluation of the upcoming material. These evaluations cohere through lexis, and to a certain extent, syntax.

Tm9a

T　　　　　['one ,te] rrible 'thing we did ,after the 'first world 'war which weren't 'anything to 'do with the 'Germans or our ,allies *or anything like tha-* or the 'Turks or *anything like ,that*(0.6)was the Am risa, Massacre *after the first world war* (.) that was in` India (0.9) 'lots of

Tm9b

T　　(0.6) and a,nother 'terrible *thing* that 'happened (.) the 'man who in'vented, gas during the *'first war* 'got the 'Nobel Prize for, chemistry (.) which is 'frightened he might get ¯hung (.) or

The syntactic similarity between the two can be seen if one allows that Tm9b has an omitted past tense copula at the point of the first micropause, in which case, both utterances have a basic SVC construction with complex subjects and complements.

Tm9a and 9b represent legitimate floor-holding initiations in that by evaluating upcoming talk, Tom signifies he is about to extend his turns. Tm9b in particular, with its cohesion to Tm9a, gives the co-participant a clear indication of the type of conversational event that is about to ensue.

Topic-shift, then, is, perhaps surprisingly within the context of autistic discourse, largely managed by Tom. His initiations become topicalised and arise legitimately from the preceding discourse. Tom also signifies extended floor-holding through cohesion and prior evalution of ensuing talk. Co-operation is not sought by him however, such that topic-uptake is not a negotiated activity. Similarly, topic maintenance is mainly Tom's province. The researcher's questions in Tm9 appear to have the function of maintaining topic; topic may be facilitated through the use of wh-questions (line 13, 32, 49, 53), rhetorical questions

(line 7, 58), clarification requests (line 60, 65), as well as open/yes-no questions (line 42, 69, 73). However, examination of the talk surrounding these turns reveals that the topic is not dependent on them for up-keep. For example, the wh-question at line13 is dealt with by a Tom in a single turn component, after which he continues with the topic as if no interruption had occurred. The attempt at a wh-question at line 32 is overlapped by Tom and not acknowledged by him at all. Similarly, the researcher's next question at line 42 is latched by Tom and, despite being a potential conduit for topic development, is again dealt with minimally (line 43), with Tom making an unnegotiated topic-shift in his next turn (line 45).

Thus, the researcher's questions do not facilitate topic maintenance in Tm9. Although they enable the researcher to take part in the discourse, and are possibly indicative as to her perceived notion of her role as discourse facilitator, in reality they add little to either topic movement or maintenance: while Tom controls the former of these, topic maintenance, at least in this section of the transcript, the researcher's facilitation attempts seem to be largely superfluous. The impression is given of a monologue with interruptions rather than a dialogue between co-participants. Such an impression is given further weight by examination of the types of turn taken by each participant. We have noted the researcher's frequent use of questions. She also makes use of supportive utterances, both back-channel (Tm9 lines 5, 19), and as turns in their own right (Tm 9 lines 16, 21, 30).

The researcher's questions occasionally lead into topic uptake. Tm 10 below shows such a sequence. It will be noted however, that the topic is short-lived. In this case, its maintenance is entirely S's responsibility and is achieved entirely through the use of questions.

Tm10

S   (.) 'covering them with ˌchemicals (.) so you - (.)you're su'pposed to be very 'careful where you 'buy your baˌnanas from 'now (1.0) and only get them from 'countries where they're not (.) ⌐hurting 'people (8.8) do you know 'anything about the Vietˌnam 'war

T   (1.2) it'sˌfinished 'thank 'goodness (.) it 'took a 'long ˌtime to (0.8) come to an 'end (.) it did 'only 'continue what doing 'what theˌFrench had 'finished off (.) with the A'mericans and they made a (.) 'worse 'job than the 'French did =

S   =ˈmmhm˘ (0.8)↑

did theˌFrench 'start it 'aːll↑

T   (1.0)˙ yes˙

S   (0.6) 'howˌcome

T   (1.2)well they wanted indeˌpendence (.) 'these 'country (.)ˌfrom 'France

S   (.)˙mmh˙ (19.9) ⌐loads of 'wars ⌐aren't there (.) d'you know about the˙Bosnian one (.) war ['now]

T   ˙[not re]ally (.) no˙ =

It is notable that Tom's talk includes no supportive features at all. Back-channel utterances are entirely absent, while overlaps occur only as anticipations of turn completion (Tm9 line 8, 66), or as floor-taking gambits (Tm9 line 33, 61). As such, Tom's talk bears none of the features associated with facilitative discourse. He does however, occasionally use questions. Questions which have direct relevance to ongoing talk may be regarded as facilitative of that talk. Excluding tags, Tm11 below represents the full set of questions asked by Tom from the first two transcriptions.

Tm11a

S　　　(2.4) 'where did you 'live be‚fore‚Tom

T　　　(1.3) place called Turn'pike 'Lane (0.9) 'Leeds '19˙‚area˙

S　　　`right

T　　　(0.6) off 'Morley`Road (.) *'heard of the area*　　　　　　　*fast*

Tm 11b

S　　　(1.6) did you get`rid of that coffee (.) were it‚horrible =

T　　　　　　　　　　　　　　　　　　　　　　　　= yeah

S　　　(2.2)' go on

T　　　(.)'what‚else˙

Tm11c

S　　　(0.8) was 'that like the‚best 'roo:m 'then

T　　　(0.6)‚no:: (1.2) we have 'gas 'one 'time we used to have an e'lectric 'oven (1.2) *what d'you pre‚fer 'gas or e `lectric*　　　　　*fast*

Tm11d

S　　　(0.8) 'what did he‚do

T　　　(.) 'lecturer at 'Grape`Lane

S　　　(.) ¯o:h‚ri:ght

T　　　(.) 'heard of that‚pla:ce

S　　　(.)hhu‚mum

T　　　(.) 'heard of 'Grape‚Lane

S　　　(.)yeah (1.4) 'what did he‚lecture in

Tm11e

S　　　(.) ´no (4.4) d[o you 'know-]

T　　　　　　　　　　　[I'm 'doing　⌊this one 'aren't I　　*banging on picture he's copying*

S　　　(0.6) ¯yeah (.) you ¯are (.) ¯yeah

Tm11f

T　　　(0.6)' Kevin' 'sometimes˙ (0.6) I've been to his‚house˙once or twice˙

S　　　(.) oh ¯yea:h

T   (.) do you know where ‾Abley is

S   (0.9) ‾no:

T   (0.7)‾ Ipley ‵area (.)˚‗ know where it is˚

Tm11b can be regarded as a clarification request and thus is a discourse maintenance device. Similarly, Tm11e is a straightforward process question, in that it relates directly to the activity which is carried on alongside the discourse: that is, it has exophoric relevance. The remaining five questions asked by Tom may be regarded as integral to the discourse in that they are relevant and meaningful in the context of the current topic. In fact, all relate to similar topics: Tom's life outside the Residential Centre. There is structural and lexical similarity between 11a and 11d in that both include the same verb in the same tense and both have the same auxiliary and pronoun omitted. Likewise, the question at line 5 of Tm11f has auxiliary and pronoun omitted. A further point to note is that all but one (Tm11c) of the discourse-relevant questions above are concerned with location. Having noted that some of Tom's questions have shared structural identity and that there is a tendency for them to include some locative reference, Tom's use of discourse relevant questions in relation to topic is explored further below.

8.5.2. Topic and discourse structure

The section from which Tm11d is taken is the start of Transcription Two (1.7.96: Appendix 6.2.). The discourse structure of the whole of this part of the transcript (until after the coffee break when Tom is no longer engaged in completing his puzzle) is of the type we have come to associate with unsuccessful interchanges between Tom and the researcher. All but one of the researcher's turns includes a question, while Tom's turns are brief and sometimes truncated (as with Tm11d above). There are long switching pauses; the final one marking the section end is 13.9 seconds. *"can't remember"* and *"don't know"* are both in evidence, as are low volume utterances. Thus it is clear that Tom is engaged only minimally in the discourse throughout the section.

By contrast, the section at the end of Transcription One (Appendix 6.1.: starting at line 649) from where Tm11c is taken, is structurally indicative of a far more successful sequence. Whilst many of the researcher's turns are structured as questions, turns from both participants are far more likely to be multi-component. Further, whereas turns are linked dyadically in the Tm11d section (that is, the researcher asks questions and Tom responds in two part sequences throughout the section), in the Tm11c section, linked sequences continue over a greater number of turns. For example, Tm12 below (taken from the longer section) shows the researcher's question at line 1 eliciting a two component response to which Tom continues to add over his next two turns. The researcher's questions at lines 3 and 5 are both emergent from and facilitative of the topic, rather than attempts at new or ancillary topic initiation. As well as Tom's question at Tm11e, Tom also uses a tag at line 18, further

indicating that the participants in this sequence are far more co-operative than is the case in the Tm11d section.

Tm 12

1	S	(1.9) ˈwhat was it ˛called
2	T	(0.7) ˈTimba (1.0) ˈblack
3	S	(.) wasˌhe:
4	T	(.) *black* ˈvery ˈhairy inˌdee:d *fast*
5	S	(.) was h(hhhhhhh)e::::
6	T	(.) used to ˈbrush his ˈcoat ˈoff inˌsummer and there wasˆloads
7		of ˈhairs [on the ˈbrush]
8	S	[(hhhhhhhhh)]
9		(hhhhhhh) (0.8) did youˌlike him
10	T	(.) yeah (.) he used to ˈchase ˉcats
11	S	(0.6)ˌdid he
12	T	(.) ˈbark atˌcats a ˈlot
13	S	(.)hhhhhhhhhh).hhh[hhh]
14	T	[ˈnea]rly goes up aˌtree after the ˈcats (.)
15		at ˈone ˈtime =
16	S	=ˈhon[estly]
17	T	[they] ar-(.) they ˈarch theirˌbacks (.) l- likeˌthat (0.6) n- andˌspit
18		(.) they ˈdo ˈspit atˌdogsˌdon't they =
19	S	=ˉyea::h
20	T	(.) goes ((spit)) (0.9) it'sˌreally disˌgusting (.) you [never seen them]
21	S	[(hhhhhhhhh)]
22		(HHHhhhhhhh)
23	T	but they ˈarched theirˌbacks (.) if they ˈdo that to ˈmake themselves give the
24		imˈpression they're ˈbigger than [they]aːre
25	S	[ˌmmhm]
26	T	(0.9) it's got ˈeverything to do withˌsiːze (.) if they ˈlook ˈbigger than theyˌaːre
27	S	(.) ˉmmhm (1.3) and ˈshow all yourˌteeth (0.9) likeˌthat =
28	T	=ˈ ˉyeaːhˈ
29	S	(.) and [really ˈscaːre]
30	T	[and da we(.) d] og (.)went wowo[woooooo:::::::::::]
31	S	[(hhhhhhhhhhh)]
32	T	(1.1) andˌchased them

Since the two sections from which Tm11c and Tm11d are taken differ to such an extent, it may be presumed that Tom's discourse relevant questions do not arise simply as a function of the structure of talk. They may occur during co-operative sequences of discourse as well as in non-co-operative sequences characterised by two-part, question-minimal-response units. However, Tm11c is distinct from Tom's other questions in that it is the only example

of a discourse relevant question which does not have locative content. Further, Tm11c is the only example of a question which does not require a yes/no response: it is more syntactically complex than the others, in that it is composed of a wh-question followed by an elliptical alternative question. Thus, it may be the case that, while questions are rare in Tom's discourse, they can occur in talk sequences of any type. However, when the talk strucure is more co-operative, as is the case in Tm12, the questions which arise may have greater flexibility in terms of both syntax and lexical content.

8.5.3. Topic in relation to sentence and discourse level structural similarity

The issue of topic in relation to structure at discourse and sentence level in Tom's talk is interesting from another perspective. Tom's transcripts contain examples of the same topic discussed on different occasions, thereby allowing us to compare how both talk and syntax can be shaped by topic.

Tm13a (Transcription One: 24.6.96: Appendix 6.1.)

1	T	(.) *'nineteen seventeen* (.) they 'fought on the (.) *just as* *'well* (.) cos after the
2		'Russian Revo lution we'd 'lost (.) 'Russia on our 'si:d[e] *fast*
3	S	[mm]hm
4	T	(0.6) and we 'just that moment (.) thank 'goodness we had the (.) A'mericans (.)
5		made up for it (1.5) that Pershing missile which is 'name now (0.7) is 'named *after*
6		*a first world war general* (.) 'he was the co'mmanding chief in the *first world war*
7		(.)[they make now] *fast*
8	S	[↑o;h ri::ght ↑]
9	T	(0.8) Pe:rshing (.) 'they're called'
10	S	(0.6) ↑ oh [did they]↑

Tm13b (Transcription Two: 1.7.96: Appendix 6.2.)

1	T	(0.8) and so 'Russia 'France and Britain had 'fought against 'Germany and Turkey
2		(0.6) 'suddenly became the re verse of one another (.) the only 'difference is that
3		America was on our 'side in the 'first world 'war for a bit
4	S	(.) ri::ght
5	T	(0.8) didn'- we'd 'never 'been a 'European 'war with A'merica on
6		our 'side be[fo:re]
7	S	[ri:: g]ht
8	T	(1.2) and erm (.) that 'Pershing mis sile what's to 'talk about now =
9	S	=mmh[m]
10	T	[is]
11		named after the 'first world 'war Com mander
12	S	(.)↑ o:h ri::ght ↑

13 T (.) he was the Com'mander in 'Chief of the US 'army from 'nineteen 'seventeen

14 S (0.6)⸜ri::ght

The origins of the name "Pershing missile" is the subject under discussion in Tm13. As can be seen, there is some degree of syntactic similarity between the two. Pershing missiles are introduced similarly by complex subjects:

Tm13ai

that ⸜Pershing missile which is 'name now

Tm13bi

that 'Pershing mis sile what's to 'talk about now

There is similarity of both lexis and structure: both include the head noun *"Pershing missile"*, premodified by the same demonstrative determiner *"that"*, and postmodified by a relative clause. Both relative clauses contain the same adverbial *"now"* in final position, and both include syntactic errors in the relative clause verb phrase.

The predicate is resumed after a pause in Tm13a and a latched back channel utterance in Tm13b:

Tm13aii

is 'named *after a first world war general*

Tm13bii

[is] named after the 'first world 'war Com mander

The similarity between verb phrases and complements above is such that only the determiner and head noun vary.

Finally, both sentences are followed up by an extra turn component which functions to give more information about the commander/general:

Tm13aiii

'he was the co'mmanding chief in the *first world war*

Tm13biii

he was the Com'mander in 'Chief of the US 'army from 'nineteen 'seventeen

There is lexical and syntactic similarity between the two constructions: although the complement noun phrase in Tm13biii includes a postmodifying prepositional phrase, both utterances have SVCA structure, and both have a *"command"* derivative and *"chief"* as part of the head of the noun phrase or immediately next to it.

Thus, there is clearly lexical and syntactic similarity in Tom's talk when the same topic is mentioned. The three turn constituents shown at Tm13i, Tm13ii and Tm13iii also share identity at a functional level in that the subject noun phrase is used to introduce the topic, the

predicate imparts the information, which is added to by the final sentence at Tm13iii. Further, the three turn constituents are overtly separated in both transcriptions. Interestingly the constituents in Tm13b, the later transcription, are separated by back channel-type utterances (*"mmhm"* at line 9) or supportive comments (*"oh right"* at line 12), whereas in Tm13a, they are separated by pauses.

In both cases, the topic of the Pershing missile emerges after a similar sequence of topics. Tm13a is preceded by topics as follows:

S brings up the topic of the second world war (Transcription One: line 297)

T takes up the difference between the first and second wars (Transcription One: line 299 ->)

T continues with the difference in America's involvement in both wars

T mentions loss of Russia on the side of the Allies

Pershing missile mentioned.

While Tm13b is preceded by topics as shown below:

S introduces topic of Germany

T mentions climate and size and other features of Germany

T mentions the two World Wars

T continues by mentioning the difference between the two wars, listing different countries' involvement in each

T mentions America's involvement

Pershing missile mentioned.

Preceding topic sequence, syntax and lexis therefore show a high degree of similarity within Tom's talk on the same topic. Since a major focus of interest here is repetitiveness within autistic language, it seems that on the basis of the above there is good reason to expect that structural and lexical similarity may exist elsewhere in the transcripts. The use of similar syntax and lexis to discuss familiar topics has also been noted in non-autistic talk as a means of enhancing fluency (Pawley & Hodgetts Syder, 1983). The section below explores further the types of repetitiveness that have been noted.

8.6. Repetition

Repetition exists on many levels in Tom's talk. We have seen above that Tom has a tendency to use similar utterances as responses to questions when he is unwilling to participate in the current talk. Tm1a, and Tm3 show typical uses of *"(I) can't/don't remember"* and *"I don't know"*. That these utterances function as indicators of discourse avoidance rather than having a simple communicative function, is indicated in a number of ways. As mentioned above, they often occur with peculiar voice quality, reduced volume and reduced intonation contour. Sequences such as that shown in Tm14 below also indicate that there is something other than a direct relationship between form and meaning in these utterances.

Tm14

1	S	(66.3) what`else have you 'done to'day 'Tom
2	T	(.)`don't know` *fast*
3	S	(24.1) have you 'done anything else (.) to'day
4	T	(0.8)`can't re'member`
5	S	(0.8)´no
6	T	(0.7)`don't remember` *whisper*
7	S	(30.7) you can make ˎother 'things with 'tho::se (.) d'you ever 'make (.) 'something
8		just (.) out of your`head (.) on 'there
9	T	(1.4)`don't think so` *whisper*

The content of all of Tom's turns above seems only minimally related to intended meaning. In particular, Tm14 lines 6 and line 9 sit uneasily in the sequential context. On other occasions however, it may well be the case that Tom has genuinely forgotten something, as in Tm 15 below:

Tm 15

S	(13.9) have you 'read any stuff since I saw [you] 'last have you 'read any`books (.)
T	[eh]
S	since I 'saw you 'last
T	(0.7) n' I don't reˏmember

There is also a fair degree of flexibility in Tom's discourse-avoiding utterances. As well as the forms mentioned in Tm14 and 15, Tom also uses truncated utterances (dealt with below in relation to syntax), one word minimal responses ("*yes*" and "*no*") and on occasions he clearly sequentially relates his discourse avoiders:

Tm 15a

S	(23.5) d'you see 'anything on`telly this ˏweekend
T	(1.0)`I can't reˏmember I said`

Thus, while Tom seems to favour particular utterances in order to indicate a disinclination to talk, he is not inflexible in this. Rather than being limited to a single invariable form, Tom has a range of available utterances to fulfill the same function. Neither do particular utterances always occur as identical forms (Tm3a and Tm14 line 4; Tm14 line 6 and Tm 15). However, almost always the forms in question are marked by the prosodic features mentioned above. Indeed, these prosodic features co-occur more frequently with the disinclination-to-converse-function than does a given form. Since this is the case, it is almost certainly useful to think of repetitiveness in these environments as having a prosodic dimension. Such a dimension has often been described in the field of autistic talk (for example, by Local & Wootton, 1995; Wootton, 1999) although its occurence in relation to Asperger's syndrome has not to my knowledge been reported.

On this basis then, it may be presumed that repetitiveness in Tom's talk is less rigid than that which we have seen in the conversation of the less able study participants. Nevertheless, it does exist and, as with the other participants, does so on a variety of levels. Tm16 below illustrates some of these.

Tm16

1	T	(2.1) .hh a 'strange un'fortunate` *thi ng* what 'happened to Van`Gogh was .hhh he
2		'painted millions of (.)`*paintings* (.) 'sold only one in his life (.) 'now that he's 'dead
3		they're 'bloody`masterpieces [those things] *fast*
4	S	[I ˌkno:::w] (0.8) I ˌkno:w (.) i[t's`cra::zy]
5	T	['people] (.) w- (.)
6		you 'know (.) ̗look upon them a:s e:rm (1.0) at the 'time they only 'saw`one 'now
7		(1.4) 'now that e- (.) he's`dead (1.0) and he's been 'dead for *'several ̀centuries*
8		*they 'think they're con 'sidered very very valuable inˌdeed* (.) if you 'slash a Van
9		ˌGogh you had to pay *billions ofˌpounds* and [they're] *fast*
10	S	[` yeah`]
11	T	very ̗valuable (.) you [know (.)] pro'tect likeˌmad
12	S	[ˌmmhm]
13	T	(1.6)they become acˌcepted 'later on (.) it's 'no 'good for being acˌcep[ted later] on
14		`  though`
15	S	[⁻yea:h]
16	S	(.) they ̗a:lways 'say that 'appens to 'artists ̗don't they =
17	T	=` yeah`

Lexical repetition is in evidence here on line 2 where "*painted*" and "*paintings*" occur within a couple of words of each other. Similar incidences occur throughout. Lines 2 and 4 in Tm17 show further examples (" *'everybody just doesn't want it*" and "*I 'guess ̀nobody wants it*"). The interesting feature with these types of lexical repetition, is that there is morphological variation within the repeated items. Items are also repeated without variation (for example, "*naturally*" is repeated unvaried in Tm17 on line 2). However, lexical repetition with morphological variation neatly illustrates the dichotomy between formulaicity and productivity in Tom's talk, which we have seen to a certain extent above in relation to discourse-avoiding utterances.

Tm17

1	T	(.) you ̗know (.) cos y'all this (.) 'wasted ̗lives 'trying to 'fight aˌgainst it and
2		'naturally of its own a'ccord 'everybody just doesn't want it 'naturally 'anyway it's
3		just sort of a (.).hhhh (.) a 'matter of 'voting it out of (0.6) [` office] (.) I 'guess
4		'nobody`wants it

Lexical repetition, such as in the "*painted/paintings*" example above, is also interesting in another respect, in that there is a possibility that it arises out of a disinclination to use proforms. For example, we don't often talk about someone having "*painted a painting*".

More acceptable would be to talk about *"doing a painting"*. Proforms enable us to avoid this type of constituent repetition. Tom is certainly able to use nominal proforms: at line 6 in Tm16 *"one"* is used instead of *"painting"*. However, proforms could have been used at line 7 (to avoid repetition of the complement adjective *"dead"* by replacing the second token with *"so"*), and again at line 13 (in place of the second token of *"accepted"*: the complete verb phrase and adverbial could be replaced with a proform such as *"that"*, although Tom's meaning is not particularly clear here).

On the basis of the above, it may be concluded that Tom's suggested difficulty with proforms is not absoloute, but confined to more complex proform constructions. Such an explanation would accord with the difficulty Tom has with complex syntax especially at sentence level as detailed below. An alternative explanation of Tm16 is that Tom simply may not be able to disinhibit repetition of lexical items. Undoubtedly this is the explanation behind some of Tom's repetitions. *"naturally"* at line 2 in Tm17 is a likely candidate for an inability-to-disinhibit explanation. This second token seems superfluous to the construction in which it is located. In particular, here, *"naturally"* does not have special emphasis indicated by tone movement or proximal micropauses. Had these been present, then *"naturally"* could have been understood to have a discourse function apart from a merely content-related one. As it stands however, the item seems to have little if any relevance at the productive level.

Whilst the term 'lexical' has been used as a descriptor for certain types of repetition, the scope of this term should be understood to include repetition of items above the word level. For instance, *"now that he's dead"* at lines 2 and 7 in Tm16 are clearly repetitive. Since there is variation of prosody and repair between the two tokens, they are unlikely to be echolalia-like in nature. However, both tokens are used as the crucial link between declarative statements in a causal argument; that is, they are both used in an identical discourse context. This can be clarified by extracting the relevant sequences, as is done in Tm16i below.

Tm16i

Token 1 *"now that he's dead"*	**Token 2** *"now that he's dead"*
Van Gogh painted millions of paintings	at the time they only saw one
he sold only one in his life	*now that he's dead*
now that he's dead	they're considered very valuable
they're masterpieces	

The token *"now that he's dead"* is not intrinsically restricted to occuring between statements. It could easily be placed finally in a sequence. This type of repetitiveness seems strongly linked to that which occurs in relation to the topic-related sequences discussed above, although it must be remembered that, in the present example, the local context may well be exerting influence.

Local context does indeed seem to play a significant role in repetitive lexis of this type. Tm16 line 13 also has an example of two lexically identical tokens with varied prosody (*"accepted later on"*). Local influence can of course extend beyond a single turn. Tm17 occurs 4 lines subsequent to Tm17a and 13 lines before Tm17b (Transcription Two: line 183-209).

Tm17

1   T   (.) you ˏknow (.) cos y'all this (.) 'wasted ˏlives 'trying to 'fight aˏgainst it and

2   'naturally of its own a'ccord 'everybody just doesn't want it 'naturally 'anyway it's

3   just sort of a (.).hhhh (.) a 'matter of 'voting it out of (0.6) [`office] (.) I 'guess

4   'nobody`wants it

Tm17a

T   [it's] 'strange to

              'think all theˏefforts the A'mericans (.) put`militarily into 'trying to get rid of

              `Communism .hhhh when they 'find it's just co'llapsed 'naturally of its own a'ccord

              `anyhow =

Tm17b

T   (1.0) you know (.) it {s} doesn't makeˏsense (.) all the 'blood (.) 'spilt over 'trying

              to 'strength (1.0) 'left `wingis[m (.)] which is 'naturally (.) co'llapsed of its own

              acˏcord

S   [mmhm]

The *"naturally of its own accord"* sequence occurs in all three extracts with slight variations:

Tm17i

'naturally of its own a'ccord

it's just co'llapsed 'naturally of its own a'ccord

which is 'naturally (.) co'llapsed of its own acˏcord

The core components of the utterance are *"of its own accord"* with " *naturally"* preceding. Note that the sequence is potentially interrubtible with regard to *"naturally"*, hence it cannot be considered to be a core component. *"collapsed"* also has a tendency to occur alongside the core utterance. Hence " *of its own accord"* begins to look like a frame (Hickey, 1993). It should further be noted that, while the phrase occurs in relation to the same topic, the wider syntactic context differs between all three mentions. Prosodically the utterances vary also. A further sequence is also noted as recurring with relation to the same topic. Tom's intervening turn between Tm17 and Tm 17b is shown at Tm18 below:

Tm18

T   .hhh [so it doesn't make any 'sense]

A similar sequence occurs at line 1 in Tm17b. Once again, the repetition is not lexically or prosodically faithful. However, as with the Van Gogh examples, *"it doesn't make any sense"* occurs in a similar discourse context on both occasions of use (note S's turn is omitted from Tm18i for the purposes of clarification):

Tm 18i

1. .hhh [so it doesn't make any 'sense]
2. (.) you know (.) cos y'all this (.) 'wasted lives
3. 'trying to 'fight against it

4. and 'naturally of its own a'ccord

5. 'everybody just doesn't want it

Tm18ii

(.) it {s} doesn't make sense
(.) all the 'blood (.) 'spilt
over 'trying to 'strength (1.0) 'left
`wingis[m (.)]
which is 'naturally (.) co'llapsed of its
own ac cord

The repetitive sequence occurs as a discourse preamble, the function of which is to evaluate the upcoming turn components. Further syntactic similarites can be seen to exist between Tm18i and ii. The second component in both cases includes a noun phrase which has the same pre-determiner *"all"*. Both sequences at Tm 18i2 and Tm18ii2 also have a past tense verb form immediately next to the noun phrase head (*"lives"* and *"blood"*). The third component (Tm18i3 and Tm18ii3) makes use of similar catenative verb sequences with progressive inflection. The fourth components have been discussed above.

At a semantic level, the imagery that is used in both sequences is also comparable. In both, Communism is described as if it were a combatant, while there is also a clear similarity between the metaphorical senses of blood being spilt and lives wasted.

Once again then, we see that while Tim's repetitiveness is far from inflexible, it nevertheless characterises his talk to a significant degree. Both topic and local influence seem to exert an influence over his lexical and syntactic repetitiveness, as well as that at the discourse level. Some of this repetition can be explained by the avoidance of proforms (Tm19 below shows further examples of this) or the reliance on similar constructions to perform the same discourse function, as discussed above with relation to the signifiers of a disinclination to converse. The extent to which repetitive utterances are rigid or inflexible is much less than that seen with the research participants studied thus far, and has similarities to types of normal uses of repetition (Pawley & Hodgetts Syder, 1983). Whilst prosodic features reliably signify a disinclination to talk, this is not accompanied by similarly consistent lexical or syntactic repetition. Similarly, when syntax or lexis is repeated (as in the utterances below for example), prosodic features do not necessarily follow suit.

Tm19a

T   (1.1) no they were penetrating in the 'area in the ['hope] they'd 'leave the 'area

Tm19b

T (0.9) and erm (.) they'd 'helped 'China 'earlier on in the 'earlier this ⸜century .hh
   (0.8) a'gainst Ja⸜pan [(.) and] 'helped got a bit of (0.7) 'territory back to Japa- (.)
   ˋChina

The repetition of *"Japan"* in Tm 19b above suggests that at least in part, Tom's repetitiveness stems from an inability to disinhibit repetition of items; that is, once an item has been produced it is likely to be repeated in the local environment. Such an explanation would then also pertain to sequences such as those exemplified in Tm16 and Tm17 above, where discourse, syntactic and lexical repetition also have a clear local basis. However, sequences such as those dealt with in Tm 13, in which the topic could be said to be the repetitive inspiration, suggest the operation of a different mechanism altogether.

The discussion of repetitiveness so far has not included other-modelled sequences. In fact, these are relatively rare in the transcripts. Tm20 below gives examples.

Tm20a

S (2.9) 'any dṵcks
T (0.9) *'no ¯du cks*   *fast*

Tm20b

S (.) ´no(1.9) what they ⸜like 'down 'there (.) they all ¯right
T (.) ˙all right˙   *whisper, fast*

Tm20c

S (.)⸜ri::ght (1.5) and what⸜ happened tǫ him
T (1.3) I don't know ⸜wh˙ *at 'happened to him* ˙   *whisper*

Tm20d

S (2.8) 'who did we 'sign thẹ treaty with
T (2.3) e'ventually we 'signed a treaty with Ver'sailles in 'nineteen⸜nineteen

Tm20e

S (0.8) ¯ri::ght (6.6) what about⸜England (.) areˋwe 'rich (.) or ['poor]
T   [we::']re (1.8)
   'probably [in between 'rich and 'poor⸜ aren't we]

Tm20f

S (.) ¯mmhm (2.5) d'you 'watch anything 'on at the mòment that's 'funny
T (0.8) ˙don't think thereˋis anything 'funny on at the 'moment˙

Tm20g

S   (3.0) but it˙happened

T   (.)ʻbut it ʼhappened˙ (1.2)

Tm20h

S   (1.4)‚peacefully you mean (.)ʻy[eah]

T   ˙ [‚peac] efully (.)‚yeah˙   =

Since the above represent the entirety of other modelled repetitive utterances in the first two transcriptions, it is clear that Tom is far more likely to use his own prior talk as a model than he is to use another's. In fact, the utterances above do not seem particularly deviant: the sequences in which they occur are not dissimilar to those in which we would expect non-autistic repetition to occur (Johnstone, 1994). All but two of the utterances involve some lexical or syntactic reworking of the model: only Tm20b and Tm20g are in any way reminiscent of echolalia, in that they involve whole or part repetition of an other prior-utterance. Prosodic features are not repeated in any of the utterances, although Tm20b and Tm20g could be considered to have flattened contours. It should be noted further, that prosodically speaking, and with the exception of Tm20d and Tm20e, all of the other-modelled utterances above are marked in some way. For example, Tm20a and Tm20b are uttered at an elevated rate, while Tm20h, Tm20g, Tm20f and Tm20c are all low volume.

Hence, while repetition certainly does exist in Tom's language, its dimensions are far more varied and its realisations far more complex than with any of the other particpants considered thus far. Other-modelling has featured to some extent with all other participants. Its comparative rarity in Tom's talk suggests a relatively sophisticated language user. Further, we have seen that there seem to be two distinct mechanisms at work underpinning Tom's repetitiveness: one that results in at least a partial inability to disinhibit repetition within local contexts and one which appears to have a basis in topic and which accords with more normal uses of repetition.

8.7. Syntax

8.7.1. Syntactic errors: Noun phrases

Tom's syntax is ostensibly competent. Noun phrases occur with pre- and post-modification in subject, object and complement slots and as components of prepositional phrases. Tm21 illustrates this.

Tm 21a

S: NP (post-modifying relative clause)

the ʼperson who ʼbuilt the original Ger- (.) ʼBerlin Wall's been put in ʼprison for ‚treason

Tm21b

O: NP (prepositional phrase)

we 'watched 'Passport to` Pimlico: with (0.8) .hh 'Stanley Holloway:

Tm21c

Complement: NP (post-modifying relative clause)

on the boat there were some 'people who were a bit 'young for ciga rettes

Tm21d

Prepositional phrase: Prep + NP (post-modifying relative clause)

and we 'fought against 'Turkey which we'd 'helped in the 'Crimean War

Noun phrases can, then, be complex. Errors may also occur. Typically, these are in relation to pronouns and may be errors of omission, person, number or transposition. Errors in determiners within noun phrases may also occur. Examples of typical noun phrase errors are listed in Tm22 below.

Tm22ai

wrong pronoun - number, person

T ..... and he didn't give em any 'warning to dis.perse cos it were (.) the r- (.) un -

(.) 'lawfully (.) a'ssembled` anyhow

Target: they

Tm22aii

T .... and they 'whipped those who re fused 'tied to a 'whipping 'post` they was meant

to re'sign from the army (1.2) and he 'died in re'tirement in 'ninetwenty seven

Target: he

Tm 22b

transposed pronouns

T .... the` willingness to people to 'back it to help it to 'do what it 'wants them to 'do=

Target: to do what they want it to do

Tm 22c

pronoun omission (*)

T *in geography (*) have to tell about 'which 'countries have rainforests*

Target: you/one

Tm22d

unclear referent - overuse of pronoun

T   (1.0) un'less 'everybody helps it do its 'thing it won't suc'ceed *anyway* it could be
     Bosnia: the Congo: o:r [(.)] anyway (.) it 'has (.) all these or in *the   'middle east*(.)
     what 'makes it

Tm22e

article wrongly placed in complement adjectival phrase

T   = well that's a silly (.) to government to make itself deliberately un popular=

Tm22f

plural determiner with singular head

T   (1.2) well they wanted inde pendence (.) 'these 'country (.) from 'France

Tm22g

determiner omission (*)

T   .... 'just a 'bit bigger (1.1)' than (*) 'back (.) 'garden 'one

Tm22h

plurality error

T   .... (.) she did 'actually 'worse than a lot of ^ man prime minister wo[uld do |

Some of these errors may reasonably stem from difficulties in the cohesion of extended discourse (for example, Tm22a, Tm22b, Tm22d, Tm22f, Tm22h). All of them involve incorrect or inaccurate anaphoric reference. Tm22aii, Tm22b and Tm22d may also have perseveration as a further explanation, while Tm22f and Tm22h are agreement errors and as such may be regarded as a particular subtype of cohesion errors.

Of the remaining errors, Tm22c and Tm22g are simple errors of omission. These omissions superficially resemble Tom's truncations (that is, omissions of early occurring clausal elements). However, while Tom undoubtedly does truncate certain utterances, Tm22c and Tm22g do not fit into the usually occurring pattern of this feature. Firstly, while both determiners (Tm22g) and subject pronouns (Tm22c) can and often do occur early in a sentence, in neither of the above is this the case: Tm22g's omission is the first element of a dependent clause while Tm22c's omitted constituent is preceded by an adverbial phrase. Secondly, both omissions occur midway through a turn, while truncation tends to be associated with first-mentioned turn constituents.

By putting Tm22c into context we can see that this telegraphese is not limited to early occurring items at either clause or sentence level:

Tm22cc

1   T   (0.9)ʹ noˑ (0.9)˛nobody ʹdid (2.5) but ʹsay (.) is just (.) ʹLEARNING something for

2   the ʹsheer hell of ˛learning like (.) one ʹsense would be all˛right d- even ʹthough it's

3   ˋinteresting but (1.2) *in geo˛graphy have to tell about ʹwhich ʹcountries have*

4   ˛*rainforests I mean the* ʹwhole (.) menàgerie of ʹcountries that hadˑthemˊ (0.8) .hh

5   though the˛trouble is (0.9) at the ʹsame ʹtime *as I'm ˛doing it* the ʹvery ʹsecond thé

6   *very ʹin*stant it'sˋhappening it's all˛going

In the first three lines there are omissions of three grammatical elements: preposition *"in"* and dummy subject *"it"* on line 2, and the pronoun *"you"* on line 3. In addition, there is a question of tense consistency in the sequence. Tom is relating an incident from his past, yet uses the present tense on line 3 (*"have"*) reverting to the past on line 4 (*"had"*), before resuming use of the present on lines 5 and 6 (*"is"*, *"I'm doing"*, *"it's"*). Tom's omissions do not seem, then, to stem from problems with noun phrases, but rather to have a more general significance. Since the turn is self-initiated and continues a topic on which Tom seems keen to expatiate, the difficulty that we see in Tm22cc may well proceed from the attempt to match precise communicative intent with spontaneous, productive output. Temporal cohesion and relational items (*"in"*, *"it"*, *"you"*) appear to be particularly fragile in this sequence. The former of these is discourse related and represents a possible difficulty in discourse planning and coherence, while the latter suggests a feature associated with developmental behaviour: that of omission of functional items. Such omissions do not necessarily cause communicative difficulty since by their nature functional items have low semantic load and may be interpretible in context. It has been suggested that such items are omitted due to their lack of phonetic salience; that is, they are not stressed and have low intensity (Fletcher & Ingham, 1995).

The remaining noun phrase error is Tm22e. While all of the above errors are comparable to those made developmentally, this incorrect assignment of an article to an adjectival phrase is not. Instead, the suggestion here is of a possible blend between competing structures, such as can be seen in relation to Tm24di and Tm26c and Tm26e below.

Tom's noun phrase errors are, then, not simply explicable in the context of noun phrases. All of them (with the possible exception of those involving agreement within the noun phrase) require reference to the surrounding discourse as a basis for explanation. It is sometimes not possible to determine whether an error has arisen due to a lack of facility with cohesive devices or from the tendency to perseverate. Further, there is a clear identity between Tom's noun phrase errors and those that typically occur in children's language, suggesting that Tom's errors may be indicative of a limited ability to use his grammatical knowledge (Fletcher & Ingham, 1995: 610). Such errors are not regarded as proceeding

from a qualitatively distinct linguistic competence, rather a restricted, but essentially similar system, to that of non-impaired language users.

8.7.2. Syntactic errors: Verb phrases

Just as Tom is able to construct complex noun phrases so his verb phrases can be indicative of a relatively sophisticated degree of competency. Tm23 exemplifies the range of this ability.

Tm23a

catenative construction (1) and non-finite *to*-infinitive clause as direct object (2)

T   .... they managed to per suade Donald Hampton to get some cigarettes for them

(1)   (2)

Tm23b

verb agreement between clauses; perfective aspect with modal verbs

T   .... if we'd have been 'able to use it I wouldn't have minded using it (1.2)

Tom's use of such structures suggests a well-developed linguistic ability. However, errors in verb phrases are far more common than is the case with noun phrases. A sample of Tom's verb phrase errors is shown below.

Tm24a: Tense Errors

Tm24ai - contracted auxiliary - present time indicated rather than past

T   (.) it's 'launched into space (.)' it was a satellite'

Target: *It was launched into space*

Tm24aii - contracted copula - present time indicated rather than past

T   (0.8) cos there's (0.7) civil un rest in Amrits a::

Target: *there was civil unrest in Amritsa*

Tm24aiii - present time indicated rather than past - no agreement between clauses

T   (.)' but it 'happened' (1.2) but just cos we (.) 'do a 'good thing *in that respect*

Target: *we did a good thing*

Tm24aiv - copula - present time indicated rather than past

T   .... which is frightened he might get hung

Target: *who was frightened*

Tm24av - lexical verb - not marked for tense - present time indicated rather than past

T   'really (0.7) ↑just↑ like walk' all over the blumming place =

Target: *walked all over*

Tm24avi - lexical verb - verb phrase marked twice for tense (also catenative)

T   .... [(.) and] 'helped <u>got</u> a bit of (0.7) 'territory back to Japa- (.)'China

Target: *and helped get a bit of territory*

Tm24avii - tense agreement between clauses

T   .... if you '<u>slash</u> a Van Gogh you <u>had to pay</u> *billions of pounds*

Target: *if you slash a Van Gogh you have to pay billions of pounds*

Tm24b: Auxiliary Errors

Tm24bi - omission of auxiliary (*)

T   (.) they (*) having quite a (0.6) an`empire

Target: *they were having quite an empire*

Tm24bii - omission of auxiliary

T   (.)_Spanish and _Spain and`Portugal (*) 'quarreling over South A`merica

Target: *Spain and Portugal were quarreling over South America*

Tm24biii

omission of auxiliary and lexical verb (Head of VP) (*)

T   .... 'Margaret`Thatcher (*) gonna (*) i'mmediate en`quiry into the 'number of
         'jobless`blacks

Target: *Margaret Thatcher's going to launch an immediate enquiry*

Tm24c: Catenative Errors

Tm24ci - "*and*" substituted for "*to*"

T   = so they 'tried (.) <u>and</u> 'send the 'people

Target: *so they tried to send the people*

Tm24d: Modal and Tense Errors

Tm24di

modal and adverb "*before*" do not correspond; problem with indicating future time; progressive aspect

T   .... what had 'never 'ever _happened in the 'whole 'history of the 'world
         and <u>would ['nev] er .hhh   gonna happen be fore</u>

Target: unclear

Tm24dii

modal; future time; progressive and perfective aspect

T   ... what 'never happened be_fo::re .hhh an 'never 'happened in the
         _past and <u>wasn't even gonna be (.) 'foreseen to be 'able to be happen</u>

Target: unclear

Many of the above errors are, as with noun phrases, similar to developmental ones. Tm24a suggest a problem with marking tense, such that the more simple present tense is indicated rather than the past. Tom's tendency to contract the auxiliary (Tm24ai and Tm24aii) in verb phrases where the intended reference is past rather than present may also be indicative of a problem marking tense. Alternatively, Tom's liking for truncation may have extended to the contraction of auxiliary "*be*" in both past and present. Auxiliaries are also problematic in Tm24b, and in Tm24avii there is no tense agreement between clauses. These errors are further suggestive of developmental errors.

Tm24avi and Tm24d illustrate problems with complex verb phrases. Tm24avi as double tense marking is a fairly straightforward error, again, suggestive of developmental errors. While the target of Tm24di is not clear, a suggestion may be that the realised utterance is a blend of two competing targets occurring alongside a lexical error where "*before*" is substituted for "*again*". The competing verb phrases are:

was never going to happen
would never happen

Blending may explain errors elsewhere in Tom's transcripts (see below). The target of Tm24dii is less clear. The problematic verb phrase is very complex: Tom seems to be aiming to construct a future progressive passive. In fact, the phrase is acceptable, though clumsy, if the final "*be*" is omitted. This error, along with Tm24avi, may then be explained in terms of perseverative operations on the verb phrase. The former represents an attempt to mark the passive twice; the latter an attempt to double mark past tense.

The passive causes Tom problems elsewhere:

Tm24e: Passive Error

T   there was this 'bridge between them and the ˏRhine .....

         (.) which was trying to be`held

Here the verb "*trying*" needs an animate agent which "*this bridge...*" clearly isn't. The construction is far more acceptable without "*trying*", or with active voice and use of a subject pronoun ("*which was being held*" or "*which they were trying to hold*"). Again, the possibility of a blend of two competing structures suggests itself.

Aspect Errors

Tm24b above illustrates a tendency to omit the auxiliary in progressive constructions. Tom sometimes has a problem with perfective aspect. Usually these constructions are correct (Tm25a) although, on occasion, confusion exists between past perfective and simple past tense forms (Tm25b and Tm25c).

Tm25a

T   (1.9) it was a 'great ¯shock (0.8) when I 'heard the 'news that he'd 'lost his ̗yacht

Tm25b - past perfective substituted for -ed form

T   (.)ˈI don't knowˈ (3.3) .hhh (.) 'somebody <u>had 'gone</u> to see this 'Williamˋ Morris
        'expedition (.) have you ̗heard of 'that

Target: "*went*" (simple past)

Tm25c - past perfective substituted for -ed form

T   [be] cause they wouldn't 'leaːːve (.) a piece of 'Asia called
        Man̗chuːria   <u>they'd declared</u> 'war on (.)̗Russia

Target: "*declared*" (simple past)

8.7.3. Syntactic errors: Clause-combining

As noted above, tenses do not always agree between clauses (Tm24avii). Tom also often appears to use the wrong subordinator when linking clauses:

Tm26a

T   ↑ [they c]ould ↑ <u>un'less</u> you
        would have thought they'd discovered ̄ Africa *before South America* (.)

Target: *but*

Tm26b

T   [has to] be a 'con'certed (0.9) has to be a con'certed world ̀effort (.) <u>[un]less</u>
        it'sˆpointless =

Target: *otherwise*

Tm26c

T   (0.8) it's like the u'nitedˋ nations is 'finding it can only 'do as much as <u>'whatever</u> the
        (.) members want it to ̗do =

Target: ∅

Tm26d

T   (0.6) and a̗nother 'terrible ˈ*thing*ˈ that 'happened (.) the 'man who in'vented̗ gas
        during the '*first war* 'got the 'Nobel Prize for̗ chemistry (.)<u> which</u> is 'frightened he
        might get ¯hung (.)

Target: *who*

Tm26e

T   but they 'arched their̗ backs (.)<u> if </u>they 'do that to 'make themselves give the
        im'pression they're 'bigger than [they ̗aːre]

Target: ∅

Tom's use of subordinators and co-ordinators in a 6,000 word transcription (Transcription Two: 1.7.96) is shown below.

TT: ii - Co-ordinators in Tom's talk - Transcription One

co-ordinators (n=50)	*and*	*but*
	35 (70%)	15 (30%)

TT: iii - Subordinators in Tom's talk - Transcription One

subordinators (n=32)	*because*	*unless*	*where*	*if*	*so*
correct uses	9 (28%)	4 (12.5%)	1 (3.125%)	4 (12.5%)	5 (15.625%)
incorrect uses		2 (6.25%)	2 (6.25%)		

rather than, which, though, when, like used once each (all correct)

TT: iv - Relative pronouns in relative clauses - Transcription One

Relative pronouns (n=15)	*which*	*that*	*who*	*where*	*what*
correct uses	3	1	4	1	0
incorrect uses	3	1			2

Tom has an evident preference for simple clause combining. *"and"*, *"but"* and *" because"* are used most frequently and always without error. While other strategies of clause combination are attempted by Tom, these often result in errors. Tm26a and Tm26b as examples indicate a straightforward misunderstanding of the meaning of the subordinator in question: Tom seems to have confused *"unless"* with *"otherwise"*. However, Tm26c and Tm26e are suggestive of blending. Likely targets for the two utterances are given below.

Tm26ci

it can only do whatever the members want it to do

Tm26cii

it can only do as much as the members want it to do

Tm26ei

they do that to make themselves bigger than they are

Tm26eii

if they do that they give the impression they're bigger than they are

Clause combining may be avoided altogether. Tm26f is a typical example of an extended turn.

Tm26f

T   (.) it's a semi detached and it's ˉwhite (1.4) out'side (0.7) it's not a 'very 'big
ˌgarden (.) very 'small 'front ˌone (.) ne- (.) en - (.) 'just a 'bit ˌbigger (1.1)˙than 'back
(.) 'garden 'one (0.8) and erm˙ (1.3) and up ͡stai:rs (0.7)ˌdownstairs (0.9) and a
'television and a ˉvideo: (1.3) a`dining room (.) we 'a:lways used to 'eat in the
ˌkitchen at (.) 'never used to 'bother about 'eating in the`dining room ['sometime]
(.) un'lessˌguests were 'there

Here Tom sounds as if he is listing features of the house where his parents live rather than
presenting a cohesive description.

8.7.4. Syntactic errors: Prepositions

Tom's use of prepositions is also sometimes errorful.

Tm27a

T   = well that's aˌsilly (.) to ˌgovernment to make itself deliberately unˌpopular=

Target: *for*

Tm27b

T   suc'ceed is the- (.) the`willingness to people to 'back it toˌhelp it to 'do what it
'wants them to 'do=

Target: *of*

Tm27c (omission (*))

T   = .hh you'd 'stand out (*) a 'soreˌthumb an (.)

Target: *like*

Tm27d

T   (.) but we don't know 'where to 'put the 'nuclear ˌwa::ste[(.) no]body wants it on
their back (.)ˌgarden (.)

Target: *in*

In the same 6000 word transcription (inclusive of researcher's talk) the breakdown of
correctly used prepositions is as shown in TT: v below.

TT: v - Prepositions in Transcription One

pre-positions	in	of	to/with	at/for	on	against	from	before/by	between/ over
% of total pre-positions	32%	15%	9% each	6% each	5%	4%	3%	2% each	1% each

about, round, into, out of, during, after, till all used once each.

" *in*" is then used on nearly a third of occasions of use of prepositions. Just under half of these uses (49%) are temporal, while 34% are locative. The remaining uses are idiomatic or metaphorical (for example, "*in the marxist tradition*" and " *in the hope*"). "*in*" is cross-linguistically early in acquisition possibly reflecting the relative simplicity of its cognitive content (Hickmann, 1995: 209), although its use as an indicator of anything other than locative relations is not discussed.

Tom's preposition errors can then be broken down into errors of omission (Tm27c) and errors of meaning (Tm27a, b and d). Tm27a and Tm27b may result from anticipatory planning errors: both involve high frequency targets and outputs, and are in what may be described as heavily biasing environments. This is particularly so for Tm27b. Tm27d may have arisen due to the phonological similarity between target and output "*in*" and "*on*".

8.7.5. Syntactic errors: Clause structure

While Tom's clauses may contain errors, these are not usually so pervasive as to impede comprehension. Utterances such as Tm28 are infrequent. It occurs in the context of the vocabulary section of the WAIS-R interview.

Tm28

S   (0.6) don't 'know what that ‾means (0.8) o:, kay (.) .hhhhhh ho:::w about (.)'ponder (.) what does`ponder =

T   = the 'thinking {əmaʊndɪn ə} (.) a`problem (1.3) 'ponder a `problem at articles like 'ponder the 'problem of the (.) 'next`world (.) from the (.) 'sinking 'state of ˏmind as to

Here, the metalinguistic task of providing a definition for the cognitive verb "*ponder*" has evidently taxed Tom's ability to a considerable degree, as is suggested by the frequent pauses. Such utterances are interesting, in that we are able to see how Tom constructs a turn, the content of which must be worked out 'on-line'. Despite the promising start with " *thinking*", Tom clearly has difficulty in expressing his intended meaning.

The concept of "*thinking*" is a semantically sensible place to begin. However, Tom's realisation of the concept as a noun phrase leads him into a dead end. Since "*ponder*" is a verb, to begin its definition with a noun phrase is bound to be a troublesome strategy. In fact, during this section of the WAIS-R interview, all of Tom's successful definitions of verbs begin with, generally non-finite, verb phrases (as with Tm29 below). Indeed this pattern extends beyond verbs. Successful definitions of nouns and adjectives also have an almost exclusive tendency to have nouns and adjectives as their first item. Tom's attempt at defining "*ponder*"is then problematic from the start. He next produces a collocatively related item: the object argument "*problem*". The remainder of Tom's attempt at definition centres around this collocation ("*ponder a problem*"), and involves the postmodification of "*problem*". The meaning of "*at articles*" is not clear; neither does "*from the sinking state of mind*" have any easily apparent relevance. Syntactically speaking, Tom's utterance has no cohesive clause structure. While phrases have acceptable internal structure, they are not linked in such a way as to form a higher level unit. Such a lack of interphrasal cohesion is not necessarily a source of difficulty in conversation. Here, however, there is a real problem in that without such cohesion, meaning is adversely affected.

A similar type of utterance is produced a few turns earlier when Tom is asked to define "*terminate*". Here, however, the word is successfully defined.

Tm29

1	T	(.) to 'finish from (2.0) in it's com'ple:te(.)liness (1.4) to ‚terminate (.) to 'finish (.)
2		ex 'actly com'pletely (.) like a [‚bus] 'terminus (.) at a 'terminus it doesn't (.) go
3	S	˙[yes]˙
4	T	anymo::re [(1.0)] from the (0.6) from the 'moving 'sta:te or the usage 'sta::te
5	S	˙[no]˙
6	T	(.) and 'terminate the (3.2) 'life as re'turn to 'life

Once more, phrases are not combined into clauses, with the exception of the section preceding the one second pause and overlap in line 4. The difficulty begins on line 4 of the sequence, at the point at which Tom reverts to using noun phrases to add to his, what has already been judged to be acceptable, definition. Apart from leading Tom into expressive and communicative difficulty, these noun phrases give the utterance a pedantic feel. Both the disjointed intraclausal structure and the lexis combine to make Tm28 and Tm29 jargon-like in quality. The task undertaken by Tom at this point is, however, not one which is typically encountered in everyday talk. Below, (Chapter 10: *Features of Autistic Language*) agrammatic performance of normals during cognitively complex tasks is discussed. While Tom's performance here is certainly dysfluent and incohesive, it is comparable to non-autistic-type utterances in similar contexts.

More frequently in Tom's talk we find clauses which, while acceptably structured and easy to understand, are oddly organised. Truncation is one aspect of this peculiarity, and one which has been mentioned both above in this chapter and in relation to other study

participants. Tom's truncated utterances tend, as with the other study participants, to involve omission of early occuring items. Tm30 below exemplifies this.

Tm30a

S   (3.1) and 'what about ‾Hannah

T   (1.9) 'older than that ˙(*2 syllables*)˙   *whisper*

Tm30b

1   S   (0.8) 'what did he do

2   T   (.) 'lecturer at 'Grape Lane

3   S   (.) ‾o:h ̩ri:ght

4   T   (.) 'heard of that ̩pla:ce

Tm30c

S   it's f-=

T   = 'last 'fifty` yea:rs or so even ̩mo:re than 'that (.) was the (0.7) the 'biggest 'waste of (.) 'blood and ['life (0.7)] then (.) been in the whole of 'history ̩in't there

It can be seen that omissions are not syntactically based. That is, in each example a different type of item or items has been left out. Tom omits subject and verb element (copula and auxiliary) from Tm30a and Tm30b, line 4. In Tm30b line 2, he omits subject, verb (copula) and the indefinite article from the complement noun phrase, while, in Tm30c, only the definite article has been left out. Meaning is not unduly affected by this, since the items that are cut from Tom's truncated utterances are all functional and therefore have a low semantic load. A further contributing factor to the negligible effect on meaning is English end-weighting for content. Since the omitted items occur early in the clause they are less likely to bear informational load.

The omission of items is not however, restricted to those that come early in the clause. Tm31 illustrates a typical answer to the information section of the WAIS-R test.

Tm31

T   (1.0) 'merican 'civil' rights 'leader who was a'ssassinated nineteen sixty̩ eight 'memphis (1.7) by 'James 'Earl ̩Ra:y

The omission of items is here limited to functional/relational items as it is in Tm30; in this case, a preposition is left out. The meaning of Tom's utterance is not affected, but there is a telegraphic quality to the utterance. This feature has been discussed above at length.

Tm30c exemplifies another feature of Tom's clauses which seems peculiar to him amongst the study participants: non-canonical phrase-sequencing. This feature is illustrated further in Tm32 below.

Tm32a

T   = 'born in 'nineteen 'fifty͵seven` Hannah

Tm32b

T   (1.1)` *Costa Rica* `   *whisper*

(1.0) a 'country which had` never taken 'part in the second world 'wa:r .hhh (.) which
i'ronically a'bolished its͵army 'three years ͵afterwards 'Costa` Rica

Tm32c

T   (3.5) 'Portugal throughout ͵history was 'Britain's 'friend (.) like 'France was its
tr[a'ditional]

S   `[mmhm ]`

T   ͵enemy =

Tm32d

T   (2.2) 'Charles the 'first in his 'greed to get ͵paintings made himself (.) the 'country
`bankrupt 'buying Van 'Gogh` paintings =

Tm32e

T   (.) e:rm (1.9) cos of the 'Russian Revo͵lution we were 'glad that A'merica 'entered
cos we'd 'lost an 'ally:: (.) cos

Tm32f

T   [be] cause they wouldn't 'lea::ve (.) a piece of 'Asia called
Man͵chu:ria they'd declared 'war on (.)͵Russia

The pattern for these utterances is varied. In Tm32a and Tm32b, Tom has put the subject in
final position (the whispered "*Costa Rica*" in Tm32b is treated as a separate utterance due
to the voice quality and pause which follows it). Note that both of these utterances include
partial or complete omissions from the verb phrases. In Tm32c and Tm32d the utterance
accords better with the surrounding talk, if the adverbials (respectively "*throughout
history*" and "*in his greed to get paintings*") precede the subjects. Finally, in Tm32e, the
first dependent 'because' clause is informationally better located after the main clause
(target: "*we were glad that America entered cos we'd lost an ally cos of the Russian
Revolution*"), as is the case in Tm32f (target: "*they'd declared war on Russia because they
wouldn't leave a piece of Asia called Manchuria*". Here, there seems to be a particular
problem in indicating causality and consequences in the right order. These judgements
about acceptability are intended to be based on discourse requirements rather than stylistic
ones.

Whilst, strictly speaking, these are not errors, but rather choices made by Tom, there is a range of acceptability in these canonical sequence alterations. Tm32a is quite odd due to the violation of fairly rigid English word order expectations (MacWhinney, 1989), while Tm32c is reasonably acceptable. In the context in which it occurs, Tm32f relegates the important new information (the clause that deals with Manchuria) to the spot usually reserved for old, thereby causing confusion to the listener.

Such choices may reflect the use of particular planning strategies, an issue dealt with further below. Whether this is the case or not, at the discourse level, it certainly is the case that Tom's co-participant has to work harder to access his meaning. Put another way, Tom's utterances suggest that he does not take his listener's needs into account. Tom's use of pronouns as illustrated in Tm32ee below illustrates this point further. This section includes Tm32e above, as well as succeeding utterances.

Tm32ee

T   [be] cause they wouldn't 'lea::ve (.) a piece of 'Asia called
          Man‚chu:ria they'd declared 'war on (.)‚Russia

S   (.)‚ri:ght (1.9) be[cause] 'Russians were in it and Ja'pan wanted it‚back

T   [and-]

T   (1.1) no they were‚penetrating in the 'area in the ['hope] they'd 'lea:ve the 'area

S   [‚ri:ght]

S   (.) ⌐ri:ght

T   (0.9) and erm (.) they'd 'helped 'China 'earlier on in the 'earlier this‚century .hh
          (0.8) a'gainst Ja‚pan [(.) and] 'helped got a bit of (0.7) 'territory back to Japa- (.)
          ⌐China

The interlocutor has a considerable amount of work to do in disentangling the confusion of pronouns and antecedents.

Hence, difficulty at inter- and intraclausal levels can be regarded in two ways: as suggestive of a flaw in sentence planning to convey complex messages, and as evidence of a degree of lack of competence at the discourse level.

8.8. Summary

Tom presents us with a complex set of linguistic features. While he is by far the most sophisticated language user amongst the study participants, and the only one whose full scale I.Q. is not an unequivocal indication of cognitive impairment, he does exhibit features akin to those of the other study participants; for example, the use of particular prosodic features in specific discourse contexts. Other features are relatively sophisticated and may be associated with a relatively well-developed linguistic competence; for example, taking control of topic shift and maintenance. In the main however, Tom's language shows features similar to those of the less able participants, with less severe indications of

impairment. For instance, while Tom exhibits odd prosody, he does not faithfully other-model this dimension of his speech. In common with the other participants he relies on particular strategies to extricate himself from unwanted conversations. These, however, are neither as rigid nor as uncommunicative as they are for the other participants. Tom's language is, broadly speaking, repetitive, and he appears to have problems in disinhibiting perseveration of lexis within local environments. However, there is an interaction between repetitiveness and productivity in Tom's language which is far more suggestive of a normal linguistic profile than with the other participants. Linguistic tasks requiring a high level of metalinguistic ability give rise to a revealing level and type of dysfluency. While similar features have been noted in the language of normal individuals engaged in complex or unfamiliar linguistic tasks (Pawley & Hodgetts Syder, 1983), the extent of Tom's dysfluency and range of errors suggests that Tom's linguistic ability may be somewhat more fragile in these environments than that of normals. In particular, Tom does not seem to have an adequate strategy to enable his performance in difficult contexts. Similarities between Tom's errors and errors which occur as a feature of normal development may then be superficial, and, rather than indicative of incomplete linguistic development, may reflect difficulties in on-line processing.

9. Penelope

9.1. General Background

Penelope is a twenty eight year old female with autism who is resident at the same institution for adults with autistic spectrum disorders as Tom. Socially, she is relatively able, such that she manages to hold down a part-time job, to which she travels on her own on a daily basis. She is relatively passive though talkative with a fairly cheerful disposition. She has an obsessive interest in Keith Chegwin to whom she has written letters for some years.

Living some way distant, Penelope's parents were unavailable to give background information about her. The WAIS-R (Wechsler, 1981) was administered to provide cognitive context to Penelope's talk.

9.2. WAIS-R Analysis

The WAIS-R intelligence quotient measurement showed Penelope as having a full scale intelligence quotient of 65: verbal sub-score of 60; performance sub-score of 73. This puts her in the category of mentally deficient. The breakdown of Penelope's Wechsler scores is shown below.

PT: i - Penelope's Wechsler profile

Verbal Subscale	Scaled Score ( ) show rank order	Performance Subscale	Scaled Score ( ) show rank order
Information	1 (3)	Picture Completion	5(2)
Similarities	1 (3)	Picture Arrangement	4 (3)
Arithmetic	3 (2)	Block Design	8 (1)
Vocabulary	3 (2)	Object Assembly	8 (1)
Comprehension	3 (2)	Digit Symbol	3 (4)
Digit Span	6 (1)		

A thirteen point difference between subscale scores is considered significant (Wechsler, 1974), hence Penelope's performance score is significantly higher than her verbal score. Such a wide disparity between subscale scores and in favour of the performance subscale is reported fairly widely in the literature on Wechsler profiles in autism (Allen, Lincoln, & Kaufman, 1991; Asarnow, Tanguay, Bott, & Freeman, 1987; Freeman, Lucas, Forness, & Ritvo, 1985; Lincoln, Courchesne, Kilman, Elmasian, & Allen, 1988; Narita & Koga, 1987; Ohta, 1987; Schneider & Asarnow, 1987; Wassing, 1965). This feature is, however, fairly

unusual amongst the research participants in this study, who tend to have elevated verbal scores, albeit rarely to a significant degree.

Penelope's profile peaks and troughs are also fairly typical. Lockyer and Rutter (1970) report performance peaks and troughs in accordance with Penelope's, while Szatmari, Tuff, Finlayson, & Bartolucci (1990) report identical verbal peaks and troughs. Both of these studies however, describe full scale intelligence quotients with slightly higher verbal than performance scores: that is, a pattern which is the reverse of Penelope's profile.

The skills associated with good performance on the object assembly task include being able to recognize a picture from its component parts and good awareness of spatial relations (Wechsler, 1974). Successful block design also suggests good spatial relations and the ability to analyse forms into component parts. These two skills are, then, relatively well developed according to Penelope's performance peaks. Her verbal peak suggests a relatively good short term memory for figures.

Penelope's peformance troughs suggest relatively poor visual memory and ability to learn non-verbal material, while verbal troughs indicate an absence of general knowledge, a deficient long term memory for facts, difficulties in relating real world referents to ideas, categorizing and conceptualizing (Wechsler, 1974). We may then expect Penelope to show limitations in lexis and the relational aspects of language. A good short term memory may also predispose her towards forms of immediate echolalia.

9.3. Speech

9.3.1. Misarticulations

Penelope's pronunciation is not always accurate. The utterances below illustrate the types of misarticulation that may occur in her speech.

The misarticulations below (P1a and P1b) involve low frequency words which have been simplified to a certain extent. It seems entirely feasible that Penelope may not have encountered these items in a productive context before and hence mispronunciation may be related to imperfect imitation of the model, since they will not be part of her lexicon.

P1a

S   (1.4) e:::::r (.) ´designate

P   (.) {ˌdɛːʂɪneʊːt} (0.8) can't reˏmember

P1b

S   (0.9)˙oˌkaːy˙ (1.9) ´regulate (.) ↑ ˙d'you know wha[t thatˋmeans]˙↑

P   [{ˈɹɛɡəlɛʊt}   ] (.) ˈmeans ˈgo

         ˈswimming

P1c

S   (.)ˈoˌkaːːyˈ (2.4)ˈoˌkaːːyˈ (.) how abouːt (.) aˌssemble

P   (.) {əˌsɪmbl̩}

Simplification is undersood to involve such features as the omission of segments ([g] in P1a; [j] in P1b) and neutralisation of vowels ([ʊ] becomes [ə] in P1b). In addition to this simplification, the alveolar consonants occuring within the first two syllables in both P1a and P1c have become dentalised. It is further noted that the stressed vowel in P1c has been made more close in Penelope's imitation. While this is not simplification it may be considered to be articulatory harmonising towards the surrounding obstruents. Simplification also occurs with lexical items with which there is good reason to presume Penelope is familiar:

P1d

P   (.) sheˌleft- (.) ˈBig ˈBreakfast in ninety ˌfiːːve asˌweːːll. ((0.6) {ˈzəʊ}ˌBaːll (.) ˈfirst ˌstarted on

P1e

S   (0.7) he alˈways ˈlooks veryˈfriendly an ˈhap[pyˌdoesn't he   ]

P   [ˈyeːːːah   ] (.) {və}ˈfriendly and ˌhappy

P1f

P   (.) he ˈdoes the ˈfirst {dən}theˌdoorstep asˌweːːll

P1g

P   (4.2) s'got medium ˈsized {θm̩}(.) like (.)ˌsiːːze (.) ˈKeithˌChegwin has (0.8) [liːke ˌthaːːt]

P1h

S   (.)ˌriːːght (.) have we go- have you got ˈsmallˌhaːːnds asˌweːll

P   (.) got ˈsmall {ˌhæːː}

P1d and P1e involve the omission of entire syllables, although in the former case, the syllable is only one segment in length. The latter case exemplifies vocalic neutralisation as well as syllable deletion, while P1f is a further example of such neutralisation. The deletion of segments which occurs in P1g and P1h is more extreme than that which occurs in P1a and P1b: "*thumb*" in P1g has no vowel at all, while P1h involves coda deletion, although the nasalisation on the preceding vowel suggests that the [n] segment is at least motorically planned.

P1i

P   (1.0) ˈworking on (.) in the {ˌdɪsk} as ˈwell

[target: *desk*]

P1j

P   (.) with {ˌbɪəts̩} (.) like that

[target: *beard*]

P1k

P   (.){ˈwɛd̠zdɛɪz} and ˌfriːdays (.) ˈnine till ˌthreeː:

P1l

      ˈKeith's has been ˌoff .hhhh but (.) he ˈsometimes ˈcomes on (.) {ŋ̩ˌkeɪʒəntɬiː}.

Finally, the examples above contain lexical items where Penelope has substituted segments. P1i is similar to P1c in that the vowel [ɛ] has been made closer, resulting in a loss of contrast between phonemes. The target [d] in P1j has been affricated and devoiced, while the target nasal [n] in P1k has been substituted by its homorganic plosive. P1l is the only misarticulation in which a segment has been inserted: [t]. This example also contains a segment substitution that is some way from the target: [ŋ] for [ə], perhaps due to a process of harmonising with later segments.

Penelope's misarticulations, then, consist of segment or syllable deletions, closing of [ɛ] in environments which suggest that harmonising may be the cause, vowel neutralisation, segment substitution, and, in one case, segment insertion. While the first three are consonant with making pronunciation easier, the two final categories of segment substitution and insertion are not necessarily. Nor is there any obvious explanation for P1i -P1l since the substitutions are unsystematic: for example, [d] is the target in P1j and the substitution in P1k. Since productions such as are exemplified in P1j- P1l are relatively rare in Penelope's speech, it is possible that, rather than these being indicative of a disordered phonology, they are simply idiosyncratic productions of the sort that children may make en route to correct pronunciation of an adult target (Menn & Stoel-Gammon, 1995: 359). In the main, then, it seems safe to assume that the majority of Penelope's misarticulations result from the persistence of early simplifying processes (Crystal, 1981: 46).

9.3.2. Intonation: Faithful and altered contours

In common with other research participants, Penelope has a restricted vocal range and favours shallow intonation contours:

P2

P   .hhh I've been ˈworking ˈsin{ssː} (2.1) eːːːrrm (.) ˈfour ˈyears aˈgo ˈsince (.) ˈnineteen
        ˈninety ˌthreeː:

In addition, Penelope's use of tone can sometimes be quite odd. P3 illustrates the unconventional use of tone in a list.

P3

P   .hh I've gotˇGladys (0.8) ˈEːdith ˈAːnn (0.6) ˈMarion as ˌweːːll (0.8) and ˌWendy
        and ˈDonald ˌHarris (.) theˌofficer

Tonal nucleii are sometimes sited unconventionally: P4a illustrates the odd placing of stress in the lexical item *'key worker'*, while P4b shows the tone unit nucleus occuring in an unexpected location.

P4a

S   (.) n'‾aa::h (.) i- it's 'good to 'hear you've got a 'nice‿key 'worker [isn't it]

P   [‿yea:::h] (.) 'nice

key‿worker

P4b

S   ‾ri:::ght (0.9) but you haven't de'cided what to::wn you gonna go to or-=

P   =I haven't

dè ci::ded (.) what 'ti::me as ‿we:ll =

Both of the above examples, P4a and P4b, are interesting, in that they clearly show that Penelope is modelling her turn on the prior turn of S, but in neither case has the tone been mimicked. The modelled utterances which result have an odd quality which certainly would not have been the case had Penelope's utterances been faithful echoes. In fact, tone in Penelope's other-modelled utterances is generally close to the model but rarely echoic:

P5a

S   (0.7) that's really‿good ‿innit

P   (.) really 'good ‿innit

P5b

S   (0.9) ‾yeah (.) is it- is it like an ‿overall

P   ‿overalls s'well [(.)   ]like an‾overall

P5c

S   (.)‿ri:ght (1.6) and- I expect you have to be very‾clea:n (.) as [well]

P   [‿YE]AH (.) be very

'clean as ‿we:ll

P5d

S   (0.7) are they gonna‾match =

P   =YEAH‿ma:tch

P6 represents an isolated occurrence of a truly faithful repetition of an utterance including tone contour (it should be noted that P5 and P6 utterances are all taken from Transcription One:15.7.96, while P7 utterances are taken from the WAIS-R Transcription: 22.7.96: Appendix 7.2.).

P6

S   (7.0)ʃ lovely

P   (.ʃ lovely (5.2) °yea::h°

Interestingly, faithful echoes of tone and lexis together occur much more frequently in the WAIS-R Transcription during the vocabulary subtest. P7 below are examples of such utterances.

P7a

S   (.) what bout (.) ˊponder d'you know what [ˏthat 'means]

P   [ˋponder   ](.) 'me:::ans (.) can't

rèmember

P7b

S   (0.6) reˊluctant

P   (.) reˊluctant (.) no::: (.) can't reˏmember

It is possible, then, that while Penelope's use of tone is unconventional, it is not entirely unsystematic, in that faithful replication of lexis and tone tends to indicate an inability to continue with the topic on which the lexeme in question is based, while remodelling of tone is indicative of the reverse. Indeed, the function of the utterances in P5 appears to be that of concurrence with the prior turn. Such a function is implied not only by the sequential location of Penelope's modelled utterances, but also by her "yeah" additions in P5c and P5d (see below for discussion of "yeah/yes").

9.3.3. Formulaic utterances and tone

The issue of often used lexical items in Penelope's repertoire, or formulas, naturally relates to the above, but is also dealt with in the section on repetition below. The two utterances which recur most significantly and in company with particular tones are "yeah/yes" and "as well". "Yeah/yes" has a strong tendency to occur with rising tone, while "as well" has a strong tendency to co-occur with falling tone with a final extended vowel.

9.3.3.i. "yeah/yes"

Throughout the transcripts there are 85 separate tokens of "yeah/yes". The frequency of occurrence of types of "yeah/yes" are shown in the table, PT: ii below.

PT: ii - Tone realisations of "yeah/yes" tokens in Penelope's talk

Tone realisation of *"yeah/yes"*	Percentage of total number of *"yeah/yes"* tokens (n=85)
Rising *"yeah/yes"* (*"yeah/yes"* occurs with high or low rising tone)	68%
Rising *"yeah"* (*"yeah"* occurs with high or low rising tone	48%
High rising *"yeah"* (*"yeah"* occurs with high rising tone)	32%
Rising *"yes"* (*"yes"* occurs with high or low rising tone)	14%
Falling *"yeah"* (*"yeah"* occurs with high or low falling tone)	25%
Falling *"yes"* (*"yes"*occurs with high or low falling tone)	7%

The tendency for the *"yeah/yes"* token to occur with rising tone, and in particular, for the " *yeah"* variant to occur with high rising tone can thus be seen. The range of functions of " *yeah/yes"* are shown in the table, PT: iii below.

PT: iii - Functions of *"yeah/yes"* tokens

Function of *"yeah/yes"*	Percentage of occurence (from total utterances)
minimal response	36.8
turn-taker	24.7
confirmer	18.8
part of responding utterance	12.6
part of confirming utterance	1.1
others	6

The definitions of the above functions are as listed below.

Minimal response. *"yeah/yes"* given as an acceptable but minimal response to a question. These utterances have to occur as the only element of one of Penelope's turns, or may be part of multi-component turns as long as they are the first element and are separated by the succeeding component by a pause lasting a minimum of one second, for example:

P8a

S   well do you ʼwant to ↑ˋtell↑ me ʼsomething about yourˊself

P   (1.0) yea:h

Turn-taker. Where *"yeah/yes"* does not have any apparent sequentially significant relationship to the surrounding talk. These utterances do not further the talk by completing two-part pairs, or by maintaining or continuing the topic. Whilst these utterances are the least interactive of the *"yeah/yes"* tokens, they do limit the occurrence of extended pauses:

P8b

P   =I haven't

      deˋci:ded (.) what ʼti::me as ˎwe:ll =

S   =ˎri::ght

P   (1.0) ˊyea:h

S   (0.7) ↑ˎbrilliant↑

Confirmer. *"yeah/yes"* indicates concurrence with or acknowledgement of the prior turn, and hence has sequential significance in the context of surrounding talk, and also enables the movement forward of topic:

P8c

S   (0.8) aa:::h you ˎare ʼlucky

P   (.) ˊyea:h

While the above are suggested as discrete categories, it is sometimes possible to make an argument for an example of an utterance to be defined in more than one way. In particular, it seems likely that the categories of turn-taker and confirmer may fade into one another. P8d below represents just such a case:

P8d

S   (.) o::h ˎyea::h (.) Iˎdo ʼlike him

P   (0.6) ˊyea::h

These utterances are, however, relatively rare in the transcript and have not been taken into account in the calculations.

The final two categories are simply cases where *"yeah/yes"* form part of a larger utterance, the function of which is defined as above:

Part of confirming utterance

P8e

S   (.) ˉa::::h ˉri:ght (.) so ʼall ˎfour of you

P   (.) ˊyeah ˎfour of me as ˎwe:ll

Part of responding utterance.

P8f

S   (.) and they've got`big `thumbs `have [they   ]

P   [´yea::]h [(1.3)] they got `big `thu::mbs

Tables PT: iv below show functions of *"yeah/yes"* token variants.

PT: iv a - Functions of rising *"yeah"* token

Type of *"yeah/yes"*token	Function	Percentage of total token type (n=46)
Rising *"yeah"*	turn-taker	31%
	minimal response	27%
	confirmer	27%

PT: iv b - Functions of rising *"yes"* token

Type of *"yeah/yes"*token	Function	Percentage of total token type (n=12)
Rising *"yes"*	turn-taker	41.6%
	minimal response	33.3%
	confirmer	8.3%

PT: iv c - Functions of falling *"yeah"* token

Type of *"yeah/yes"*token	Function	Percentage of total token type (n=21)
Falling *"yeah"*	turn-taker	5%
	minimal response	52%
	confirmer	10%
	part of responding utterance	33%

PT: iv d - Functions of falling *"yes"* token

Type of *"yeah/yes"*token	Function	Percentage of total token type (n=6)
Falling *"yes"*	minimal response	66.6%
	others	33.3

From the above we can see that there is a tendency for rising tokens to mainly have the function of turn-taker; that is, the least interactive function corresponds with the most frequently occuring token variant (if the categories of high and low rising tone are conflated). Falling tokens, however, have the main function of minimal response, with turn-

taking function occuring as the least frequent of all functions. This brief analysis therefore enables us to note a clear relationship between realisation of tone in a formulaic utterance and function within Penelope's speech. Falling tone in company with the *"yeah/yes"* token is associated with a more interactive function than rising tone. Indeed, falling tone tokens appear to be comparatively more flexible than rising tone tokens, in that their range of functions is greater and more diverse. Falling tokens also sometimes occur accompanied by loud volume in the data (see P9 below), whereas this is never the case for rising tone tokens.

P9

S   (0.9) aa::::h ri::ght (.) so he's- he 'does 'still do the 'Big 'Breakfast

P   (.) YE:::S

9.3.3.ii. *"as well"* and *"either"*

As noted above, *"as well"* also occurs frequently in the transcripts and can be identified as a formulaic utterance. In all, *"as well"* occurs on 49 separate occasions during Transcription One. Examples of *"as well"* can be seen in P1d, P1f, P1h, P1i, P3, P4b, P5c, P8b, P8e. The breakdown of realisation and position in which this formula occurs can be seen in PT: v below.

PT: v - Realisations of *"as well"* in Penelope's talk

Realisation and Position of "as well"	Percentage of total occurrences of token (n=49)
1. falling tone, extended final vowel, utterance final	73.5%
2. falling tone, extended final vowel, mid-utterance	4%
3. other realisations, utterance final	20.4%
4. other realisations, other place	2%

Even more so than with *"yeah/yes"*, *"as well"* has a strong tendency to occur with the same realisation and in the same position within an utterance. Realisational variants do exist (categories 3 and 4), though these tend to involve levelling or flattening of tone (as in P10a), with only one occasion of rising tone (P10b) and one of fall-rise (P10c), and account for less than a quarter of all tokens.

P10a

P   (.) brilliant (.) as 'we:ll

P10b

P   (.) mmm (0.9) m yea::h(1.0) .hhhhhh thanks: .hhh (.) I 'had my hai:r 'coloured (.) as we::ll

P10c

P   (.) I wo- (.) I like 'working 'there as we::ll

"*as well*" utterances do not have an easily identifiable function; rather, it seems that "*as well*" is added to utterances of all types. Both utterances which are highly   dependent on other prior-turns and those which have a more productive appearance may include the "*as well*" formula:

P10d

S   (0.7) ri:ght (.) wha- (.) the officer what (.) sort of 'officer is he

P   (1.0) 'working on (.) in the {˛dιsk} as 'well

P10e

S   (0.6) is 'that all ˛ri:ght

P   (0.6) s' that all ˛ri::ght as 'we:ll

" *as well*", then, as with "*yeah/yes*", is a formulaic utterance with a strong tendency to be realised similarly: with "*yeah/yes*" the similarity involves the suprasegmental feature of tone, while for "*as well*" tone and vowel extension are involved. Further, the realisation of tokens is limited to a few types. While for "*yeah/yes*", function can be associated with realisational type, "*as well*" is associated only with location within an utterance.

There are three occurrences of "*either*" in the two transcripts. Despite this incidence being too low to suggest a formulaic identity of equivalent significance as "*yeah/yes*" and "*as well*", there are good reasons for regarding this utterance as having a formulaic quality. The three occurrences of "*either*" are shown below in P11.

P11a

P   = yea:h I've been af ready

         been on 'oliday ˛either

P11b

P   (1.6) then I had a 'lazy 'day on the 'beach ˛either

P11c

P   (0.7) 'sentence 'mean 'put the 'words ˛ri:ght 'either

In common with "*as well*", "*either*" always occurs in utterance final position and, also in common with "*as well*", it occurs with considerably reduced lexical significance: that is, the word's meaning does not accord with its context. "*as well*" is a focusing adjunct and as such   can be interpreted meaningfully in a wide variety of contexts even though the communicative intent may be lacking. P10b is an example of the possibly fortuitous occurrence of "*as well*" with a context that enables a conventional interpretation. However, on most occasions, "*as well*" seems to be a superfluous addition to the utterance of which it is a part. P10a and P10d are clear examples of this. "*either*", whose classification can also be that of focusing adjunct, is far more obviously used without regard to its meaning, since on no occasion of its use does it appear to contribute to the meaning of the utterance. Thus, despite its limited distribution, "*either*" appears to be formulaic. As for "*as well*",

no functional significance between occasions of use is apparent, and its intraclausal function seems to be simply additive. Finally, "*either*" never occurs in any context where it is used meaningfully, nor does it occur in any location other than utterance finally.

9.3.4. Other prosodic features: Voice quality and intensity

Voice quality and loudness are features which Penelope manipulates in non-conventional ways. P12a and P12b below illustrate the use of peculiar voice quality in two utterances.

P12a

S   (.)ʾis he

P   (.)ʾis he (1.2)° `he's a lovely `ma::n°   *creaky voice - low pitch*

P12b

P   .hhh just say‿ello:: (.) as well (.)ʾKeith did (1.8) *yea.::::h*   *creaky voice - low pitch*

Interestingly, it is only on the Keith Chegwin topic that Penelope marks utterances in this way.

Volume tends to be increased in utterance initial position as P13 illustrates below.

P13a

S   (0.6)ˆmmm (.) ˈwhat ˈsort of ⁻uniform is [it-]

P   [ˌWH]ITE one

P13b

S   (.) ↑ohˌ lovely:↑(.) wh- (.) an ⁻what is it (.) is it aˋpinafore

P   (.)ˌPLAIN (.) ˈwhite ˈone (.) a[sˌwe]ll

P13c

S   (0.9)mm (.)you ˈsaid you were gonna saveˌup (.)·for something=

P   = SAVE ˈUP (.) to

buy my new ˌclo::thes (0.6) .hh and aˌbedding (.) asˌwe::ll

As with other research participants, the location of loud volume, that is, in utterance initial position, particulary in overlapped or latched turns, is in accordance with normative data. What marks off Penelope's utterances of this type is the large degree of increase in volume.

Prosody, then, tends to be manipulated by Penelope in particular ways. Tone, in particular, has been shown to have an association with formulaicity, which in turn may be related to particular discourse functions (this is also discussed futher below). On the other hand, such formulas may not have any obvious function or significance, other than to indicate Penelope's propensity for such structures. Faithful reproduction of intonation contour of a model occurs only rarely and in such contexts as suggests a non-interactive intent. Finally,

Penelope occasionally uses a marked voice quality, but confines this to the context of obsessive topic.

9.4. Repetition

9.4.1. Formulaicity and other-modelling

Repetition has to some extent been dealt with above in the sections dealing with the realisational, functional and locational dimensions of the formulaic utterances *"yeah/yes"*, *" as well"* and *"either"*. As mentioned above, Penelope is rarely truly echolalic in her speech, as, at the very least, tones tend to be modified in her other-modelled utterances even if this modification often only involves levelling. The most faithful echoes that occur, do so in the context of the administration of the WAIS-R (see P6 and P7 above). However, as the examination of *"yeah/yes"*, *"as well"* and *"either"* suggest, repetition and formulaicity do occur elsewhere in Penelope's talk. Indeed, utterances which are in some sense dependent on a prior other-turn are prevalent throughout. Other-modelling is defined here as a turn which has at least two lexical words or a complete phrase in common with an immediately prior turn. The only exception to this is when prior turns are less than two words in length. During the first 124 turns in Transcription One (Appendix 7.1.), Penelope produces 27 other-modelled turns (21.8%). P14 exemplifies this type of utterance.

P14a

S   (.) oh ˆthat's 'good (.) so you get 'free dinner

P   (.) get 'free 'dinner ˏeither

P14b

S   (.) yeah 'green ˏand 'mountains

P   (.) 'green and ˏmountains asˏweːll

P14c

S   (1.4) you 'lookingˆforward to it =

P   = I'm 'lookingˏforward to it as 'weːll

P14d

S   (.)ˏyeaːh (0.9) dˆyou 'like him

P   (.) Iˏliːkeˏhiː:m (0.8)ˏyeaːh

P14e

S   (0.9) an- (.) 'where's your (.) is it (.) d'youˆlive at 'Poplar 'House

P   (0.9) .hhh I 'usually 'live atˆPoplar House as ˏweː:ll

P14f

S   (2 syllables) did you goˏswimming in theˏseaː

P   (.)ˏnoː:: (.) I dˀ (.)ˏdidn't (.) I 'paddled in theˏ{ss}eaː: e-(.) ass- (.)w-(.)ˏweːll

P14a and P14b both repeat the final part of the prior turn. Both are also reworked to a limited extent, in that tone is remodelled and items have been added utterance-finally. The additions in both cases are formulaic (the argument for both being regarded as formulaic is

made above). P14a and P14b, then, whilst not echolalic, represent the least productive type of prior-turn, other-modelled utterance in Penelope's repertoire. P14c and P14d and P14e show a greater degree of re-working, although it should be noted that the tone contour of P14c is faithful to its model. P14c-e show alteration of pronoun from second to first person. P14c involves the addition of an auxiliary while P14d and P14e involve auxiliary deletion. P14e has *"usually"* inserted between subject and verb. This item is used frequently during this section of the transcript. However, it differs from *"as well"* and *"either"*, in that its use is apparently in accord with its conventional meaning (however, *"usually"* presents somewhat differently in the syntactic errors discussion below). Finally, P14f is the most productive other-modelled utterance. Discounting the false start, it includes a change of main verb and aspect, alteration of pronoun, and, as with the preceding P14 examples, the addition of a formulaicised component.

There is thus evidence of a degree of syntactic ability within the context of other-modelling, although Penelope certainly does make errors in both this type of utterance and those which have a more productive appearance. This issue is dealt with further below.

9.4.2. Syntactic repetitiveness

Penelope's productive utterances (that is, those which are not other-prior-turn dependent) during Transcription One account for 26.66% of her turns (60 out of 225 turns). It should be noted that this calculation does not include minimal responses, since their status as productive or repetitive utterances is unclear. Incomplete sentences, apart from those where only the subject was missing, were also omitted for the purposes of this calculation. Taking these factors into consideration then, the amount of other-modelling and productivity appears to be roughly equivalent. The mean length of an other-modelled turn is 5.1 morphemes (138 morphemes in 27 other-modelled turns). This calculation was made using Brown's conventions (Brown, 1973) for counting morphemes; that is, false starts, fillers and dysfluencies were discounted, and lexemes composed of derivational morphemes, proper nouns and unanalysed items were counted as one morpheme, for example, *"as well"*. By contrast, the mean length of turn of productive utterances as delimited above is 8.7 (524 morphemes in 60 utterances). Since, then, Penelope's productive capacity exceeds her other-modelling, it seems unlikely that she makes use of other-modelling as a means to overcome syntactic deficiency.

Further to this, Penelope's productive utterances are diverse in their syntactic function composition. These utterances range from simple SV or SVO structure to SAVOAA. However, when the realisation of components is examined, it is noted that, while Penelope has a preference for the extensive use of adverbials, these are often realised by one of her favourite or formulaic items. *"as well"* and *"usually"* are two such items that recur as the adverbial component in Penelope's productive utterances. *"usually"* is used extensively but apparently conventionally during one section of Transcription One (as P15 below

exemplifies), which suggests that it is not formulaic. However, see the discussion on this item in the section on syntactic errors below for an argument which makes the case for its definition as a formula. Hence, although the item accords ostensibly with standard uses here, in fact it is best regarded as formulaic rather than merely repetitive.

P15a

P   .hhh I 'usually 'shell the˷eggs an (1.7) n' I 'usually- (.) {'meɪts-}(.) {'meɪʔ 'tsəm} ˎscoːnes an- (0.8) 'fruit an ˎplaiːn

P15b

P   (0.8) n'I usually- (.) eːrm (3.5) 'clear up the 'pots (.) an - 'empty the ash˷traːys (0.6) in those˷bags n- (0.8) n the 'rubbish in those˷bags .hhhh I 'usually did a lot of 'clear- (0.6)˷loading the 'dishwasher

P15c

P   = n I 'usually 'put the˷pots a'waːy

P15d

P   (.) 'usually 'have a˷sandwich (0.7){əʔ}(0.7) 'Crown 'Court (.) I- (0.6) cos I .hhhh don't ne- (.)˷neeːd to 'pay my 'money˷do I ˎnoːː

P15e

P   (.) yeah (.) I 'usually get 'paid every 'friday (.) as ˎweːːll

P15f

P   (.) I 'usually 'go on-(.) 'go ˎhome (.) {sss}- (1.0) in 'summer and 'Christmas as ˋweːːll

P15g

P   (.) I usually (.) 'visit my˷paːrents [(.) as ˩weːːll

P15h

P   (0.7)I usually 'see them in the 'summer and 'Christmas as ˎweːː[ll]

There is possibly some local influence at work here, since all but one of the *"usually"* tokens occur within the first 140 lines of transcript. Interestingly, *"usually"* always takes second place in the clause. It occurs first in P15d only because the subject is omitted. This is suggestive of the pattern which occurs with *" as well"* which almost always is located utterance finally.

Above, it is mentioned that the structure of Penelope's clauses on the level of syntactic functions is diverse. However when *"usually"* and *"as well"* clauses are compared with

the other productive clauses, it is found that these are less likely to have a novel structure than other types. There are nine productive clauses with a *"usually"* component, which take five different forms. This gives a type-token measure of 0.55. *"as well"* clauses, of which there are 16 taking eight different forms, have a type-token measure of 0.5. The measure for other clauses is 0.8125. There is therefore a clear tendency for *"usually"* and *"as well"* to occur in company with more frequently used clause types.

When the productive utterances are subjected to further analysis for discourse function, it appears that the majority of productive utterances have the function of Response or Confirmation of prior turn. Of 60 utterances, only four are Initiators of new topic or contributors to topic. Three of these have an often used syntactic function structure (two have the structure of SVOA with A realised by *"as well"*, and one has SVOAA with second A realised by *"as well"*). The remaining utterance has a unique structure because it is a question.

There is, then, a tendency to use familiar forms to make initiations or to move the talk forward, as well as a relationship between the use of formulaic items within more often used, and hence more familiar, clause types. Thus, while Penelope appears to be using language productively to about the same extent that she is using it repetitively, repetitiveness has a subtle presence even in what appear to be productive environments. Further, there appears to be some interaction between levels of repetiveness that are as yet unclear in their operation.

9.5. Syntactic Errors

9.5.1. Verb phrases

Penelope, in common with the other research participants, makes many errors during her talk. Verb phrase errors can be categorised into those which affect the expression of tense or aspect, and errors of omission. Omissions are often of auxiliaries as P16 below exemplifies.

P16a

P   (1.2) been ʻworking at the ʻCrown ʻCourt ˎrestaurant (.) on the (.) w-ʻwednesdays and ˎfridays

P16b

P   (0.9) get a ʻplaːːne (.) an ʻstay (.) an aˌpartment asˎweːll

P16c

P   [ˊyeaːː]h [(1.36)] ˎthey got ʻbig ʻthuːːmbs

P16d

P   (0.7) I'm ʻgoing (0.8) been to ˎLanzarote (.) thisˇyeːːːar

As with other research participants, P16a and P16b may well result from a tendency to truncate utterances by omitting early occurring items (subjects are also missing from these utterances). This cannot be the case for P16c and P16d where the first item in the utterance is not part of a verb phrase. In the case of P16d the auxiliary omission may be due to the false start. It is noted that deletion of the contracted *"have"* auxiliary does occur elsewhere in Penelope's speech. P16e below is a further example. However, P16e and P16f also demonstrate that Penelope does not omit the *"have"* auxiliary when it takes the third person singular variant. The tendency to delete this form is therefore unlikely to have a syntactic basis and possibly derives from dialectal influence.

P16e

P   I 'got sm- (.) I 'got e::rm (1.2) Dawn's 'got 'small thu::mbs:

P16f

P   (1.4) and 'Alan's got (.) Thomas has 'got 'big thu:mbs:

Other types of omission are shown below in P17.

P17a

P   (.) 'Lissa my 'friend as we::ll

P17b

P   .hhh just say ello:: (.) as well (.)`Keith did (1.8) *yea:::h*   *creaky voice - low pitch*

P17c

P   (0.7) 'sentence 'mean 'put the 'words ri:ght 'either

P17a demonstrates the omission of the copula, while P17b and P17c both include deletion of the third person singular morpheme. It is possible that these errors may stem from some genuine limitation of morphological competence. P18e-h below may also be interpreted as indicative of such a limitation.

Tense and aspect errors are exemplified in P18 below.

P18a

P   (0.8) n'I usually- (.) e::rm (3.5) 'clear up the 'pots (.) an - 'empty the ash trays (0.6) in those bags n- (0.8) n the 'rubbish in those bags .hhhh I 'usually **did** a lot of 'clear- (0.6) loading the

P18b

S   (0.7) 'what did he used to 'do on 'the::re

P   (0.6) he '**does** the doorstep as we::ll

S   (.) ↑ oh does he 'still 'do ˙that ↑

P18c

S (0.7)ˌriːght (.) wha- (.) the ˏofficer 'what (.)ˌsort of 'officer is he

P (1.0) 'working on (.) in the {ˏdɪsk} as 'well

P18d

S (1.1) an wh- (.) 'what sort of 'thingṣ happen (.) when he 'does 'that

P (.) 'knocking on theˏdoors (.) when-(.) to 'visitˏpeople (1.3) in the 'houːːse asˏweːll

P18e

S (1.3) an (.) 'what did youˏdo inˏLanzarote (.) can you 'tell me what youˏdid

P (1.3) eːːːrm I- (.) I'veˋaːte 'out (1.5) n' I had a sun'bathe asˏweːll (0.9)n' I 'went for a 'ride (.)

P18f

P 'heːː (.) was on the s- (.) con- (.) {ss} (.) 'multicolouredˏswap 'shop 'JohnˏCraːːven is

P18g

S (.) and he 'used to 'doːː eːːːrm(.) he used to do the- the- th- he used to goˏout and do theˏswapping

P (.) yeːːːs: (1.0) °Keiːth (.)ˏChegwin (.) does (.) does the 'bigˏswapping asˏweːːll°=

P18h

S (0.6)' that's it (0.7) d'you reˏmember it 'then

P (.)ˌyeːːːs[s (.) I reˋmember] ed it

P18i

P   = yeaːh I've been alˋready

been on 'oliday ˏeither

P18c and P18d are tenseless, which, since both follow a challenging question form (responding to*"what sort of"* questions requires the ability to manipulate and express both ontological and categorical knowledge: cf. the comments in the WAIS-R analysis above) may be indicative of Penelope's difficulty in dealing with complex cognitive tasks and adequate syntactic expression simultaneously.

There seems to be genuine confusion in P18a and P18b between past and present tense. P18e, f, g and h also indicate confusion. The lack of cohesion with surrounding discourse in these examples is particularly noteworthy, suggesting that perhaps in some cases, these

errors result from a confusion surrounding the concept of time. This possibility is explored by S during the extract shown at P19a below, of which P18b is the culmination.

P19a

1	S	(1.1) d'you- d'you`see him (0.8) have you 'seen him on anything else since the
2		'Big 'Breakfast
3	P	(.) I haven't seen him- ((drinks)) I haven't 'seen him (.) for h- a::ll ˌwee::k (.)
4		because 'Keith's has been off .hhhh but (.) he 'sometimes 'comes on (.) {ŋ
5		ˌkeiӡəntli:}.
6	S	(0.9) a:::::h ˌri::ght (.) so he's- he 'does 'still ˌdo the 'Big 'Breakfast
7	P	(.)`YE:::S
8	S	(1.0)`e:::hhh
9	P	(.)´yea:h
10	S	(1.0) cos I haven't ˌseen the 'Big`Breakfast for ˌa:ges
11	P	(.) mhmm na:::
12	S	(.) n'I 'thought p'raps he didn't ˌdo it anymore cos I 'know he ˌused to 'do it
13	P	(.)ye::::s::
14	S	(0.7) 'what did he ˌused to 'do on 'the::re
15	P	(0.6) he 'does the ˌdoorstep as ˌwe::ll

In fact, at the time of the recording, the presenter in question, Keith Chegwin, no longer appeared on the programme referred to. As Keith Chegwin is a central obsession of Penelope's, it may be the case that her confusion stems from a strong desire for him to return to her screen soon. However, temporal confusion is also evident in P19b below, this time with the adverb "*sometimes*". Penelope's use of "*sometimes*" here cannot be accurate since the programme did not visit places more than once.

P19b

S	(0.8) did`you 'ever go to (.) the 'Swap 'Shop did they 'ever 'come to you:r 'town
P	(0.7)`someti:mes ˌe:h (.) ye::ah (1.5)`he::'s a 'lo::vely 'ma:n

A single instance of the repetitive item "*usually*" also suggests that temporal adverbs may not always be used completely in accord with convention:

P19c

P	(0.9) .hhh I 'usually 'live at`Poplar House as ˌwe::ll
S	(0.6)ˌri:::ght` (1.0) an:: (.) 'sometimes d'you (.) 'go somewhere`else (.) °as well°
	(1 syll)
P	(1.6) e:::rm (1.7)`no:: =

As in P19a, the researcher explores Penelope's meaning here, in this case, as the proposition conveyed seems unlikely. Thus, whilst context conspires to make the other instances of "*usually*" appear acceptable, it may not be the case that Penelope's concept of

the lexeme is in full accord with the community-wide usage. A formulaic definition may then be more appropriate for this item.

P18e and P18i are however, indicative of purely syntactic confusion. P18e is a blend between the present perfective form and simple past tense while P18i involves a duplication of past participle form, possibly caused by the interruption of the verb phrase by the time adverbial "*already*". Line 4 of P19a, P16c, P17a, P17b, P17c and P18e indicate particular problems with morphological inflection. Thus, while it seems possible that some of Penelope's verb phrase errors may result from more general cognitive difficulties of temporal awareness, there is certainly a syntactic aspect to at least some of them. Neither can truncation by excising early clause elements fully explain her syntactic limitations here, as has been shown above. Penelope's tendency to avoid tense marking in cognitively demanding situations is futher suggestive of a fragile system. In all, then, Penelope's verb phrase errors imply a generally limited syntactic ability.

9.5.2. Noun phrases

Penelope's noun phrase errors fall quite neatly into discrete categories. By far the most pervasive are those that relate to her use of determiners. The errors exemplified in P20 below relate to incorrect insertion of a determiner where none is needed.

P20a

1 P   (1.2) been 'working at the 'Crown 'Court ˏrestaurant (.) on the (.) w-'wednesdays and
2   ˏfridays (1.6) I 'usually- (.) 'buy- (.) 'c.d.s (.) 'every ˏfriday (0.6) then- (.) an 'now I'm
3   'saving- (.) my: - (.) f- (.) to 'buy 'new ˏcloːthes (.) 'next ˏweeːk

P20b

P   (.) an theˏbedding (.) asˏweːll (0.6) an the 'new˘ curtain (1.1) an thɛ maːt an the
           ˏwaːːtch (.) as ˏweːll

P20c

P   (0.6)˘ yeaːːh (0.9) and she's hav- 'had a 'straight ˏhair (.) in 'nineteen 'ninetyˏfouːr

Reference should be non-specific in line1 of P20a, as it should be for the listed items in P20b, where Penelope is telling the researcher what she is saving up to buy. Interestingly, line 3 of P20a shows Penelope making correct non-specific reference to new clothes. P20c shows incorrect use of a determiner to refer to the mass noun "*hair*".

" *the watch*" in P20b has the wrong determiner, relating again to non-specific rather than specific reference, as do the examples in P21 below.

P21a

P   (0.8) n'I usually- (.) eːːrm (3.5) 'clear up the 'pots (.) an - 'empty the asɦtraːys (0.6)
           in thoseˏbags n- (0.8) n the 'rubbish in thoseˏbags .hhhh I 'usually did a lot of 'clear-
           (0.6)ˏloading the

P21b

P   (.) 'usually 'have a ˏsandwich (0.7){ə?}(0.7) 'Crown 'Court (.) I- (0.6) cos I .hhhh don't ne- (.) ˏneeˌd to 'pay my 'money ˏdo I ˏno::

P21c

P   = SAVE 'UP (.) to

buy my new ˏclo::thes (0.6) .hh and a ˏbedding (.) as ˏwe::ll

P21d

P   (.) 'patterned̦ curtains (.) and a- (0.6) 'bedding as ˏwe::ll

Penelope uses a demonstrative in P21a where clearly there is no endophoric or extralinguistic context available to disambiguate the reference. The possessive "*my*" is used rather than "*any*" in P21b, while P21c and d both show Penelope struggling with the non-count noun "*bedding*" once again, which here requires the determiner "*some*" .

Determiners are simply omitted in P22a and b below.

P22a

P   (.) she̦ left- (.) 'Big 'Breakfast in ninety̦ fi::ve as ˏwe::ll. ((0.6) {'zəʊ}ˏBaːll (.) 'first ˏstarted on

P22b

P   (.) with { ˏbɪəts:} (.) like that
target: beard

Penelope's other noun phrase errors are shown below at P23.

P23a

S   (0.6) an- an 'what- (.) d'you 'have in your̦ sandwich
P   (0.6) 'tunas

P23b

S   (.) ⁻a::::h ⁻ri:ght (.) so 'all̦ four of you
P   (.) ´yeah ˏfour of me as ˏwe:ll

P23c

S   (0.7) right (.) ↑have you 'seen 'something you̦ fancy↑
P   .hhh I̦ chose that as 'we::ll (.) few 'weeks a̦ go:: (.) with ˏHannah

P23d

P   (.) .hh 'chosen a ˏpattern 'one as ˏwe::ll

P23e

P   (0.6) do'mestic 'mean 'doing their 'washing and ˌironing as ˌwe::ll

Penelope's confusion about how to refer to non-count nouns emerges again in P23a, this time with the use of the unnecessary plural morpheme. P23b is interesting, because it involves a prior-turn-dependent utterance, in which Penelope correctly identifies the pronoun "*you*" as requiring alteration to first person, but does not pluralise it. P23c and d both involve the use of forms (demonstrative "*that*" and pro-form "*one*") which require antecedents which Penelope has not given, or at least not unambiguously so. Both instances are succeeded in the transcript by sequences in which the researcher initiates repairs. Similarly, P23e has no antecedent, although since this example is from the WAIS-R vocabularly subtest no repair is attempted.

Clearly then, Penelope has difficulties with fairly basic syntax. These problems extend beyond not taking listeners' needs into account, although incorrect, ambiguous or unclear use of determiners, pronouns and pro-forms are certainly factors which lead to an impression of incohesive discourse, and are judged to be incorrect chiefly due to the inevitable ensuing comprehension difficulties. However, all the above examples, in particular P23a and P23b, are strongly suggestive of a lack of systemic awareness. Since noun phrases are so salient in language, Penelope's lack of facility with them would seem to be indicative of a fundamentally immature syntactic ability.

9.5.3. Prepositions

Penelope's use of prepositions is quite limited. Taking only her productive utterances from Transcription One of which there are 60, there are only 26 uses of prepositions, 2 of which are erroneous. Their breakdown into types is shown below, along with meanings of particular tokens (Quirk & Greenbaum, 1973).

PT: vi - Prepositions in Penelope's productive utterances

Preposition	in	on	at	for	of	with	round
number of occurences	8	5	3	3	1	1	1
meanings	temporal: 4 position: 4 errors: 2	idiom: 3 pos-ition: 2	posi-tion	recip-ient: 1 idiom: 2	poss-ession	accom-paniment	direc-tion

From such limited data it is difficult to draw any reliable conclusions. However, there does appear to be a tendency to use prepositions to indicate position (approximately a third of all

correct prepositions), while temporal matters are referred to using only *"in"* during the transcript. Penelope's idiomatic uses of prepositions are exemplified below as well as her errors.

P24: idioms: *"on"*

P24a

P   [used to]be on the Big 'Breakfast

P24b

P   'Zo Ba:ll (.) 'first started on the 'Big 'Breakfast in ni -ninety fi :ve

P24c

P   (hhhhhh) ye:(hhh)ah (.) on the telly I measured his (1.4) 'thumb like 'mi:::ne =

P25: idioms: *"for"*

P25a

P   (1.4) an did some 'shopping- (.) for 'food as we::ll

P25b

P   (0.9)n' I 'went for a 'ride

P26: errors

P26a

P   (1.0) 'working on (.) in the {disk} as 'well

P26b

P   (0.9) get a 'pla::ne (.) an 'stay (.) an apartment as well

All the *"on"* idioms are related to television and television programmes, while the *"for"* uses are considered idiomatic because they appear in often-used expressions. Their use here is formulaic, although this formulaicity extends to the wider community, and is not then necessarily a feature peculiar to Penelope's language.

Both errors relate to the use of Penlope's most frequent preposition *"in"*. In P26a she self-repairs to use it incorrectly, despite the acceptability of her original attempt. As with the P24 and P25 examples, *"working on the desk"* is an idiomatic prepositional form, although in this case, Penelope is clearly not confident of its use. Interestingly, in this situation she reverts to her most frequently used preposition *"in"*. P26b is a case of simple omission. The question which preceeds this utterance is of the type that Penelope appears to find problematic (wh-question types are discussed in the section on conversation below), hence the omission of the preposition in this case possibly relates to the challenging context.

Penelope's prepositions are all part of prepositional phrases functioning as Adverbials. The single exception, shown below at P27, is part of a nominal postmodification.

P27

P   (1.3) 'very well 'stayed in the(.) apartment as we::ll (1.2) 'me an Me'lissa 'shared the 'rest of my:: 'room

Penelope's meaning is not clear in this case. The most likely target is *"me and Melissa shared a room"*. If this is the case, then *"the rest of"* is superfluous, and suggests that it has been imported into the utterance without analysis. As such, it would count as a formulaic usage. However, in the absence of further comparable tokens it is difficult to be certain of its status.

Perhaps the most telling feature of Penelope's use of prepositions is their infrequency. While this makes it difficult to detect definite patterns of usage, it also suggests a limited facility. This limitation is further implied by Penelope's evident preference for the *"in"* form, such that she self-repairs to include it erroneously. Similarly, the functional role played by prepositions within clauses, as well as the spread of meanings to which Penelope applies them suggests limitation. Finally, we see in P26b above, that, under duress, even Penelope's most established preposition is excised to contribute to an overall telegraphic effect. Once again, the implication is that of a fragile system, whose successful operation is subject to relatively slight contextual pressures.

9.5.4. Clauses

Penelope's clause structures are discussed in the section on syntactic repetitiveness above. Further to the points noted there regarding preferred clause structures, there is also a tendency to truncate clauses by excising early occuring items. Examples are given in P28 below.

P28a

P (1.2) been 'working at the 'Crown 'Court restaurant (.) on the (.) w-'wednesdays and ˌfridays

P28b

P (.) 'usually 'have a ˌsandwich (0.7){ə?}(0.7) 'Crown 'Court (.) I- (0.6)

P28c

P (1.0) 'working on (.) in the {ˌdɪsk} as 'well

P28d

P   [ˌYE]AH (.) be very

'clean asˌweːll

P28e

P (.) .hh 'chosen a ˌpattern 'one as ˌweːːll

Penelope certainly does not make use of this strategy consistently, nor is it applied to only productive clauses: P28d and P28e are prior-turn dependent. Also, although clause components are deleted, P28d exemplifies a case where Penelope has inserted a formulaic *" yeah/yes"* token external to the truncated clause. As with other research participants, the deletion of early occurring elements is not confined to discrete clause components: subject and auxiliary are deleted in P28a, while just the subject has been omitted in P28b.

Clause connecting also tends to be simple. By far the majority of clauses in Transcription One occur on their own as single simple units. In all, there are only 24 points at which it is possible to use a co-ordinator or subordinator in the transcription as it stands. When more than one clause is present, and connection is explicit, co-ordination using "*and*" is the preferred option:

P29a

P (0.8) n'I usually- (.) e::rm (3.5) 'clear up the 'pots (.) an - 'empty the ash˛tra:ys (0.6) in those˛bags n- (0.8) n the 'rubbish in those˛bags .hhhh I 'usually did a lot of 'clear- (0.6)˛loading the 'dishwasher

P29b

P (1.3) e::rm I- (.) I've`a:te 'out (1.5) n' I had a sun'bathe as˛we:ll (0.9)n' I 'went for a 'ride (.) 'round the˛countrysi:de (.) as˛we::ll (1.4) an did some 'shopping- (.) for 'food as ˛we::ll

"*and*" occurs as the co-ordinator nine times. "*but*" is used to co-ordinate clauses on only one occasion:

P29c

P (.) I haven't seen him- ((drinks)) I haven't 'seen him (.) for h- a::ll ˛wee::k (.) because 'Keith's has been ˛off .hhhh but (.) he 'sometimes 'comes on (.) {ŋ ˛keɪʒəntli:}.

The option of juxtaposing clauses without any explicit connective is also used by Penelope. This can be seen in line 2 of P29a above and in P29d below:

P29d

P (0.8) he's- (.) he's- (.) he's`pretty (.) he's`beautiful (.) he's a`very 'gorgeous 'man ['Keith˛Chegwin is   ]e:h

This least effortful of connecting strategies is also employed on nine occasions. The only subordinator used by Penelope is "*because*", in both its full and also its contracted form "*cos*". This is exemplifed in P29c above.

Dependent clauses appear to a limited degree in the transcriptions. These are always infinitive "*to*" clauses. The three examples that occur are shown at P30 below.

P30a

P an 'now I'm 'saving- (.) my: - (.) f- (.) to 'buy 'new˛clo:thes (.) 'next˛wee:k

P30b

P cos I .hhhh don't ne- (.)   ˛nee:d   to 'pay my 'money˛do I˛no::

P30c

P (.) 'knocking on the˛doors (.) when-(.) to 'visit˛people (1.3) in the 'hou::se as ˛we:ll

At the above-clause level Penelope's language is, then, quite simple. Clause connecting is for the most part avoided, and, when it does occur, is achieved using forms and strategies whose logical and formal expression is predictable and accessible.

9.6. Conversation

9.6.1. Questions and pauses

In comparison with the other research participants, conversation with Penelope contains relatively few extended pauses (extended pauses are those which are at least one second in length). Indeed, Penelope is inclined to fill pauses that are exceptionally long. Penelope appears to use extended pauses for comparable reasons to other research participants: for instance, when there are high linguistic demands made on her by her interlocutor. These demands generally take the form of questions, in particular wh-questions are likely to induce extended pausing:

P31a

S   (.) an- (.) 'what was it ˷like

P   (1.3) 'very˳ well 'stayed in the(.) a˳pa:rtment as˷we::ll (1.2) 'me an Me'lissa 'shared the 'rest of˷my:: 'room

P31b

S   (.) an- (.) 'what are they all` like (0.8) °can you 'tell me a 'bit about ea-°(.) 'what they ` look like an wha- (.) 'what 'sort of` people they are

P   (1.5) { ˷naɪs::}   *large font indicates loud volume*

P31c

S   (0.7)˷ri:ght (.) wha- (.) the˷officer 'what (.) sǫrt of 'officer is he

P   (1.0) 'working on (.) in the {˷dɪsk} as 'well

That Penelope struggles with finding responses to these questions is evidenced not only by the pauses, but also by the peculiarities of the responses she eventually makes. P31a has been mentioned above (as P27 in the section on prepositions), where the final turn component was examined. However, the initial turn component is also odd in the lexical choice of "*well*" rather than "*good*". P31a also falls into the category of turns that are multi-component, but in which connectives are avoided. P31c has likewise been examined above (as P28c in relation to deletion of early clause components; as P26a in relation to formulaic prepositional phrases; P18c in relation to tenseless verb phrases; P1i as an example of a conflation between /ʌ/ and /ɛ/ phonemes). This utterance is thus interesting for a variety of reasons, hence the location of this particular extended pause is perhaps not surprising. The difficulty of the " *what sort of*" wh-question type which elicits this problematic response is further evidenced in P31b where another token of the "*what sort*

of" question also gives rise to extended pausing. Penelope's response here, given the amount of information apparently sought by the researcher, can be considered minimal. Hence wh-questions appear to correlate with next-turn extended pauses. The responses which follow such pauses also show features on other levels which can be associated with increased linguistic demands.

Increased load made by the sequential environment is also relevant in the context of the WAIS-R. While the demands in the P31 examples can be argued to be of a fundamentally linguistic nature, those made by the questions in the WAIS-R are both linguistic and cognitive. Penelope deals with these questions in a variety of ways. Penelope's responses to some of the questions from the information subtest are shown below.

P32a

S   (.) d'you know what`colours are in the 'British ˎflag

P   (1.4) 'yellow (.)ˏred (.) a:::nd`whi::te (.) as ˎwe::ll

P32b

S   how many ˎmonths: (.) there are in a`yea::r

P   (1.6)ˏtwe::lve

P32c

S   = 'right (.) ǫ ka::y (2.1) d'you 'know (.) the `na::me (.) of any 'primeˏminister (.) of 'Great ˎBritain (.) during the 'second 'world ˎwa:r

P   (.) MrsˎThatcher

P32d

S   (.) d'you know what a therˎmometer's fo::r (.) 'what d'you use a ther`mometer (.) [for]

P   [{hfiɑ:ʔ}] (.) don't 'kno:w

Where Penelope believes she knows the answer, as in P32a and P32b, her pausing is extended, presumably while she retrieves the required information from memory. When she knows the solution is beyond her, she takes far less time to give a response, as in P32d (cf. Mary). P32c is interesting as, in common with other research participants, Margaret Thatcher's name in connection with the term *"Prime Minister"* is retrieved quickly by Penelope. The suggestion has been made elsewhere in this study (for example, in the chapter on Mary) that autistic language users may find the collocative impulse hard to resist. Penelope's quick response, which fails to take account of the final part of the question, may be indicative of just such a response. This type of quick collocative responding is seen again during the vocabulary subtest of the WAIS-R. The examples appear below at P33.

P33a

S   (0.8) ↓'very 'good↓ (3.4) ˎkay ˎnext 'one is(.) ˎsh[ip]

P   `[sh]ip (.) me- (.) 'means to- (.)

`grow on (.)

and 'travel sˎ'we::ll

P33b

S   (.) d'you know whatˎpenny 'mea::ns

P   (.) 'penny 'means (.) 'spends a`penny (.) go to the`toi::let

P33c

S   (3.1) e::rm (.) 'how a`bou::t (1.3) e` no:rmous (.) what does[-]

P   [e]'no:rmous

'means (.) 'eat an e'normousˎlu::nch

Rather than the definitions required by the WAIS-R, Penelope gives collocative responses in all the above cases. The switching pauses between her and the researcher are thus less than 0.5 seconds or overlap with the prior turn. As with the other study participants then, it appears that collocations can be accessed relatively easily by Penelope, and when the conversational context appears to allow her to do so, she takes advantage of this strategy. Such a strategy is essentially linguistic. Penelope's use of it to complete an unfamiliar task such as the WAIS-R vocabulary subtest, which has both cognitive and linguistic loading, suggests a default tendency in pressurised circumstances to apply it. Thus, it is not necessarily the case that difficult questions will always give rise to extended pausing.

Extended pauses also appear in contexts which suggest they Penelope may use them to plan, as the utterances below show.

P34a

P   (1.2) been 'working at the 'Crown 'Court ˎrestaurant (.) on the (.) w-'wednesdays and ˎfridays (1.6) I 'usually- (.) 'buy- (.) 'c.d.s (.) 'every ˎfriday

P34b

P   .hhh I 'usually 'shell theˎeggs an (1.7) n' I 'usually- (.) {'meɪts-}(.) {'meɪʔ 'tsəm} ˎsco:nes an-

P34c

P   (0.8) n'I usually- (.) e::rm (3.5) 'clear up the 'pots (.) an - 'empty the ashˎtra:ys (0.6)

Planning pauses are identified as such in non-autistic speech when they appear between clauses or tone units or close to their boundaries (Harley, 1995), just as is the case in P34a and P34b. The example in P34c is slightly different in that, here, the pause intervenes

between the linguistic elements of adverb and verb, suggesting that the adverb does not belong to the planned unit, but outside it. That is, it does not need to be planned. It will be noted that the adverb in question is the formulaic "*usually*". This item has a strong tendency to occur in proximity to an extended pause (note its location in P34a and P34b). This further confirms the formulaic identity of "*usually*" suggested above, since the environment in which it commonly occurs is one associated with planning. Its appearance here may well represent a further resource conserving strategy, similar to collocative responding discussed above. By using "*usually*", Penelope is able to fill a pause with a syntactically acceptable and, in most cases, semantically feasible, unit, the production of which will also buy her additional planning time. In part, the success of this strategy is dependent on the nature of the word "*usually*" itself. "*usually*" is able to fit into the meaning frame of many utterances without drawing attention to itself, nor detracting from or contradicting the central message.

The final point to make in relation to extended pauses is that Penelope does not tolerate them to the same degree as the other research participants. P35 below illustrates the point.

P35a

S   (7.0) lovely

P   (.) lovely (5.2) °yea::h°

P35b

S   (1.0) mmmm

P   (.) yeah (3.5) °yeah°

P35c

S   (2.0) I haven't 'seen ⌐him on 'telly for a ˙whi::le

P   (.) no::::

P   (4.2) s'got medium 'sized {θm}(.) like (.) si::ze (.) 'Keith ˎChegwin has (0.8) [li:ke ˎtha::t]

These three examples represent the three longest unfilled pauses in Transcription One. In none of them do the pauses belong to Penelope, since she has been the last to speak in every case. She does however take responsibility for their termination, making use of the formulaicised rising "*yeah*" in P35a and P35b, and reverting to an earlier and favourite topic in P35c (Keith Chegwin). While the techniques for initiating talk are similar to other study participants, that is, the use of formulaic items and the unsolicited introduction of favourite topics, this comparatively low tolerance for unfilled pauses is unique to Penelope.

The brevity of pauses in Penelope's talk is in part this is due to her filling them ("*usually*" can be considered to be a particularly sophisticated type of filler) , which again, marks a

departure from the other research participants. Examples of Penelope's fillers are shown below.

P36a

P   (0.8) n'I usually- (.) e::rm (3.5) 'clear up the 'pots

P36b

P   (.) I 'like e::::rm (.) 'John ˏCraven

P36c

S   (2.4) erm (.) has 'anybody got ˏsmall 'thumbs

P   I 'got sm- (.) I 'got e::rm (1.2)ˏDawn's 'got 'smallˏ thu::::mbs:

Penelope's use of pauses is then indicative of a relatively able conversationalist. Her dislike of extended pauses and techniques for terminating them, regardless of 'ownership', suggest that she is able to identify and take responsibility for this aspect of conversational maintenance. The environments which give rise to her own extended pausing are comparable to both other study participants and non-autistic language users: that of high cognitive demand. The strategies which Penelope uses to overcome these points of difficulty in talk suggest effective use of the resources which she has to hand.

9.6.2. Errors and repairs: Penelope: self

Repairs are relatively infrequent in the transcripts. The researcher self-repairs and occasionally makes other-repairs. Penelope's same-turn self-repairs are discussed here. She makes no other type of repair during the transcripts. In the same-turn repair that occurs in P36c above, Penelope attempts to revise her original utterance twice. The micropause that precedes the first attempt at revision is succeeded by the filled pause ("*erm*") and then a second, longer pause, eventually culminating in successful production of the target. An interpretation of these repair attempts may lie in the apparent difficulty noted elsewhere in the study that participants have in disinhibiting production of particular forms. In some instances, the likely source of interference can be recovered from the context (cf. Mary chapter). However, in the case of P36c, the immediate context suggests no reason as to where the interference proceeds from. However, some light may be shed on this error and the subsequent repair problem, by looking at the beginning of the topic sequence which leads to P36c in P36d below.

P36d

1	P	(0.7) .hh I 'like (.) 'Noel Ed mo::nds
2	S	(1.0)ˏye::ah and [w-]
3	P	[ˏyea:]h
4	S	(2.0) I haven't 'seen ˉhim on 'telly for aˉwhi::le
5	P	(.) no:::::
6	P	(4.2) s'got medium 'sized { θm }(.) like (.)ˏsi::ze (.) 'KeithˏChegwin has (0.8)

7		[li:ke ˌtha::t]	*shows thumb*
8	S	[has ´he::]	
9	S	(0.7) ↑ˌyea::h↑	
10	P	(.)´yea:h =	
11	S	= about ˌthat ´si:ze	*points*
12	P	(.)ˌye::ss	

Penelope has herself initiated an unnegotiated single-turn topic change here in line 6. This abrupt sort of topic shift is looked at in detail again below. Our interest here, however, lies in the structure of line 6 as the topic-introducing turn. The turn pivots on the size of Keith Chegwin's thumb (*"medium-sized"*). The primary linguistic message is backed up by making an overt comparison of the size of the thumb to her own, accompanied and given emphasis by the extra-linguistic gesture of Penelope showing her own thumb. Thus Penelope introduces mention of Keith Chegwin's thumb size by making doubly explicit the connection to her own. The researcher continues the topic first initiated in P36d by asking questions which relate to the thumb sizes of other people. However, at line 6 in P36d we see that the first association between Keith Chegwin's thumb size is made by Penelope to her own. The question which elicits the response in P36c is effectively an initiation of a sub-topic within the main topic of thumb-sizes: medium-sized and big thumbs have been mentioned, now it is the turn of small thumbs. Importantly, this sub-topic initiation is made by the researcher and not Penelope. A structural connection between the repair in P36c and the turn at line 6 in P36d, where the introduction of the main topic is made, may then be the source of Penelope's problem in disinhibiting mention of herself. Penelope has perhaps associated first mention of thumb-size within introduction of that topic (or sub-topic) with mention or reference to herself. It can be seen (again, as discussed in the section on topic below) that Penelope's topic introductions are rare in the transcripts and that when this does happen the topic is always a favourite one. Conversely, it can be presumed that her other co-participants rarely introduce one of Penelope's favourite topics, these being considered obsessive and in need of supression rather than encouragement. Hence other-initiation of one of Penelope's favourite topics is likely to be an unusual situation for Penelope. The temptation to bring the initiation which has been accomplished by the researcher in P36 into line with her preferred structure may then effectively give rise to the error and subsequent repair difficulty in P36.

It is further noted that when Penelope produces the target utterance in P36c, the noun " *Dawn*" is given appropriate stress.

Same-turn self-repairs are not always so problematic for Penelope. P37a (substituting *"to"* for *"when"*) below is carried out comparatively easily.

P37a

S   (1.1) an wh- (.) ʼwhat sort of ʼthings happen (.) when he ʼdoes ʼthat

P   (.) ʼknocking on the doors (.) when-(.) to ʼvisit people (1.3) in the ʼhou::se as we:ll

Here, the error (*"when"*) is repaired in one attempt with the use of a single micropause. This time the immediate context does suggest a possibility for the source of the error: the final section of the preceding other-turn. Final component, prior-turn influence is a likely source of echoic or repetitive Penelope utterances, which can only give rise to one of a limited set of possible interpretations (see *Repetition* section 9.4. above). If Penelope's judgement is that her next-turn intention does not accord with any of these interpretations, then prior-turn influence has to be minimised. In the section on repetition we saw how Penelope is able to manipulate this type of repetitive, prior-turn influenced utterance. Penelope's intention in P37a is evidently judged to be such that it cannot be conveyed by a repetition. A repeat, manipulated or otherwise, is not pragmatically sufficient in this case.

The repair in P37a is made subsequent to full production. That pronunciation of *"when"* is complete before repair takes place, suggests a delayed self-monitoring ability. The lack of stress on the replacement *"to"* is of further interest, suggesting that, in fact, *"to"* does not replace *"when"*: *"to visit people"* does. This gives further credence to the presumption underpinning the discussion above: that the repaired " *when*" represents the beginning of a repeat of the final component of the prior turn in full, that is, *"when he does that"*. The implication is, then, that, here, Penelope is processing, both receptively and productively, in units above the single-word level, that is, formulaically, to a degree not seen in non-autistic language. Comparison with the researcher's repairs may be useful here. These are briefly illustrated by P37ai below.

P37ai

S   (.) an- (.) ʼwhat are they allʼ like (0.8) °can you ʼtell me a ʼbit about ea-°(.) ʼwhat they ʼlook like an wha- (.) ʼwhat ʼsort ofʼ people they are

The two self-repairs here both include stress on the target, despite its lack on the original incomplete repaired words. It can then be assumed that the researcher is working at the single word level when she repairs here.

Near repetitions with a prior-turn association are corrected elsewhere by Penelope as the example below shows.

P37b

1   S   (1.0) was it-(.) was it gree::n (.) or was it (1.0) got mountains on it =

2   P   = mount - (.)

3   GREEN (.) as we:ll

4   S   (.) yeah ʼgreen and ʼmountains

5   P   (.) ʼgreen and mountains as we:ll

In this sequence, Penelope begins to repeat the more recent lexeme, *"mountains"*, but curtails this and self-repairs to produce *"green"*, which occurs earlier in the prior turn (line 1). As with the two previous examples, Penelope uses a micropause prior to successful production of her target (line 2-3). The target lexeme is also emphasised with stress, increased volume and a succeeding micropause. Interestingly, the researcher does not interpret the repair successfully, as is shown in her next turn. The nucleic tone on *" and"* here suggests that line 4 is a checking utterance, with the researcher not entirely confident of Penelope's intended meaning. Penelope responds at line 5 with an echo which has reworked tone and an additional formulaic final component. Since there is no further negotiation (line 5 marks the end of this sequence), the researcher clearly interprets line 5 as concurrence with her line 4 interpretation. The repair sequence is therefore unsuccessful, despite Penelope's original self-repair. The repetition at line 5 has overridden any interlocutor doubt about Penelope's intended target.

Influence of prior other turn can also be seen in the Penelope's self-repair carried out in P37c below.

P37c

S   (1.5) and what's ˉKaren ˈlike is ˍshe all ˈright

P   (.)ˍshe all ˈright (.) she'sˍall riːght

Here, Penelope's self-repair centres around an echo of the final section of the previous other-turn. The echo is a completely faithful replica of its model, including tone, and as such forms an ungrammatical response to the researcher's question. Penelope's repair therefore appears to be syntactically inspired. The addition of the contracted copula and relocation of the nucleus turns the echo into an acceptable response to the researcher's question. Here then, the prior turn's influence has been successfully reworked to conclude a communicative event. P31c above is a further example of a repair with a syntactic basis. In this case, as documented above, Penelope's repair is unnecessary, as the repaired component is grammatical and the target ungrammatical. Repairs are then, not always well motivated in Penelope's talk.

Repetitive influence need not arise with an other turn as the source. P37d shows Penelope's own turn giving rise to a repaired error.

P37d

1   P   (0.8) n'I usually- (.) eːːrm (3.5) ˈclear up the ˈpots (.) an - ˈempty the ashˍtraːys (0.6)

2   in thoseˍbags n- (0.8) n the ˈrubbish in thoseˍbags.hhhh I ˈusually did a lot of ˈclear-

3   (0.6)ˍloading the ˈdishwasher

Once again, the target *"loading"* is given nucleic stress and is preceded by a pause. The *" clear-"* token at line 2 has stress only, in common with its model on line 1. This type of error may be termed perseverative rather than repetitive.

Finally, a repair apparently made on the basis of pronunciation is shown in P37e below.

P37e

P   .hhh I 'usually 'shell the ˏeggs an (1.7) n' I 'usually- (.) {'meʊs-}(.) {'meɪʔ 'tsəm}
        ˏscoːnes an- (0.8) 'fruit an ˏplaiːn

The target utterance is *"make"*. Neither of Penelope's attempts is accurate, however, it seems likely, taking the realisation of the tokens "make some" as ['meɪʔ tsəm] into account, that Penelope's first attempt did not include any allophonic realisation of /k/. Hence the second realisation, while inaccurate, is closer to the target than the first. Note, here that while [ʔ] is a possible allophone of /k/ in some London dialects, it does not feature as such in Penelope's accent.

Self-repairs are then, for Penelope, sparsely distributed and accomplished within the same turn (although response series discussed below could be interpreted as repairs which are carried out over a number of turns, and which arise from a perceived lack of informativeness in the original turn). They may be motivated by mismatch between form and intention, pronunciation or syntactic error, though not all pronunciation or syntax errors are repaired, and not all errors accomplish repair in accordance with standard forms. Penelope's errors and self-repairs are indicative of influence exerted by prior-other turns or structural characteristics of the context. Perseveration may lead to error and subsequent repair, as may a heightened tendency to process in units above the single word level.

9.6.3. Interaction structure and topic

Much of the talk in Transcription One is structured in adjacency pairs, with the researcher as questioner or first part provider and Penelope as responder or second part provider. This structure is instituted right from the beginning of the transcript:

P38a

1	S	well do you 'want to ↑ tell↑ me 'something about yourˊself
2	P	(1.0)ˏyeaːh
3	S	(.)ˏyeah (.) 'anything you ˏliːke
4	P	(1.2) been 'working at the 'Crown 'Court ˏrestaurant (.) on the (.) w-'wednesdays and
5		ˏfridays (1.6) I 'usually- (.) 'buy- (.) 'c.d.s (.) 'every ˏfriday (0.6) then- (.) an 'now I'm
6		'saving- (.) my: - (.) f- (.) to 'buy 'new ˏcloːthes (.) 'next ˏweeːk
7	S	(0.6)ˏright
8	P	(.) an theˏbedding (.) as ˏweːll (0.6) an the 'new˘curtain (1.1) an theˏmaːt an the
9		ˏwaːːtch (.) as ˏweːll
10	S	(.)ˊwoːːw

11	P	(0.6)´ye:s =
12	S	= loads of 'stuff
13	P	(0.7)´yeah
14	S	(1.5) n- (.) how 'long have you been, working at the (0.6) 'Crown 'Court, Restaurant
15	P	.hhh I've been 'working 'sin{s::} (2.1) e:::rrm (.) 'four 'years a'go 'since (.) 'nineteen
16		'ninety, three::
17	S	(.)´wo::w
18	P	(0.8)´ye:s
19	S	(.) n 'what d'you¯do 'there

Penelope is given the invitation to take an extended turn to talk about herself at line 1. Following Penelope's minimal response, which accepts but does not take up this invitation, it is made more explicit in line 3. Penelope sets about providing the information in line 4. Despite her misunderstanding as to the nature of the invitation at line 2 (in itself a clear illustration of the type of pragmatic confusion well-documented in the autism literature), it is still the case that both of Penelope's turns thus far have been second-part responses to the researcher's first parts. Penelope's response is continued into her next turn at line 8, with the researcher providing supportive back-channel type utterances (*"right"* and *"wow"*), inbetween and subsequent to Penelope's contributions. Penelope's next two turns at lines 11 and 13 consist of rising *"yeah/yes"* tokens, with a researcher evaluative comment *" loads of stuff"* intervening. Finally, the sequence is brought full circle by the researcher's next question at line14. The pattern of first part adjacency pair followed by response, followed by supportive utterance and/or evaluation, followed by *"yeah/yes"* token continues from line 14 until line 19 when the next question is posed. Thus the format for much of the interaction is established. Particular points of interest to note here concern the lack of necessity for Penelope to complete a response in a single turn. The question at line 19 gives rise to a 'response series' (after Zimmerman's 'interrogative series', 1984), which is continued over 4 turns. The series which begins at line 4 in P38a above is completed within a shorter frame of two turns. In lines 10 and 17 of P38a above, as well as with the response series which begins at line 19, the end of the informative content of Penelope's response is marked by the researcher uttering *"wow"* with rise-fall intonation. The turns which contribute to a response but do not complete it tend to be met with a *"right"* token by the researcher.

Thus, during the early stages of the transcription both participants contribute to a predictable structure of talk which includes formulaic-type content on both parts. The researcher's mid-response series support utterances, here realised by *"right"*, and end of informative content markers (*"wow"* in this section) continue with different realisations throughout the transcription. P38b is from a later section of the same transcript.

P38b

1	S	(.) ↑oh ˎthat's ˈgood↑ (1.1) is Meˈlissa yourˈfriendˈthenˈ
2	P	(.) ˈLissa my ˈfriend as ˎwe:::ll
3	S	(.) ↑o::h ˈthat's ˎbrilliant↑
4	P	(.)ˈyea::h
5	S	(1.3) an (.) ˈwhat did youˎ do inˎ Lanzarote (.) can you ˈtell me what you ˎdid
6	P	(1.3) e:::rm I- (.) I'veˈa:te ˈout (1.5) n' I had a sunˈbathe asˎwe:ll (0.9)n' I ˈwent for
7		a ˈride (.) ˈround the cquntrysi:de (.) as wȩ::ll (1.4) an did some ˈshopping- (.) for
8		ˈfood as ˎwe::ll
9	S	(.) ↑ˉri:ght↑
10	P	(1.6) then I had a ˈlazy ˈday on the ˈbeach ˎeither
11	S	(2.0)↑ ˈthat's ˎbrilliant ↑
12	P	(.)ˈyeah
13	S	(.) ↑ˎyeah↑ (1.4) w- was it ˎhot
14	P	(.)ˎYEAH {ts}ˎhot as ˎwe::ll =

Again, we see the researcher evaluating Penelope's previous response at line 1 before moving into the next question. Penelope's response is a single turn in length and hence is complete at line 2. The researcher's next turn is therefore evaluative. The question at line 5 gives rise to a two-turn response series which is divided by the supporting *"right"* token. Once again, the completion of Penelope's response is met with evaluation at line11, this time realised by *"that's brilliant"* .

The talk, then, is clearly question-led. Topics are moved into, either step-wise as in P38b or with no obvious connection to prior discourse as in line 1 in P38a, by the means of questions. An organizational problem then arises at the critical point between researcher evaluations and the setting of the next question. At these points we find the rising *" yeah/yes"* tokens discussed above (and found in P38a lines11, 13, 18 and in P38b at lines 4 and 12). The discourse organizational role of these utterances, often given the function of 'turn-taking' or 'confirmer' in the repetition section above, is then seen to be that of marking the points of difficulty that are bound to exist in a discourse which relies heavily on the setting of and responding to of questions. The researcher's sequential solution to these turns is to attend to the talk by making the next conversational move. This may be a clarification of her previous move, as in P38a line 3, or the setting of another question as in P38b line 5.

As mentioned above, falling *"yeah/yes"* tokens tend to have a different discourse function: that of direct response to a question; this is illustrated by Penelope's turn at line 13 in P38b.

Penelope does initiate topics on rare occasions. When this happens, the content always relates to one of her favourite topics. P39 below illustrates such an occasion

P39

1	P	oo:::h (.) do you (.) 'like e::::rm (0.9) do you 'like e:rm (1.0) whassi͜name (.)͜Keith
2	S	(0.9) 'who's͜Keith
3	P	(.)͜Chegwin
4	S	(.)͜o:::[h͜ ri::ght]
5	P	[used to]be on the͜ Big 'Breakfast
6	S	(.) o::h͜yea::h (.) I͜do 'like him
7	P	(0.6)´yea::h
8	S	(.)͜yea:h (0.9) d´you 'like him
9	P	(.) I͜li:ke͜hi::m (0.8)͜yea:h
10	S	(.) is he your͜favourite
11	P	(.) is he my`fa:vourite (1.1)´ye::s::
12	S	(.)´is he
13	P	(.)´is he (1.2)° ´he's a lovely 'ma.::n° *creaky voice - low pitch*
14	S	(.)´is he
15	P	(.)´yea:h °he's a 'very 'nice 'man͜isn't he° *slightly creaky -´nice' breathy*
16	S	(1.1) d'you- d'you`see him (0.8) have you 'seen him on anything̃ else since the
17		'Big 'Breakfast
18	P	(.) I haven't seen him- ((drinks)) I haven't 'seen him (.) for h- a::ll͜wee::k (.)
19		because 'Keith's has been͜off .hhhh but (.) he 'sometimes 'comes on (.) {ŋ
20		͜keɪʒəntli:}.
21	S	(0.9)͜aa::h͜ri::ght (.) so he's- he 'does 'still͜do the 'Big 'Breakfast
22	P	(.)`YE:::S
23	S	(1.0)´e:::hhh
24	P	(.)´yea:h

Penelope's topic initiation begins with the attention-gaining discourse device of *"oooh"* followed by a question. The typical roles of the talk are thus reversed here, with Penelope taking on the first-part enquiring position. Penelope also hedges and extensively pauses before actual mention of the topic. Neither is her mention sufficiently informative resulting in the researcher temporarily resuming the role of first-part provider at line 2. Her response is, then, actually delayed until line 6. The pattern here can then be seen to deviate from the sequences in which the researcher is first-part provider. This type of negotiation or other-repair does not take place in these contexts. Further to this, in the post-response slot where the researcher typically evaluates, Penelope inserts a rising *"yeah"*, indicative of organizational difficulty. Next-position is, then, composed of a researcher question, thus apparently attempting to return the talk to its more familiar pattern and the participants to their usual roles.

Penelope's turns are constructed slightly differently here, however. Her responses at lines 9, 11 and 13 consist of re-worked prior-turn dependent structures as a first component, with a formulaic second component. This is rising *"yeah/yes"* in lines 9 and 11 and *"he's a lovely man"* with marked voice quality in line 13 (this last item is judged formulaic by

analogy with similarly marked utterances occurring amongst the other study participants). Penelope's 'ownership' of the topic in this case may be presumed to be the cause of this divergence of pattern. The talk finally resumes its familiar pattern from line 16 onwards, with question, response, evaluation, question, response, evaluation culminating in a rising "*yeah/yes*" utterance at line 24. The token cannot take place betweeen the earlier occuring evaluation and question (line 21) as these are both delivered within the same turn. This strategy enables the researcher to sidestep the critical moment of difficulty in this unusual context.

Talk with Penelope is then characterised by a question and response format with concomitant evaluation and support. Penelope's responses may, and often are, extended over more than one turn. The researcher's role is facilitative, controlling and maintaining of the discourse. Her control over the sequencing is such that when the structure deviates from the 'norm' she works to bring it back into line in as few turns as possible. Topic shift is mainly managed by the researcher using the question and answer routines as a basis. On rare occasions, Penelope may take on the role of topic initiator. In such contexts, she too makes use of the question and answer format. This is evidently difficult to maintain and the more familiar roles are soon resumed.

9.7. Summary

Penelope emerges from this analysis as having a conversational ability at odds with her linguistic competence. Linguistic competence is restricted on a variety of levels. Speech consists of regularly occuring misarticulations, not all of which can be attributed to unfamiliarity with lexis, and in the main which can be equated with simplifications usually associated with developmentally delayed speech. Syntax is seen to be simple in its range and systemically fragile. The reliance on formulas and other-models is extensive. Undoubtedly, as is shown by the WAIS-R analysis and discussion on verb phrases, these linguistic problems may, at least in part, stem from more general cognitive limitations. Given these limitations, Penelope's communicative ability is, then, perhaps better than would be expected. She attends to particular aspects of conversational maintenance, initiates talk and self-repairs. Within the context of conversation, Penelope makes extensive use of the resources she has available to her, such that the dimensions of formulaicity and repetitiveness that exist in her language are varied, subtle and pervasive.

10. Features of Autistic Language: Comparison and Analysis of the Study Participants

10.1 Speech Characteristics of the Study Participants

The features of autistic speech as they appear in the participants in this study can be usefully divided into two types: those which do not impinge on the linguistic expression of the message and may perhaps be considered as idiosyncracies peculiar to the autistic use of speech, and those features which may lead to interlocutor difficulty in extracting the message's communicative content. These two types can be equated with the levels of informativeness and communicativeness in speech (Lyons, 1977): in the first, we are concerned with the informative level, wherein the receiver is made aware of information that the sender at no point intended to deliver, while the communicative aspect relates to the transmission of the *intended* message (Laver, 1991). The informativeness features exhibited by participants in this study and discussed below are intonation, utterance final features, voice quality, and speech rate, while speech errors are related to communicativeness.

Much early literature failed to identify speech as a deficient area in autism, focusing instead on peculiarities relating to the informativeness level, for instance, inflectional and prosodic abnormalities (Fay, 1993; Rumsey, Andreasen, & Rapoport, 1986; Szatmari, Bartolucci, & Bremner, 1989; Tager-Flusberg, 1989). While a speech deficit is by no means central to a diagnosis of autism, speech-related problems resulting in inadequate communicative expression have been documented in the literature (Fay, 1993; Rapin & Allen, 1987; Tager-Flusberg, 1981; Tager-Flusberg, 1996). This weakness in phonological expression has been accepted as deriving from retarded development and equated with processes that typically occur developmentally in the non-autistic population (Bartolucci & Pierce, 1977; Boucher, 1976). In particular, the errors that may occur in the speech of autistic individuals are not considered to be specific to autism or in any way different to those which occur in retarded populations (Tager-Flusberg, 1981). Phonological deficiencies in the participants of this study are considered below.

10.1.1. Speech errors

In common with the findings of Boucher (1976), errors of substitution, deletion, assimilation and addition were discovered in the study participants. Tina, Penelope, Gary and Phoebe all show such features, while they are not as prominent in the transcripts of Mary or Tom. When Wechsler scores are taken into account, this finding further confirms Boucher's, since the two less affected particpants are the two with relatively non-retarded profiles. The features of substitution and assimilation require further analysis, however, since their manifestation in the current study participants' transcripts is not entirely in keeping with normal developmental expectations.

10.1.1.i. Substitutions and assimilation

When these occur in normally developing populations they are expected to derive from processes such as stopping, consonant harmonising and context-sensitive voicing (Smith, 1973). In addition, processes which are operational at a level above the segment may have a segmental locus, for example, reduplication (Menn & Stoel-Gammon, 1995).

Consonant substitution is a fairly frequent feature in the phonology of the study participants. Targets (T) and actual utterances (AU) are shown below.

CH1a (Ph)

T: [wɪð 'dadiː]   AU1: [wɪɾ ˌɛɾi]

AU2: [wɪ𝑦'ɛli]

AU3: [wɪdˋdɛdi]

CH1b (T)

T: ['suʃiː]   AU: [ʃə ʃiːː]

CH1c (G)

T: [sɛp'tɛmbə]   AU: [tsɛ ̱tsɛmbə]

While all the above examples show realisations where identical segments replace different target segments, the process differs in its details to the developmental process. CH1a shows a tap realising both the fricative /ð/ and the stop /d/, the latter being acquired early in children's speech (Grunwell, 1981). The second attempt at the target (AU2) resolves the difficulty with the initial, developmentally more challenging consonant but continues to show substitution of the dental fricative. The substituted consonants in both AU1 and AU2 are neither simpler in articulatory terms nor earlier in acquisition terms than their targets. This pattern also occurs in CH1c where the affricate [ts] realises the three targets, / s, p, t /. Hence, while substitution in normally developing children is typically a 'natural process' (Edwards & Schriberg, 1983; Stampe, 1969), in that it tends to derive from phonetic motor control explanations, substitution for Gary, Tina, Phoebe and Penelope reduces neither articulatory complexity or effort, or at least not within a developmental framework.

The substitutions above resemble developmental ones, however, in that in all cases there is some obvious relationship between target and realisation: there is a conflation of manner features between the segments involved in CH1c (targets of stops and fricative; realisation by affricates), while all realisations have places which are close to their targets. A divergence from developmental tendencies is noted however, in that CH1a: AU2 shows a successful realisation of a segment with a notoriously difficult (and hence late-occurring) combination of place and manner of articulation.

CH1a-c also demonstrate the process of harmonisation. Harmonising is seen here as a more complete form of assimilation where one segment takes on the totality of features of another. From the data available here, it appears that assimilation/harmonisation works in a primarily regressive manner, with later occurring segments exercising more influence than earlier ones (this is most clearly demonstrated in CH1b). This is in accord with normal processes (Menn & Stoel-Gammon, 1995) and is illustrative of articulatory planning in advance of production. Given the autistic tendency towards perseveration, we might have expected progressive assimilation to be a feature of autistic speech. However, this does not seem to occur in the transcripts, with regressive assimilation being far more in evidence (CH1d below gives such an example).

CH1d (Pn)

T: ['wɛnzdeɪz]   AU: ['wɛdzdeɪz]

Transposition of segments also occurs occasionally:

CH1e(Ph)

T: ['lɪkrɪʃʼɔlsɔts]   AU: [lɪkɹɪsʼɔlʃɔts]

This particular variant of the target *"liquorice allsorts"* occurs on almost every occasion of its production. The item is formulaic and its consistently erroneous production can be compared to Gary's *"tickly feets"* item discussed below.

Finally, the processing constraint which gives rise to a consonant substitution may not be particularly transparent. CH1f and CH1g are examples which show substitutions which may arise from the operation of one or more process, but in fact may derive from features of the local environment in a more general way.

CH1f(Pn)

T: ['bɪəd]   AU: [ˌbɪəts̩ː]

CH1g (T)

T: ['ʌðə]   AU: <bloody> [əbə] <mushrooms>

T2(dialectally conditioned): ['ʌvə]

Ch1f shows a word final stop realised as an affricate and also devoiced. Utterance final devoicing is discussed below, in relation to segment lengthening. Here, however, the word is not utterance final. CH1g shows the substitution of bilabial stop for labial velar fricative. While stopping is a developmentally natural motoric process, it is unusual in the context of the substitutions we have seen in this study. Its explanation is more likely to derive from the strong bilabial environment (both preceding and succeeding stressed syllables begin with bilabials), as well as the shared feature of labiality between the (dialectically conditioned) target and realisation. This suggests that only in a strongly biasing environment do adult phonemic substitutions resemble developmental ones.

10.1.1.ii. Deletions

Both segments and syllables can be omitted from target productions. VS1a and VS1b (in the section on vowel substitution below) show omission of segments, as do D1a, D1b and D1c below. Alternatively, D1a may be an example of vocalisation of a post-vocalic lateral. Such an explanation would be in accordance with Penelope's regional accent. Segments may also be deleted word initially, usually in echoic utterances which have been truncated. This is not always the case as D1 below shows. Here, none of the deleted segments are initial. Vowels can also be deleted.

D1a (Ph)

T: [fɹʌnt 'kɹɔl]   AU: [fɹʌn?kɹɔː]

D1b (Tm)

T: [ðeɪə havɪŋ]   AU: [ðeɪvən]

D1c (Pn)

T: ['θʌm]   AU: [θm̩]

Syllable deletion occurs in D1b above and elsewhere in the transcripts:

D2a (Pn)

T: ['zəʊiː]   AU: ['zəʊ]

D2b (Ph)

T:['gəʊɪŋ tə ðə 'tɔɪlət] AU: [gəuntɔːlət]

Deletions are not always simple excisions: they sometimes give rise to productions which contain 'blends' of target segments as D2b illustrates. The examples above demonstrate that deletions may affect almost any speech unit in any position. Deleted syllables are generally unstressed rather than stressed, although this could be theoretically related to any number of factors ranging from perceptive deficiency to gestural underscaling (Weismer, Tjaden, & Kent, 1995). Hence, the pattern of deletions is neither indicative nor counter-indicative of a pattern of delay-type errors.

10.1.1.iii. Vowel substitutions

While consonantal errors are mentioned in the literature on autistic speech production, vowels are not. This omission extends generally to the disordered literature as a whole, and proceeds in part from the impossibility of producing vowels outside the vowel space, hence while a particular production of a vowel may not conform to dialectal or variant expectancies, it is extremely unlikely to lie outside the possibilities of normal speech (Ball, 1989). Further, vowels may vary between idiolects and varieties to a considerably greater degree than consonants (Cruttenden, 1994; Hughes & Trudgill, 1996), and are less important in the recognition of a specific lexeme, the consonants bearing most of the semantic load in this respect (Harley, 1995). The features noted in the autistic productions seen here may, then, not be specific to the study participants, nor to adult autistic language users nor even autistic language users in general, but may exist as unreported features of the

vowel productions of developmentally non-normal populations. The first vowel feature discussed here is neutralisation, which has been identified as a developmentally occurring process (Smith, 1973), and concerns substitution of a vowel phoneme by the central, unstressed /ə/.

VS1a (G)

T: ['tɛɪp]   AU: [tə]

VS1b (Pn)

T: ['ɹɛɡjulɛʊ]   AU:[ɹɛɡələɛʊ]

Note that VS1b also includes the feature of [j]-dropping. Such a substitution is of obvious benefit to its producer. The articulation requires a minimum of effort and is neutral with regard to succeeding articulatory gestures, whilst still allowing interlocutor recovery of the target. Schwa substitutions have been seen to account for a majority of infant vowel forms (Kent & Miolo, 1995) and hence are known to be a means of successful compromise between simplicity of form and facilitation of communicative intent. A somewhat more difficult process to explain is that of vowel raising. This feature occurs in all of Gary's formulaic productions of *"tickly feets"*, in Penelope's speech, [dɪsk] for the target *"desk"* being an example, and also in Phoebe's speech exemplified by the erroneous production of the target *"daddy"* at CH1a above. Consistent misarticulations also occur with Phoebe's *"yes"* tokens and, prosodically defined, Penelope's *"yeah/yes"* tokens.

The consistent misarticulations which occur with formulaic items such as *"tickly feets"*, suggest a type of preservation of form consistent with the "functionally opaque" unusual echoes in Local & Wootton (1995). Both segmental and suprasegmental features are reproduced with an unusual amount of dependence on the model utterance. Below, following on from Local & Wootton, an attempt is made to locate the functional significance of such forms within a discourse model of autistic language. These speech errors are, then, conventionalised in the autistic repertoire. Rather than suggesting difficulties which require a translation or gestural/action explanation (Laver, 1991), they relate to formulaicity in the same way that prosodic repetition in formulas does.

Speech errors which are located in non-formulaic utterances may have an explanation alternative to one of developmental delay. It has been noted that these errors only accord superficially with those that we expect in normally developing children's speech. In fact, they bear greater resemblance to the types of error associated with motoric speech disorders (for example, dysarthria and apraxia) where there is a gestural scaling difficulty (Weismer, et al., 1995). Whether such a difficulty is likely to arise from a translation-type problem (that is, essentially neurocognitive/neurolinguistic in nature), or a gestural deficit, stemming from neuromuscular or even physiological origins, is partly a matter of interpretation or theoretical interest. In fact, the data suffers from a deficiency of detail in this respect, since acoustic measures are not available. However, the critical division between speech errors

with a formulaic component and speech errors that have a more productive basis is an important issue in the study of dimensions of productivity and repetitiveness in autistic language, which has further implications in the discussion of linguistic processing in this group.

10.1.2 Segment lengthening and devoicing

Utterance final lengthening and devoicing of segments also takes place. The devoicing here is likely to arise from the unusual length of some final segments which allows normal pre-pause voicing off-set to become clearly audible (Laver, 1995). Devoicing does not occur systematically in the transcripts unless the segment in question is extended and utterance final. Devoicing of segments is therefore a function of durational aspects of autistic speech.

The lengthening of segments utterance-finally accords with non-autistic signalling of a turn-transition point (Langford, 1994). However, as the examples below indicate (DP1), often the extension of segments is in excess of what we would normally expect in this type of environment and for native speakers of British English (Laver, 1995; Smith, 1994). DP1d below shows an utterance-final vowel extension. This may occur in place of final segment extension if the final segment is not a continuant. Affrication (CH1f above is an example) is also an option if the final target segment is a stop.

DP1b (T)

ˌliːːːneʃzːːsːː]

DP1c (G)

[˘suʃiːːːːː]

DP1d (Pn)

[liːke̞ thaːːt]

Durational extension of segments in children's speech is generally associated with a maturational neuromotor hypothesis (Baltaxe & Simmons, 1985; Smith, 1994). However, the extent of segment lengthening in the transcripts is far in excess of what we would expect to 'see' in children's productions. While neuromotoric control deficiency may be an explanation, this would suggest that such a deficiency was limited to duration control only, since speech errors are not so pervasive in the data as to suggest a global motoric impairment. In fact, the possibility of a problem in neuromotoric control with relation to duration is in keeping with a perseverative cognitive profile, suggesting that duration phenomena may also have a relationship with formulaicity.

10.1.3. Intonation

The intonation peculiarities of autistic language users are well documented and have been referred to extensively above. Often, the literature is quite vague about the precise manifestation of the prosodic and intonation deficit in autism: terms such as "lack of vocal inflection" (Rumsey, et al., 1986: 776), "formal intonation" (Ghaziuddin & Gerstein,

1996: 589) and "monotony" (Fay, 1993: 199) are used, not always with further clarification. It has been suggested that marking primary sentence stress is not more deficient in autistic populations than it is in control groups, nor is it the case that intonational and prosodic peculiarities proceed from a receptive deficiency (Tager-Flusberg, 1989). While prosodic and intonation peculiarities are certainly not confined to the autistic spectrum (cf. Balan & Gandour, 1999, for example), the persistence of this feature into adulthood as well as its prevalence within the autistic spectrum population makes it a predictable feature of autistic language. Since acoustic measures are not available for the data, the discussion of these features cannot be extensive, although the implications for further research are noted.

In relation to the study subjects, the standard findings are largely reproduced: shallow intonation contours, narrow vocal ranges and odd prosody are prevalent throughout the transcripts. With the single exception of Gary, pitch movement is not consistently used to mark nucleii in tone units (Tom, Tina, Mary, Phoebe and Penelope). Tone units may also sound monotonous due to a restriction of pitch movement outside the nucleus. Intonation may also be used oddly both at word and sentence level as IP1a and IP1b show below.

Ip1a (Pn)

key ˌworker

IP1b (Ph)

go and get some ́more ́yeah

The possibility has been discussed in relation to individual participants above, that the absence of pitch contour to mark linguistic stress is compensated for by alternative prosodic aspects such as amplitude and extension of vowels in stressed syllables. This is also suggested in the literature (Lovaas, Schreibman, Koegel, & Rehm, 1970). The complete absence of any marking of nuclei is, in fact, quite rare in the transcripts. In this respect, the findings compare with those of Baltaxe & Guthrie (1987), in that identification and marking of appropriate primary stress loci does not appear to be the source of the intonational deficiency in autism. Since this is essentially a linguistic rather than an affective phenomenon, a tempting interpretation is that the observed intonation impairments have an essentially emotional source, thereby concurring with Tager-Flusberg (1989). However, the widespread occurrence of utterances such as IP1a and IP1b prevent this interpretation, since the tone errors that do occur are linguistic in nature: a high rise on clause final syllable (IP1b) is not usual in British English unless specifically marking the discourse function of checking a prior other-contribution, while compound nouns have an accepted contour to which Penelope in IP1a does not adhere.

The problem with these examples, as with others, is that the use of tone is inconsistent. Phoebe does not use high-rising tone in similar utterances in such a way, nor does Penelope consistently misplace the stress in the item *"key worker"*. This variability in use of tone

alongside fairly consistently marked primary stress is perhaps suggestive of limited productive competence of linguistic intonation. While the most overt and linguistically significant uses of tone are incorporated into speech, peripheral uses are more problematic.

Gary is unlike the other study participants in that his utterances do not show reduced or absent tone contour. In fact, Gary's use of prosodic and intonation features is more varied than is the case for any of the other study subjects. For example, the pitch range that typically accompanies *"tickly feet"* extends far beyond his usual speaking range, while prosodic resources include use of breathy voice, whisper, low amplitude and particular voice qualities associated with formulaic productions. This is not to suggest that Gary's use of tone and prosody are within acceptable parameters (Gary's speech gives the impression of being animated but odd), but rather that he attends to matters of prosodic and intonational manipulation which other participants do not. Gary uses a great deal of formulaic language ('frames' and 'frozen' sequences) and there is a strong suggestion that his data incorporates a high degree of delayed as well as the more easily apparent immediate echolalia. Since he is noted as being a competent mimic of others, it seems likely that his relatively plastic intonation relates to this ability, as well as to the high degree of modelled utterances that make up his talk. That is, the linguistic sequences which Gary imports into his talk are inclusive of prosodic features, and such 'imports' are more pervasive than synchronic analysis alone can demonstrate. A tendency to faithfully mimic intonation is not indicative of a high degree of linguistic competence: Cooper and Curcio (1979, cited in Baltaxe & Guthrie, 1987; Tager-Flusberg, 1981) and Local & Wootton have noted the association between prosodically faithful echoes and low linguistic ability. While Gary's intonation and prosody give an overall impression of a relatively skilled interactant, the degree and extent of repetitiveness in his talk suggests the opposite.

Perhaps the most significant point to consider in relation to intonation is its association with formulaic items. Tone contour can distinguish between productive and formulaic use of a lexical item (as with Penelope's *"yeah/yes"* and Phoebe's *"yep"* tokens). A dichotomy then exists here, in that often immediate echolalia is prevented from being defined as pure echolalia simply because there has been reworking of the intonation contour. On occasion, tone in echoic utterances is even sufficiently remodelled to allow for an interpretation which equates with non-autistic uses of conversational repetition (cf. Johnstone, 1994). On the other hand, formulaic utterances can sometimes be identified as such by the faithful reproduction of their tone contours.

The intonational deficit in autism is not necessarily then attributable to neuromotoric explanations, while its existence as a feature of even linguistically able subjects such as Tom makes an explanation for it based on impaired cognition unlikely. In addition, hemispheric explanations of intonation impairment, which link neatly with the emotional deficit in autism, have recently been called into question (Balan & Gandour, 1999).

On the one hand, then, intonation is a clumsy tool in the talk of the study subjects: often absent, reduced, or at odds with the linguistic message. On the other hand, it can be the only reformulated component in an echoic utterance, indicating conversationally competent repetition as opposed to minimally interactive turn-taking echolalia. A particular tone contour may also be a predictable and reliable indicator of a formulaic usage of a particular lexical item within an individual's repertoire. The issue of where intonation sits within the cognitive and/or linguistic accounts of autism is, then, one of great complexity, and apparently no nearer resolution now than before.

10.1.4. Other prosodic features

Use of peculiar voice quality is associated in the data with particular points in the discourse. Special voice quality typically marks a problematic point where the study participant is uncertain of or unwilling to provide the next conversational move: Tom uses whisper or low volume, Tina uses creak, Phoebe uses low volume. Gary's use of marked voice quality is both more diverse and more widespread than the others, and is best regarded as marking a move away from current topic. Mary, who, it will be noted, has a particularly restricted use of pitch movement in her speech, does not make use of any special voice quality at any point during the transcripts. Penelope uses creaky voice only in relation to her favourite topic, Keith Chegwin. In addition, raised volume occurs at appropriate discourse points (overlaps, utterance initially), although may be somewhat loud for normal conversational expectancies. This is in accord with other findings on intensity in autistic speech (Baltaxe & Simmons, 1985). Peculiar voice quality, like intonation, may also regularly accompany formulaic items.

Speech rate can be elevated in participants' speech. Tom, Mary and Phoebe all have occasional recourse to rapid speech, often resulting in cluttering (Crystal & Varley, 1993). With both Mary and Tom, fast speech is related to self-inititiated mention of favourite topics, while for Phoebe, to formulaic productions. In a sense, these two contexts can be equated, since extended turns on any topic are not part of Phoebe's repertoire: her reference to favourite items or obsessive interests is always in the context of comparatively low component turns, although these must be regarded in the context of the high frequency of minimal or zero responses which make up a large part of her talk. Both Tom and Mary however, use high component turns to discuss favourite or obsessive topics.

Prosody and intonation are generally considered together as two aspects of essentially the same phenomenon in discussions of autistic and non-autistic language alike, with prosody having superordinate status. This conflation is natural and holds good for the study participants insofar as there exists a similar relationship between the two and fomulaicity. However, while intonation is a complex feature in autism, the manifestation of which is strikingly similar between subjects, other aspects of prosody are variable between subjects

and have been seen to have sequential significance. Sequential significance, while normally associated with intonation in non-autistic speech, is unquestionably absent from intonational uses by these study participants.

Use of peculiar voice quality, speech rate and amplitude variation, while interesting features of autistic speech, do not present us with the same set of explanatory inequivalences that intonation does. In fact, it seems clear from the above discussion, that the former features are used as compensatory mechanisms for the deficiences that proceed from the latter. Intonation and other prosodic aspects are thus inextricably linked, with autistic language users as with others. Their separation is suggested here not as one with a realistic basis, but as a useful way to consider the different directions in which each operates. Prosodic variation can then be explained in terms of intonational compensation, with the complete prosodic unit operating as a whole and closed system. Thus deficiences in one sub-component cannot help but give rise to adjustments and re-calibrations in another. Prosodic peculiarities are then secondary to and dependent upon intonational impairment. The original question relating to the genesis of the autistic intonational deficiency does, however, remain.

10.2. Syntactic Features of Autistic Language

Interest in the syntax of the study subjects proceeds from two observations which can be made on the transcripts of all the participants: first, there are many utterances containing syntactic errors, and second, formulaicity has an interaction with structure.

While the realisations of these features are not always identical between participants, in many cases there seems to be a clear relationship between them. The discussion below attempts to provide a framework in which these related features of syntax can be understood. One of the main difficulties in the consideration of this area is that, much of the time, talk is avoided altogether by the participants. Even the most voluble has extended sequences characterised by no talk at all or minimal responses. In probable relation to this, there is also a tendency for the autistic language users to 'truncate' utterances, meaning that early occurring elements in the clause are simply excised. Since early occurring elements typically carry little new information (Bloor & Bloor, 1995), this feature does not impede comprehension of the message. In non-autistic language such a feature may be regarded as a stylistic variant or, occurring more pervasively, be characteristic of an idiolect. Since early occurring clause elements are minimally informative, they can be considered to be non-important, and hence less valid, cues within the Competition Model framework, discussed further below (Bates & MacWhinney, 1989; MacWhinney, 1987).

A further issue which arises relates to performance characteristics of non-autistic spoken language. It is not only autistic speakers who produce non-syntactic utterances or who make use of formulaic language. The burden exerted by on-line processing is evident in the false

starts, hesitations, mazes etc. that fill everyday non-autistic speech. Hence, the suggestion here is not that the syntax of autistic adults is subject to pressures qualitatively different to those of normals, but that the autistic use of syntax exemplifies the greater degree and extent to which this pressure is exerted, and the particular strategies employed to minimise its effects.

10.2.1. Syntactic errors

Without exception, syntactic errors are made by all study subjects. These errors seldom affect the communicative force of an utterance since word order is not implicated. Particular tendencies exist across all participants in telegraphising and truncating utterances (see section above). Both of these operations involve omissions; the former of function words, and the latter of early occuring items in a clause. All participants, even the more voluble, engage in minimal response routines or utterance avoidance at some point in the transcripts: syntactic omissions which do not affect the transference of message-content have an obvious relation to this feature. Omitted items may be non-head consitituents of any phrase: determiners from noun phrases and auxiliaries from verb phrases are typical. The exceptions to this are prepositional phrases where the head may be missing, and in cases where the verb phrase consists of the copula and therefore constitutes a complete phrasal omission. At the inter-clause level, omissions can also be thought of as occurring, since clause-combining may be accomplished by simply juxtaposing clauses. Once again, developmental correspondences here are hard to ignore.

Errors can occur at phrase or clause level and are more or less prevalent throughout the transcripts of a particular participant. Errors may occur in agreement between units, for example, determiners with nouns and subjects with verbs. Tense and aspect may not be marked in verbs or marked inconsistently with surrounding context. Catenative constructions may also give rise to problems. Pronouns may be marked incorrectly for person or number or have no clear antecedent. Prepositions may be erroneously used and for all participants seem to have a restricted range of occurrence; for example, Penelope only uses prepositions non-formulaically in adverbial phrases, while Tom has a preference for " *in*". Transpositions sometimes occur but less so than substitutions or omissions. Typically, then, syntactic errors involve omission or substitution of free or bound morphological constituents, and to a lesser degree, transpositions.

Despite the above, the errors made by the study participants are in fact only superficially similar to developmental ones. Even participants with relatively impaired cognition are able to correctly use constituents such as modals and auxiliaries in complex verb phrases, while developmental errors typically involve the systematic and gradually decreasing avoidance or substitution of particular morphemes, which can be related to their saliency and relational complexity (Brown, 1973). Thus, were the cause of errors in the data related to a developmental immaturity, one would expect the less able participants to systematically

avoid morphemes which are late in the acquisition process. No such pattern obtains however. Indeed, the pattern of errors corresponds more closely with those seen in agrammatic profiles. Such profiles are typically associated with a diagnosis of aphasia, in particular Broca's (Blackwell & Bates, 1995; Butterworth & Howard, 1987; Miceli & Silveri, 1989), where language is found to be halting and shows omission or substitution of functors in favour of more canonical or uninflected items (Blackwell & Bates, 1995: 228).

The 'closed class hypothesis' (Friederici, 1988; Garrett, 1992, Prather et al., 1991, cited in Blackwell & Bates, 1995: 229) suggests that it is likely that agrammatism proceeds from an output processing deficiency of closed-class items with spared underlying competence. Other research considers the performance of non-aphasics with no history of agrammatism on production and comprehension tasks when engaged in activities loading on general cognitive resources (Blackwell & Bates, 1995; Butterworth & Howard, 1987). Such studies demonstrate clear similarities between non-aphasic and agrammatic performance. These results may be interpreted within different frameworks dependent on particular theoretical perspective. In any case however, they are suggestive of a non-modular account of natural grammatical systems. This position is further substantiated by McClelland & Rumelhart's (1986) and Rumelhart and McClelland's (1986) work with neural networks, which finds that deficits with a modular appearance can arise from damage to networks without modular architechture. Hence, there is no theoretical necessity to postulate a separate grammar module, damage to which results in agrammatic performance (Elman, Bates, Johnson, Karmillof Smith, Parisi, & Plunkett, 1996). Such performance seems to arise simply from a decreased availabilty of general cognitive resources.

The kind of linguistic units which are vulnerable to omission and substitution within the studies mentioned above are precisely those which we have seen affected in the autistic research participants in this study. Likewise, the normals in the Blackwell & Bates study, as with the autistic study subjects, showed a tendency to transpose units far less frequently than to omit or substitute them. These features of agrammatism correspond to features of English, where word order is more important than inflections for determining syntactic relations. As above with the feature of truncation, the Competition Model framework enables us to interpret this in terms of validity of linguistic cues (Bates & MacWhinney, 1989; MacWhinney, 1987). In English, the less salient cue of inflection is more likely to suffer in agrammatism than the more important one of word order. This provides us with an explanation for the relatively spared communicative force of the agrammatic language in the autistic study participants. The most important cues that we use to determine syntactic relations (in the case of English, word order) are far less vulnerable to error than the less important (inflections), just as they are the first to be worked out by normally developing children. We are hence provided with an explanation for the superficial similarity between the grammar of the study participants and children, as well as accounting for the relative

success in message expression, without having to address issues of communicative competence.

In extending the Competition Model to fit with generative theories, Blackwell & Bates favour the 'trace deletion hypothesis' (Grozdinsky, 1986; Hickok, 1992) in accounting for the features of the syntactic deficit, which is appealing in that it provides a generative account for agrammatism derived from unimpaired language, within the wider context of cognitive resource limitation. While priming studies have shown that there appears to be some psycholinguistic reality to the notion of trace deletion in aphasics (Zurif, Swinney, Prather, Solomon, & Bushell, 1993), there are no known studies of autistic language users which have explored this area. The similarity in the dimensions of agrammatism between aphasics and autistic language users would seem to imply that this might be an area worthy of investigation. Trace-deletion could not, of course, offer an explanation for syntactic features of autistic clauses such as truncation, but may suggest why it appears that particular types of complexity give rise to problems, over and above a somewhat generalistic one of resource deficiency. Generatively speaking, pronouns require co-indexing in a similar way to traces. Since these are clearly problematic for autistic language users in the data as in the literature (Fay, 1971; Fay, 1979), both synchronically and developmentally, investigation of their realisation and comprehension would certainly be warranted.

A further deficiency in the output of agrammatics that has possible relevance to this study lies in the self-monitoring ability of this group (Levelt, 1989). This is a possible area of deficency which may also be relevant to output speech mechanisms, discussed above. The infrequency of repairs or overt corrections in the data suggests that both at the level of speech and syntax, self-monitoring may be faulty within autistic processing.

A cognitive resource explanation of agrammatism corresponds with the observations made of individual study subjects' performance during taxing activities such as the vocabulary subtest of the WAIS-R. Subjects with relatively able profiles and 'good' language, such as Tom, become dysfluent in these contexts. The Competition Model allows us to account for this within a framework devised for normal language, and without having to postulate a grammar impairment necessarily separate to the rest of the language module. The exact linguistic specification of the impairment is impossible to determine without more detailed investigation, in particular, of receptive competence. Since resource limitations and the linguistic details of aspects of competence are not mutually dependent, it is still possible to discuss the former without making any theoretical commitment to the nature of the latter. The different grammatical profiles of the various study participants are then dependent on two factors: (1) the amount of cognitive ability which is present in the first place, or 'resting level' of cognitive capacity; (2) the task which the study participant is involved in at the time of the agrammatism. The WISC-R and WAIS-R tests were incorporated into the study design in an attempt to measure (1). However, the problems with administering and

obtaining reliable results within the autistic group (mentioned above in individual chapters) leave us with limited confidence in the measures obtained, when they were obtained. (1) is also presumably likely to be affected by general cognitive factors such as attention, or problems in the peripheral perceptual systems such as hyperacuity. These may determine the extent of resource which is available for allocation to particular activities, over and above the ones that are undertaken to cope with predictable and routine matters on a daily basis.

The Wechsler tests have been mentioned as evidence for (2) inducing agrammatic performance. Conversation and in particular, questioning is also likely to tax the autistic study participants. Indeed, since interaction is in itself a problematic feature of autism, a baseline occurrence of errors elevated beyond the frequency of normals would not be outside expectations. This certainly conforms with the relatively informal account of syntactic errors we have noted thus far, and would certainly represent a potentially fruitful area for futher research.

10.2.2. Syntax and repetitiveness

A third factor may also have a bearing on the pattern of syntax errors: that of formulaicity, or repetitiveness. All the study participants make use of formulaic and repetitive strategies, particularly so in the context of a cognitively demanding environment. The dimensions of use, however, vary. Phoebe demonstrates repeated use of particular sentence structures in company with restricted lexis in relation to favourite topics. Mary demonstrates a preference for canonical structures, particularly in relation to the verb "*saying*". There is also an association at the clause level in her data between clause function and thematic roles. Penelope uses formulas in company with oft-used structures, and has a tendency to accomplish difficult discourse activities by using a familiar structure. Tom shows a tendency to use similar structures in relation to the same topic in different conversations. Gary and Tina both make use of frames and formulas, although their genesis is difficult to determine.

In dealing with syntactic repetitiveness, we must address an issue mentioned briefly above in relation to syntactic errors. The extent to which the study participants differ from normals has to be determined. Informal observation suggests that structural repetitiveness of the type that Tom displays may be fairly routine in non-disordered populations. Conversely, experiments dealing with verbatim recall report findings that imply a transience in memory of structure in favour of lexis (Sachs, 1967). More recent findings demonstrate a clear tendency for a syntactic structure to be repeated once it has been produced (Bock, 1986). Indeed, Bock's findings suggest that the influence exerted by a preceding structure may be greater on an utterance than that of the conceptual or ideational input which gives rise to it. This is explained in terms of heightened activation of the procedures which result in production of a structure: the more a structure is used, the greater the likelihood of its subsequent use. Such a mechanism is considered to operate both receptively and

productively, so that whether a structure is heard or uttered should make no difference to the process. It is important to note that the processes of production of syntactic forms are repeated here rather than the forms being stored in an abstract representation.

The details of syntactic repetitiveness in the data accord quite neatly with the above. A strong tendency for local context to influence structure formation has been noted in the participants, just as it was in the Bock study, as well as in Weiner & Labov's 1983 and Levelt & Kelter's 1982 work. Likewise, a specific topic co-occurring with a similar structure on each occasion of mention can be explained in terms of the conceptual requirements of the topic operating in tandem with the influence of the form of the utterance on previous mention. In this case, episodic memory may also be exerting some influence. The use of the formulaic resource effectively diminishes reliance on pure productivity and is bound to increase fluency.

The repetition of formulas (for example, "yes" and "as well" tokens in Penelope's transcripts; "yes" tokens in Phoebe's transcripts; "can't/don't remember" tokens in Tom's transcripts) is, however, different. These formulas are more like the idioms described by Fillmore, Kay, & O'Connor (1988) and to which Bolinger orients (1976). Within the framework suggested by Locke (1993) and developed further by Wray & Perkins (2000), these formulas can be understood as emanating from distinct neural mechanisms to those from which productive, analytic language proceed. Developmentally, this distinction is described by the terms 'gestalt' vs 'analytic'. While gestalt language represents the output of the 'specialization in social cognition' mechanism (SSC), analytic language proceeds from the 'grammatical analysis module' (GAM). Normal development engages the child in processes varying in dependence on each of the mechanisms, eventually resulting in an adult language in which the two establish some sort of equilibrium. This equilibrium resides in the systems' typical and default operations. Both mechanisms are simultaneously available, but, in mundane environments, involve perhaps a more extensive use of 'top-down' formula processing as opposed to 'bottom-up' grammatical analysis (Wray & Perkins, 2000: 21).

The advantage of such an account is that it places formulaic language at the heart of grammar; an aspect which is absent from traditional generative models (Fillmore, et al., 1988). The dynamic, semi-productive nature of autistic formulas is also entirely consonant with such an account. Far from being an aspect of autistic language which differentiates it from non-autistic language, autistic formulaicity can be seen as the preferential use of a normative operation. The particular features of the autistic formulas need addressing however, in that there is a clear mis-match between them and their non-autistic equivalents. This derives in part from the frequency of their occurence alongside their predictability of form. Taking the "can't/don't remember" token as an example from Tom's transcripts, it occurs 7 times in the first 118 lines of Transcription 2, as well as at intervals throughout all his transcripts. While there is obvious productive manipulation of this form, this is restricted

to, in this case, two lexical possibilities. To some extent with this case, and even more so in relation to the formulas of other study participants, lexical formulaicity is tied to a set of co-ocurring, specific prosodic features. There is also a restriction in the range of forms in the repertoires of the autistic language users, as well as an apparent identity of discourse function for many of the formulaic productions in the data.

While all of the above could be considered relevant to an analysis of non-autistic formula use, it is suggested here that together, these features suggest a certain inflexibility in the switching between the SSC and GAM mechanisms. Productivity can and does operate in autistic formulas, so that, for example, the *"tickly feets"* token can be adapted to *"tickle Malcom's feet"* in an appropriately eliciting context. However, the consistent prosodic and segmental features of the form suggest a productive limitation not typical in non-autistic repetitions of formulas or frames. Likewise, specific discourse contexts in non-autistic talk may give rise to the use of predictable formulas (*"good morning"* or *"once upon a time"* (Fillmore, et al., 1988)), but these tend to be both conventional and relatively specialised to particularly routinised environments (greetings or story-telling). Autistic formulas have been seen in the data to relate to problematic sequences of talk or ones in which the autistic language user has little interest in taking part: environments which may present the non-autistic speaker with a variety of options. In part then, autistic formulas may derive some of their characteristics from the pragmatic limitations traditionally associated with autistic language. Since Locke associates formulaicity to the SSC mechanism, this observation is entirely consonant with the notion of language in autism suffering as a consequence of restricted social ability. The converse is also possible (that the restriction is primarily linguistic), but less consistent with the data. The range of formulas and more productively-defined frames which exist in non-autistic language suggest a sensitivity to social context which autistic language-users may be unable to access. Conflation of different social situations may then lead to limitation of formulaic use. Autistic formulaic restriction may not, then, be necessarily linguistic in nature but rather social. This, in company with a lack of flexibility operating between the SSC and GAM mechanisms, gives rise to the particular manifestation of formulas and frames in autistic language.

10.3. Conversation

Discourse and conversation impairment in autistic spectrum disorders have been well documented in the literature (Baltaxe & D'Angiola, 1992; Baltaxe & D'Angiola, 1996; Miller Wetherby, 1986; Tager-Flusberg, 1981; Tager-Flusberg, 1993; Tager-Flusberg, 1995; Tager-Flusberg, 1996). Earlier studies (for example, Baltaxe & D'Angiola, 1996) tend to focus on discourse cohesion using the Halliday & Hasan framework (1976). Later work reflects the growing interest in conversation analysis of disordered talk (Dobbinson, Perkins, & Boucher, 1998; Willcox & Mogford-Bevan, 1995). The focus of analysis in this study was mainly conversational.

10.3.1. Question sequences

The subjects all exhibit problems in talk relating to initiations, turn-taking, repairs, topic shift and maintenance. Further to this, there are particular structural patterns that recur throughout the data, for example, the question-response-evaluation sequence that characterises much of the talk between researcher and participant. This pattern is reminiscent of the initiation-response-feedback sequences that occur between caregivers and children, at home as in classrooms (Ervin-Tripp & Strage, 1985; Sinclair & Coulthard, 1975), and hence can be understood as a typical sequence within talk between participants with distinct competences. These sequences are indicative of the mainly facilitative role taken by the researcher which manifests in various ways throughout the talk.

During the question-response-evaluation sequences, it is of course the researcher who provides the first part. Researcher responses are not met with evaluations from the study participants: hence study participant-initiated question sequences are dyadic compared with triadic researcher-initiated question sequences. Questions by the autistic subjects are relatively rare in the transcripts. Tom uses them occasionally to move an existing topic forward; Mary and Gary use them more frequently, in particular, lines 40 - 107 of Mary: Transcription One (29.3.95) has a long sequence of questions from Mary. The functional range of Mary's questions includes clarification, information and action requests, and as such show some orientation to earlier discourse. However, they do not typically function to *build* the discourse. Information and clarification require second part responses only and do not project more extended sequences forward into the upcoming talk, while action requests require responses entirely external to the discourse. Gary's questions also function as clarification requests, mainly in the context of clear misunderstanding between participants (lines 12 - 26, Gary Transcription One: 25.5.95). Gary also uses questions with a formulaic component (for example, "*would you arrange it for me*") which function to further the topic, and as action requests (for example, "*can we do that (.) silence*"). Tina attempts to take the role of questioner from the researcher in response to extended question sequences which have researcher initiation. However, the function of these is difficult to determine given the formulaic nature of their content. Phoebe's questions are also formulaic (for example, "*d'you know what sweets I buy n e:rr {lɪkns sɔ ʃɔtʃ*"). Since she doesn't wait for a response, their status as questions is secondary to that of formulaic favourite-topic-introducing. Penelope is alone in using a question to apparently negotiate topic introduction ("*oo::h (.) do you (.) like e.::rm (0.9) do you like e rm (1.0) whassi name (.) ,Keith*"). As with all topic introductions by the study participants, the topic in question is a favourite one. This question may also have a third part evaluation ("*(0.6) yea:h*"). However, it will be noted that this is realised by a formulaic rising "*yeah*" token. The interpretation of it as an evaluation can, then, only be tentative.

Study participant questions are, then, infrequent, dyadic and limited in functional range throughout the transcripts. With the exception of the two more able participants, Mary and

Tom, they rarely cohere to prior discourse, neither do they typically move talk forward: they are most usefully characterised as'closed exchanges'(Willcox & Mogford-Bevan, 1995) which show little cohesion to surrounding talk. This absence of contingent talk is noted as occurring in young children (Keenan & Shieffelin, 1976), younger autistic children (Tager-Flusberg, 1993) and language impaired adults (Perkins, Body, & Parker, 1995) and is also relevant to topic, dicussed further below. Function may also be complicated by issues of formulaicity and favourite topic introduction. The lack of questions to negotiate topic introduction is also particularly noteworthy. The single instance in which Penelope does this accords with other relatively co-operative features of her talk, for example, low tolerance of extended pauses, and marks her as conversationally distinct amongst the study subjects. Topics are far more often introduced formulaically or with declaratives, neither of which demand a high degree of linguistic sophistication (Johnston, 1985; Willcox & Mogford-Bevan, 1995). This is perhaps most surprising in relation to Tom, whose productive language is suggestive of comparative competence, but perhaps serves to emphasise the division between conversational and formal linguistic ability.

By comparison, researcher questions are frequent and facilitative. They are used to present new or ancillary topics for talk or to maintain ongoing topics. Often the responses made by the study subjects are minimal, formulaic or absent altogether. The intended function of maintaining and furthering talk is hence not entirely successful. Indeed, as the analysis of researcher questions in relation to Tom's transcripts indicates, questions do very little to maintain a study-participant favourite topic. Often then, researcher questions also form closed exchanges, despite their intended function.

10.3.2. Topic

As mentioned above, negotiated topic introductions are exceptional in the transcripts. Topics are typically introduced abruptly (usually within a single study participant turn) and often have some formulaic component. The researcher, in keeping with the facilitator role, invariably accepts the topic and attempts to maintain it using questions and supportive back-channel utterances. Topics which are introduced by the study participants are invariably favourite ones, typically reflecting an obsessive interest, for example, sweets and drinks for Phoebe; Keith Chegwin for Penelope. A circular topic movement is noted in Mary's talk, whereby there is a stepwise movement away from the favourite topic which is then abruptly re-introduced. In fact, this same pattern occurs with all the study participants to some degree, in that the same topics are re-introduced throughout the conversation. The notion of circular topic movement does not seem appropriate where participants contribute little to the content of the intervening talk, however. Only Gary seems to demonstrate a comparable circularity, with the re-introduction of the Duncan Novell topic in Transcription Two (23.8.95). Frequent re-introduction of topics is noted in the literature on language-impaired children (Edmonds & Haynes, 1988) as well as in adults with acquired disorders (Perkins, et al., 1995). Topic bias is also a recognised feature of autistic language (Frith, 1989a). The

data shows a clear link between topic and formulaicity which may arise from a natural association between a given topic and similar language (Perkins, 1999). Memorized sequences enable a speaker to maintain fluency, and are especially likely to occur when a speaker is on familiar ground (Pawley & Hodgetts Syder, 1983). Formulaicity in relation to familiar or over-used topics is, then, certainly not a distinct feature of autistic language. Instead it is likely to be a characteristic of all language. Undoubtedly the extent of formulaicity may vary between speakers as a feature of style (Pawley & Hodgetts Syder, 1983) or between situations of language use as more or less appropriate (Perkins, 1999). However, the specific dimensions of formulaicity in relation to topic in autistic language are worthy of further investigation. The analyses of structure of preceding discourse leading up to favourite topic initiation and the issue of syntactic repetition in favourite topics are particularly interesting.

10.3.3. Turn-taking and repairs

Turn-taking rules are not always regularly observed in the data, in accordance with the literature on conversational turn-taking in autistic children (Fay & Schuler, 1980; Tager-Flusberg, 1989). It has been noted above that questions are not always responded to by participants, giving rise to extended pauses. In particular this is a feature that characterises the talk of Phoebe and Tina. While the more able participants make use of formulaic and minimal responses (for example, "*don't/can't remember*" in Tom's talk) or truncated utterances, Phoebe and Tina do not always acknowledge the contingent nature of questions, which leads to repetition or rephrasing of researcher question forms. Mary's data shows apparent non-contingent utterances which in fact are responses continued over more than one turn, suggesting that turn-taking rules and the researcher's right to complete a turn are given secondary importance to her own utterance completion. This may be considered to be a type of self-repair. Penelope too may complete utterances over several turns, giving rise to a response-series. Flouting of turn-taking conventions is most easily explained in terms of lack of awareness of the rules of talk (Johnston, 1985), which in this instance is likely to be related more specifically to a lack of awareness of interlocutor needs and rights. There is an obvious connection between this and the autistic deficiency in ascribing intentions and beliefs to others (Tager-Flusberg, 2000).

Overlaps and latches in the study participants' data do occur, though never with a supportive function, as is the case with the researcher's utterances of this type (Fey & Leonard, cited in Edmonds & Haynes, 1988). The study subjects' overlaps and latches are generally relevant to the talk and may cohere to their own prior turns or to the researcher's current or prior turn. With the exception of Tina's repetitive episodes, overlaps or latches rarely involve abrupt topic-changes: these tend to follow extended pauses.

Self-repairs are relatively infrequent in the data. Tina and Gary do not respond to the researcher's expressed difficulty in comprehension. Phoebe does attempt to make phonetic

revisions in response to overt interlocutor difficulty. Clarification requests made to Gary and Tina may be ignored or result in repetition of the original utterance. Mary, Penelope and Tom all respond to clarification requests or other-initiated repairs, although these are not always successful. On-line self-repairs are rare but do occur with the last mentioned participants. None of the study participants make clarification requests of their own, however, nor do they ever initiate other-repair even in the context of intelligence-test administration, where instructions may be complex or difficult to understand.

10.3.4 Conversation summary

Conversation analysis of the study participants confirms the literature findings on this topic. Connection to the discourse is relatively weak, corresponding to the tendency of high-functioning autistics to use more phorics than non-phorics in their talk (Fine, Bartolucci, Szatmari, & Ginsberg, 1994). The interpretation of this observation is that autistic speakers refer more frequently to the outside world than they do to the discourse. As with other studies (for example, Baltaxe & D'Angiola, 1996), the Fine et al. study found that there were few references in autistic language; Asperger's study participants used more references, but these were often unclear. This backs up the observations in this study, where the single Asperger's participant seemed far more competent both linguistically and conversationally, but in fact made many syntactic errors relevant to discourse cohesion, including referential ones. The comparative infrequency of endophor may relate to the use of truncation in the data, since truncated items are early clause elements. This is the most likely position for 'given' information (Bloor & Bloor, 1995) which, by its nature, is more likely to have endophoric realisation. Confusion with endophoric reference may also be related to a difficulty in *establishing* what is given and new information in a discourse context: this is a feature that has been noted in the language of autistic children (Ball 1978; Baltaxe 1977; Fine et al 1994, cited in Tager-Flusberg, 1996: 126), thus continuing difficulty relating to the manner in which given and new information can be encoded within a discourse (that is, referentially) may be presumed to continue into adulthood.

The utterance structure of the study participants is also noted as being relevant to lack of connectivity in the discourse. Few utterances requiring second parts, such as questions, are found: declaratives, with only a weak relation to the surrounding talk and especially to interlocutor contributions, are considerably more frequent than other types of structure in the data (Willcox & Mogford-Bevan, 1995). Even when questions are used by the study participants, a response is not always waited for, indicating that the interrogative function is not primary in such circumstances. The absence of language to elicit response, verbal or otherwise, is also noted in the infrequency of directives in the study participants' data. Only Gary attempts an imperative and needs considerable researcher interpretation before understanding is reached and the requisite action is performed.

Throughout the talk, there is, then, a heavy reliance on the more competent speaker to direct, interpret, repair, maintain and initiate topics. Such is to be expected with less able language-users, whether they are children, language impaired adults or second language learners. Adults with conversational impairment or autism are distinct within this group, in that their impairment in these functions is likely to derive from deficient purpose in talk (Johnston, 1985). Autistic children have been noted as confining communicative functions to instrumental and labelling, while relative paucity exists in the more social functions of language (Tager-Flusberg, 1996). Normally developing children have an impressive conversational competence by the age of five years (Johnston, 1985) related to a growing awareness and concomitant development of illocutionary force (Austin 1962, cited in (Johnston, 1985). Indeed, even prelinguistic infants demonstrate a wide range of communicative functions (Tager-Flusberg, 2000). Deficient or limited range of purpose in talk may also account to some degree for recurrence of favourite topics, as well as entailing a certain amount of repetitiveness and formulaicity.

The pragmatic deficiency in autism has been widely documented. It is often explained in terms of a theory of mind deficiency (Baron-Cohen, Leslie, & Frith, 1985; Bishop, ; Frith, 1989b; Happe, 1994; Lord, 1993; Meltzoff & Gopnik, 1993; Ozonoff, Pennington, & Rogers, 1991a; Ozonoff, Rogers, & Pennington, 1991b; Tager-Flusberg, 1993; Tager-Flusberg, 1996; Tager-Flusberg, 2000). A further suggestion here is that notions of emergent grammar (Hopper, 1992; MacWhinney, 1999) may prove useful in coming to an understanding of the conversational impairment in autism. Emergent grammar places discourse at the centre of language learning, proposing that grammatical categories arise from discourse requirements. This proposal applied ontogenetically effectively ties the conversation impairment in autism to the high occurrence of syntactic errors, such that the latter are dependent on the former. Deletion of early occurring clause elements may also figure in such an analysis in that, as mentioned above, these elements tend to correspond to given information and constituents which are of less importance in transmission of the message of the clause. The issue of emergent grammar is discussed further below.

11. Conclusion

The theme of prosody and its relationship to the more purely linguistic deficit in autism has long been a preoccupation of the field. This study has shown that the prosodic systems of all the adult study participants demonstrate peculiarities. The possibility of the source of such problems being more or less motoric or neurolinguistic in origin (that is, is it the fault of the planning of the program or that of the enactment of the program as it is carried out by the effector system) have been briefly considered above. Whatever the cause, there seems to be a tendency for the prosodic system to act as a single integrated system, in which deficits in one component (for example, tone contour), may be compensated for by another (for example, amplitude). The deficiencies that seem to exist throughout the system are then not necessarily all of equal status. If this model is accepted, then the tone deficit presents itself as the most likely candidate for primary source and that which triggers compensation by the other components. Tone contour is the favourite contender here for two reasons. First, it is mentioned so consistently in the literature as a feature of autistic language; secondly, while the research participants differ in their prosodic abnormalities so that some use whisper or low volume, while others typically extend vowels, all consistently exhibit peculiarities of tone. For all but Gary, this can be summarised as a narrowing of vocal range and inconsistent marking of tone-unit components.

An interesting corollary of this feature lies in linguistic planning. Tone units have long been reckoned to be the units in which speech is planned (Boomer & Laver, 1968). If the tone unit structure is so compromised in autistic language users, there is surely an implication that planning of language may be affected. The only way that these two features could both be impaired, such that planning was not affected, would be if the tone deficit stemmed from an essentially affector or motoric problem. The compensatory activities of the other prosodic elements, however, suggests that this is unlikely for two reasons. Firstly, the compensatory mechanisms are different between participants, suggesting an absence of 'natural' reaction to a physical distortion of action; secondly, nuclei are almost always marked prosodically in some way; if the distortion were motoric in origin, marking nuclei would be a matter of chance. Further, the consistency with which nucleii are marked, albeit non-conventionally, suggests a phonetic rather than phonological deficit in prosody. Hence it seems likely that the tone deficit and planning may be related. The direction of the causality cannot however be sensibly hypothesised here. Neither can the exact location of the postulated planning deficiency be specified. However, the analysis that has been made of syntactic errors suggests that a deficiency is unlikely to exist in clause composition since word order is generally not a problem. The existence of blends in the data suggests a monitoring deficiency, while unrepaired errors suggest problems in feedback mechanisms. However, function words are also consistently accompanied by errors in the data,

suggesting difficulties at a quite different level. These may or may not be related to the tone unit deficit however.

Locke (1998) warns against "theoretical adventurism" in seeking a single unitary cause in any developmental language disorder, as there are so many predictive factors which apparently correlate with a later-developing language disorder. Delays and deficiencies in "vocal mimicry, joint attention, volubility, play, social communication, babbling" (ibid: 236) have all been related to later language delays in children. Since all but the last of these are known to be impaired in autism, language is almost bound to be affected. In particular, this study has shown that the more voluble research participants, regardless of IQ measure, are more likely to attempt complex productive structures than the less voluble. Clause combining and complex verb phrases may only be achieved by strategic recourse to formulas or preferred linguistic items, themselves chosen from a limited set, but the end result is effective communication. Communicative intention cannot always be said to have been carried out by the less voluble, whose productive utterances are seriously restricted.

Locke's GAM and SSC mechanisms (Locke, 1993; Locke, 1994; Wray & Perkins, 2000) accord well with what we know of autistic language development. In this framework, echolalia may proceed from an over-reliance on the SSC module so that the operation of the GAM may be delayed in operation. The delay in the onset of productive language may stem from an inadequate amount of stored SSC derived formulas. The limitation of extent of stored formulas could proceed from the conflation of social situations in which they may be used. The social deficit also explains the reliance on echolalia in the first instance. Given an inability to determine which are the important social situations, the autistic child instead relies on contexts which *seem* to be meaningful. Thus, those utterances which co-occur with incidents which stand out from the normal run-of-the-mill may activate the SSC (Kanner's famous *"don't throw the doggie out the window"* example being a case in point). Oddly, the opposite situation may also activate the SSC: routinised activities, since language in these situations is likely to be predictable and derive meaning through repetition. The autistic child, unable to achieve the requisite level of social competence thus clutches at straws, and imports sequences with varying conventional interpretation possibilities into their store. The GAM comes into play between 20 and 30 months in normal children, making the formulas available for analysis and subsequent re-synthesis into novel productive units. However, since the trigger is a large enough body of formulas, there is likely to be a prevalence of autistic children with little or no productive language well beyond this age, unable to operate the GAM because of a paucity of input material from which it may generalise. This delay in operation of the GAM and concomitant early upset in equilibrium may be sufficient to pre-dispose the adult autistic language-user's to their characteristic rigidity and dependance on formulas and frames. The difficulty in making use of context is critical in the process, since it both increases the likelihood of the initial

selection of a formula being idiosyncratic, and restricts the on-line fluidity, which makes non-autistic formulas so difficult to disentangle from productive language.

There is, then, a dimension between productivity and formulaicity in autistic language as in non-autistic. These dimensions are however, different, and critically so in determining what makes autistic language appear to be impoverished. Inefficiently calibrated SSC and GAM mechanisms may also go some way to explain the apparent syntactic limitations we have seen in the data, such as the reliance on a limited set of prepositions.

From a performance perspective, the Competition Model (Bates & MacWhinney, 1989; MacWhinney, 1987) may also enable insight into the linguistic features of the data presented here. This model is closely associated with a functionalist perspective on language development (as well as evolution and processing), in which cognition provides a basis for linguistic universals and quantitative analyses of language are used to explain qualitative variation (Bates & MacWhinney, 1989: 6). Importantly and converse to Locke's model described above, the Competition Model hypothesises no special dedicated language module. Indeed modularity on a grand scale is eschewed in favour of a more interactive mode of processing. Thus language arises in the model as an outcome of perceptions and functions necessary to human activity and experience. As Bates and MacWhinney say:

> there are certain basic categories of perception and thought that all natural languages must deal with at every point in their history: principles of motion, space and time, and principles of human action and intention. All natural languages have had to evolve some means of encoding distinctions among objects, qualities and events, modes of organizing events in time and space, human attitudes about those objects and events, and human attitudes toward one another. They have also necessarily evolved ways of encoding functions inherent in the communication process itself, that is, the identification of referents, the establishment of a given referent as a discourse topic, the process of making points or comments about particular topics, mechanisms for shifting and/or subordinating topics, and devices that help to create cohesion across the discourse as a whole.
> (Bates & MacWhinney, 1989: 6).

Within the data, as in the literature, we have noted the prevalence of discourse and conversation impairment as well as impairment at all linguistic levels. The Competition Model gives discourse a central role in language evolution and acquisition, since this is an important source of functions onto which forms will ultimately be mapped (Bates & MacWhinney, 1989: 51). What these forms are likely to be is related to cue validity in the model, that is, how salient a cue is in the environment of the language learner. Bates and MacWhinney explain cue validity in terms of cue availability, reliability and conflict validity. These are related respectively to how frequently a cue occurs in the learner's environment, how sound it proves to be when relied upon for an interpretation, and how often two or more cues conflict (Bates & MacWhinney, 1989: 41). As with the Locke model above, the autistic difficulty in interpreting the important cues in an environment is likely to cause mapping difficulties in this model. Bates and MacWhinney argue for an innate sensitivity to

quantitative factors in language, such that children take note of and focus on frequently occurring constructions in an environment. When these are found to be reliable and have low conflict values they become the forms on which the appropriate functions are mapped. For the autistic child determining which cues to focus on may prove difficult. This combined with a paucity of functions (due to the social impairment) makes the process of form to function mapping a difficult task for the autistic language learner.

An interesting issue arises here as to the documented functional nature of echolalia. Just as the literature ascribes functions to echoes in autistic children's language, the study data has shown that some formulas in adult language may also have a functional nature (for example, indicating an unwillingness to converse). These utterances may be representative of attempts to find appropriate forms on which to map functions. In this framework, early echolalia may even be perceived of as functions which exist with no specified form; that is, the autistic child uses the most available form (an immediately preceding other- utterance) to encode a function, due to a circumscribed ability to extract from the environment form-function mappings that are conventionally appropriate and acceptable.

The study data has also shown a tendency to use self-models in repetitive utterances as well as other-models (echolalia). For some study participants the use of self-models is far in excess of other-models. Indeed, while some participants rarely use other-models (for example, Tom), all the participants make use of formulas and self-models. The use of self as a model can be analysed further into the use of formulas and the use of immediate context. Formulas are considered to be self-modelled despite their possible genesis as other-models, because they are now apparently part of the participant's own repertoire, and are not dependent for production on other-contributions. The formulas which recur in the participants' transcripts may be marked in the discourse (for example, *"tickly feets"*), with a limited connection to the surrounding talk. Such utterances may be indicative of the next stage of mapping after the use of echoes. Here we see function-carrying forms chosen which are conventionalised in the autistic language user's repertoire, though not necessarily in the context of community-wide usage. The formulaic forms may be of a sufficiently general nature to perform the requisite function (such as Tom's *"I can't remember"* and Penelope's rising *" yeah"*), or markedly idiosyncratic (Gary's *"tickly feets"*). Whatever the case, these are forms that have been chosen as sufficiently salient by the participant to operate as functional carriers. The degree of mismatch between these formulas and their conventional functions is likely to be determined by the degree of social deficit as well as the degree to which the environment presents itself as confusing to the autistic language user. While non-autistic language users have many-to-many form-function mappings, the extensive use of formulas in the data suggests that autistic language users may operate with a limited number of formulas.

The local context also provides a basis for repetition. This type of influence is much more closely allied to normal linguistic processes, as has been discussed above. However, I would suggest that the data warrant comparison with non-autistic talk of a similar nature, since a likely hypothesis is that the extent and type of influence of local context may be different with autistic language users than is the case with normals. Whatever the case, the use of formulas, local context influence and other-modelling all combine to present language which appears to be impoverished. While these factors are all present in non-autistic language, their particular realisations and situational contexts in the data give an overall impression of oddness.

Repetition and formulaicity in adult autistic language is then complex and pervasive. Echolalia appears to exist to a limited extent, and occurs particularly in the repertoires of the less able study participants. The environments in which it appears suggest that the range of functions indicated in Prizant and Duchan's (1981) work require broadening when applied to adult language. Likewise Howlin's notion of the disappearance of the phenomenon at a verbal age of three years seems to be challenged by the study findings. A further suggestion from the data is that, rather than echolalia existing as permanently holistic chunks, it has the potential for future analysis and re-working into more productive units. The case for echolalia being an instrument in syntactic structure acquisition, whilst not being borne out by research into children's echolalic utterances, remains contentious. In particular, the amount of variation in the types of repetitiveness suggest that it may indeed have some role in autistic language acquisition, albeit not a simple one.

The data also seem to favour an amodular account of autistic language. This study has examined neither lexis nor semantic aspects of autistic language, but the occurrence of difficulty at the levels of phonology, syntax and discourse for all study participants suggest that the linguistic systems of adult autistic language users are globally impoverished. A more pivotal role to discourse and conversation in linguistic acquisition and processing is suggested both by Competition Model accounts of language acquisition and use and Locke's model. Neither of these models were principally devised to explain atypical language development though Locke's model does orient to this. However, both are removed from traditional generative accounts of language development which emphasise the independence of linguistic levels as well as language from other cognitive and social processes. The data presented in this study suggest that there is an interaction between linguistic levels in the form of global impairment. Suggestion has also been made that explanations of language acquisition and development which derive from social and cognitive factors can be helpful in understanding how such global impairment may have arisen. Importantly, within these frameworks, autistic repetitiveness can be understood as not wholly unlike normal repetitiveness. The critical difference between autistic and non-autistic language instead resides in the importance of forms of repetitiveness as the main

bootstrap into language and as a processing strategy in on-line tasks for autistic language users.

This study has by necessity focused on performance aspects of productive adult autistic language. As such, questions have arisen which cannot be sensibly addressed here but whose answers are of critical importance to the interpretations offered above. These questions have been acknowledged throughout the study and promising further areas of research identified. The receptive competence of the study participants has not been investigated, neither has a great deal of detail been possible in the linguistic analyses. Nevertheless, the analysis has allowed us to note similarities between participants with greatly differing cognitive and social profiles. Critically, and even taking into account interference from performance factors, we have noted that the linguistic impairment is extensive and persistent in autistic language users. The role of repetition is apparently also critical in the language of this group and suggestive of flaws in acquisition mechanisms and on-line processing facilities. Conversely, the robustness of language must also be acknowledged here, since while impairment is pervasive, developmentally as well as synchronically, communication between autistic and non-autistic co-participants is, for the most part, achieved.

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APPENDIX ONE
Transcription Conventions

Based on Psathas (1995).

Emphasis is noted by <u>underlining</u>

Sounds that are **stretched** are indicated by **colons**: eg stre:::::tch

Cut off sounds are indicated by a **dash**. For example: la- or bu-

Pauses are given in brackets in seconds and tenths of seconds eg **(1.2)**

Less than 0.5 second is shown by **(.)**

Brackets [   ] indicate **overlapped speech**
        [   ]

No interval (latching) is indicated by **equals signs** = at the finish and start of two speakers' talk. This sign can indicate continuation of one speaker's turn when the transcription splits it up.

Marked tone shift (rise or fall) is shown by **arrows** around the relevant words: ↑word↑ or ↓word↓

Loud volume is indicated by **CAPITALS**

Quiet speech is indicated by ° symbol around the relevant words

Out breath indicated by **hhhh**

In breath indicated by **.hhh**

Laughter or crying is **(hhhh)**

Anything in doubt is in **single brackets** (like this)

Empty brackets mean **no hearing** could be achieved ( )

Double brackets indicate material that is **not transcribed** ((sniff))

{Curly brackets} indicate that the words inside are transcribed phonetically

A line of horizontal dots indicates **missing sections**

....

Italicised speech in lower font indicates that the right hand side of the transcription should be referred to for further explanation of the speech. For example:

T   I want my book *back*   *creak*

Italics on the right hand side of the transcription may also contain extra-linguistic information. For example:

Tm   don't know   *while copying from a peg board*

Phonetic diacritics are used to indicate tone movement as follows:
high rising tone
low rising tone
high falling tone
low falling tone
level tone
sentence stress

The IPA use of : indicates vowel or consonant lengthening

APPENDIX TWO
Appendix 2.1
Tina
Transcription One: 29.3.95

S= Researcher

T= Tina

C=Careworker (Cindy)

1	S	rj ght (.) we're sorted no w
2	T	(2.2) when can I 'earn more 'lines (0.6) Sushi e::
3	S	(0.5) 'when can you 'earn more whát
4	C	(.) 'when sh- can (.) 'when sh can she [ea rn it .]
5	T	[when (.)] am I gonna earn more
6		li ::ne{z::s:: } =
7	S	= ea::rn more 'lines
8	T	(0.8) I'd like to have a pi ece (0.5) {s::(.)ʃəʃɪ::}
9	C	(0.4) she- (.) 'Sue- (.) 'Sue(.) dun't like you tạlking like 'that for a stá ::rt (0.7)
10		'talking si lly (0.9) I'll keep 'them the re wi me (1.4) ri::ght (0 .7) you have a
11		nice conversạ tion wi 'Sue
12	S	(2.3) I'll 'bring you some 'more next time I co me
13	C	(2.0) i - if you're go od
14	S	(1.0) if you're go od
15	C	(.)'ye ah '
16	T	(0.4) I should think you jolly well wi ::ll
17	C	(.) 'talk pro perly::
18		(1.3) sound fu nny (1.0) don't bri ng her any if she's 'talking like 'that 'Sue
19	S	(1.7) '[ri ::ght]'
20	C	[you've] got to-
21	S	(0.3) what's thi s (0.3) [tell me] what's e re =
22	T	[don't yer] = don't you dạ re 'urt er '
23		fa:::ce *stroking S's face*
24	S	(0.6) don't I whát
25	C	(.) she'll get cró::ss
26	T	(.) DON'T YOU DẠ RE 'URT ER 'FA:::CE :: =
27	C	='take it -'(.)
28		['Sue'll 'take that] bo ok off yer
29	S	[is that what-]
30	T	(0.7) 'don't you 'dare ↓'what her fạce↓
31	T	(.) don't you dạ re 'urt er 'fa::ce::

32	S	(.) 'what's she sa͜y
33	C	(.) don't you 'dare 'urt er [fa͜ːce]
34	S	[a͜ːːːh](.) rjːːght
35	T	(.) ↑don't you da͜re 'urt my 'faːce:: ↑ (.)
36		['Sushie (.) ↑don't you da͜re]↑ 'urt my ↓'faːce:↓
37	S	[don't you 'dare u͜rt my 'face]
38	S	(.)'what's these pi͜ctures about (.) ['Tina]
39	T	[when::] (.) when:: (.) can we have a ta͜ pe
40		on 'Sushie::
41	S	(.) we'll li-(.) we- (.) d'you want to li͜ sten to it (.) 'after we've do͜ne it
42	C	(.) if you 'talk pro͜ perly she might 'put you a ta͜ pe 'on
43	S	(.) an it'll be yo͜u:: (.) you'll be able to 'hear [yo͜u]
44	C	[if yer] 'talk pro͜ perly (1.0) can
45		you se͜ e 'tho͜se(.) going ro͜und (0.9) lo͝ok =
46	S	= ↑lo͜ok ↑
47	C	(1.5) are you gonna si͝ ng =
48	T	=.HHHHH (.) yeah
49	C	(.) ' sing a so͝ ng
50	S	(.) don't 'put it so clo͜se(.) 'put it a bit further awa͜y(.) otherwise you won't be
51		able to he͝ ar it
52	C	(.) 'watch er get ele͝ ctrocuted
53		....
54	T	((sings))
55	C	↑yo͜u-↑ (.) ↓ I 'ope I didn't 'ear a ['swear wo͜rd] ↓ the͜n
56	T	[.hhhhhhhhh]
57	T	(0.6) ↓no.͜:yer 'bloody well didn't ↓ *creak*
58	C	(.) 'that was a'nother o͜ne
59	T	(.) *you 'bloody ['well] 'did no͜t* *creak*
60	C	[RI͝GHT]
61	T	(.) *you 'bloody 'well did [no͜t]* *creak*
62	C	[I'll] 'tell you 'where the͜ se are 'going
63	T	*no*:::::::::[::]::: *creak*
64	C	['this one's 'going in bi͜n (1.6) ri͜ :ght]
65	T	(1.0) *no*::::::: [:::::::::::::::::::::::::::::::] *creak*
66	C	['yes it j s (0.7) ↑shall I put it i͜ n ↑]
67	T	(0.7) *no*::::::: (0.7) *no do͜ :n't* = *creak*
68	C	= ri͜ght
69		(1.3) 'speak 'properly th[e͜n]
70	T	[I a]m going to 'start an beha͜ve *creak*
71		(2.2) *I don't 'want it to go in the bi͜n ((2 sylls))* *creak*
72	C	(1.2) 'gone [in bi͜n 'now]

73	T	[((inaud))]
74	C	(1.1) ↑no↑ (.) yer not aving it (.) yer not -(0.6) not taːlking 'properly
75		it's 'gone in the bin (.) 'sit 'properly up to table
76	T	*(.) Sushieː(.)I would like to have it ' back (.) 'sorry* *creak*
77	C	noˊ (.) 'pull your chair up to the (.)[table]
78	T	*[Sush] ie(.) I would 'like to have me 'book*
79		*back (.) Su 'shieː* *creak*
80	S	(.) 'tell Cindy- (.) 'tell Ci`ndy (.) 'tell Cindy
81	C	(2.7) she can't have it back (.) till you t'alk [properly] =
82		[(((*loud bang*))]
83		= ↑ooːːh↑ (1.5)
84		till you 'talk properly
85	T	*(.) pleːase may I have it back pleːase 'Sushiːe* *creak*
86	C	(1.0) ↑noːː ↑(.) you're not (.) [talking properly]
87	S	['tell Cindy]
88	T	*(0.9) pleaseː may I have it back aunty Ciː[ndyːː]* *creak*
89	C	↑[noː] ↑ (0.6)
90		you won't talk 'properly =
91	T	*= eeːːaaːːh* *creak*
92	C	(.) you've lost it 'now =
93	T	*= aaːːːːːː{ːːh]* *creak*
94	C	['wh]en you talk 'properly (.) you can
95		ave it 'back =
96	T	*= eeːːaa h (4.4) I am sorry Mrs Aunty Ciːːndy* *creak*
97		*(1.6) I am sorry Sushieːː* *creak*
98	S	(0.9) dˊall right
99	C	(0.5) 'Sue'll 'work with someone else (.) if you don't 'talk [properly]
100	T	[oːːːːːːh]
101		*like my 'back* *creak*
102	S	(1.2) you would 'like what sweeth[eart]
103	T	*[I'd] like { waː waːːk}* *creak*
104	S	(.)↑ you would like (.) my back ↑
105	T	*(0.6) Iːː would liːke myː boːoːk 'noːw* *creak*
106	C	(1.1) she'd 'like er book 'now
107	T	*(.) ee ːːːːaɑ h* *creak*
108	C	(0.8) ↑well I'm sorry you 'can't have it baːck (.) till yer ['talk properly] ↑
109	T	[I would] like
110		*to { biː aɪːvː }* *creak*
111	C	(1.2) you're not behaving 'talking like that a-(.) are yer (3.0) so yev lost yer
112		'book now an't yer
113	T	*(1.2) I would like to behave (.) vi 'sitin* *creak*

114	C	(1.4) 'talk [pro perly]
115	S	[vi `sit] ing =
116	T	= *I would like to [behave (.) vi sitin (.) I*] *creak*
117	C	['no 'jigsaw at half past thre e]
118	T	*would like to be 'have(.) at vi ˇsitin* *creak*
119	S	(.) 'what's your ji `gsaw about (0.9) you doing a ji ˇgsaw this 'morning
120	T	(3.4) *I've told Steven (.) to go on out of his bloody { əfə }*
121		*mushroo ːɟ ːm { zzssː }]* *creak*
122	C	['no swea ː]ring I 'said(.)
123	T	(.) *I aven't (.) 'told Ste ven to go out of his bloody { ə ɾə }* *creak*
124		*'mushroo ːːm { ssː }* *creak*
125		(0.7) *roo ːm { sː }s ((2 syllables))* *creak; descent on pitch final syllable*
126		(0.8) *ro o ːːɟ ːːː]ːː ːːm ː{ s ːː }* *creak*
127	S	['who's Ste ven]
128	S	(.) Ti `na (.) who ˇ 's [Steven]
129	T	*{ ə ɾə }] bloody { ə ɾə } mushroo ːm ː{ ssː } (0.7)* *creak*
130		*{ əbə } bloody { əbə } mush[roo ːːːm { ssː }]* *creak*
131	C	[when I- (.)]'when I get (.) 'back up to
132		ᵒuse[(.) I'm (.) gonna (.) put your 'jigsaw awa y]
133	T	*[{ əbə } bloody { əbə } 'mushroo m { ssː } (.) { əbə }]/bloody*
134		*{ əbə } MU SHroom{ sː }* *creak*
135	S	(.) Ti[`na]
136	C	[I'm] gon[na put your jigsaw awa y when I go up to ᵒuse]
137	T	[*{ əbə } bloody { əbə }*]
138		*MU SHroom{ sː }(.) { əbə } bloody { əbə } MU SHroom{ sː }* *creak*
139	S	(0.5)Ti`na (0.5) 'what is your ji ᵕgsaw about(.) tell me what your ǰ igsaw was a
140		bout =
141	T	= *bloody { ə ɾə } mushroo ːːm{ sː }(0.6) { ə ɾə } bloody { ə ɾə }*
142		*mushro o ːːːm{ ssː }* *creak*
143	S	(0.7) ↑did it have anything to do with mu shrooms ↑ (.)
144		↑ what was it a'bout ↑ *to C*
145	C	(0.7)it di ˇd have some 'mushrooms on (.) ye ̄ah
146	S	(.) ↑ di d it ↑ (.) ↑did it have mu shrooms on ↑
147		(.) [what e lse] did it have on *to T*
148	T	[{ *aːːːː* }] *creak*
149	T	(1.0) (hhhhhhh) (.) *'don't ['know]* *creak*
150	S	[tell] me what e lse it had 'on (0.5) tell me
151		'what
152	S	[that ji ᵕgsaw 'had on]
153	T	[*aa ːːːːːːːːːːːːːːːːː`ːːh*] *creak*
154	T	(1.4) aa ːːːːːh (1.5) *'don't 'kno.w* *creak*

155	S	(0.5) yẹah you dô:: (1.3) did it have[(.) ạnimals on]	
156	T	[aa ⠿⠿⠿⠿⠿h] yea:h	creak
157	S	(0.5) was it a wọod	
158	T	(.)y:æa :::h	creak
159	S	(1.3) what ẹlse was there	
160	T	(0.7)y:æa ::h	creak
161	S	(2.1) yéa:h (1.0) 'what's thjs	
162	T	(1.2)((6 sylls))	creak
163	S	(0.6) it was whàt	
164	T	(0.7) aa :::::họ :::v =	creak
165	C	= 'talk pro¯perly 'Tina	
166	T	(0.7) 'when:can I 'sing { 'rɒkɪn 'rəʊ(hhh)lɪɾ(.) rɪɪdɒɾ}	creak
167	S	(0.6) 'when can you 'sing whàt	
168	T	(.) w- { 'rɒkɪn 'rəʊlɪn rà:::dɒn }	creak
169	S	(.) 'rock n 'roll whàt	
170	T	'ro[ckin] 'rollin 'ridin	sings; creak
171	C	['rollin ri˙din]	
172	T	(0.9) out along the ba(hhhh)y.hhhh (.) a:::ll around for 'morning time many	
173		'miles away (1.0) 'driver at the 'engine (1.2){ 'swaɪmən } rushin	
174		(1 syllable)	sings; creak
175		(hh[hhhhhh).hhhhh]hhh(hhhhh) .hhh(hhhhh).hhh	
176	C	[ring the be::ll]	sings
177	S	(.) 'rockin 'rollin 'r[idin]	sings
178	T	[I don't] kno :::v	creak
179		(.) 'simon 'sings the 'bell (1.0) 'sandman 'sings the { laʊtɪ }	sings; creak
180		(0.6) ((1 syll)) the ((2 sylls)) 'bell	sings; creak
181		[(0.9) rockin] rollin ridin	sings; creak
182	C	[( )]	
183	T	(0.5) out al(hhhhh)ong (hhhhhhhhhh).h[hhh(hhhh).hhhhhhh(hhhhhhhh)]	
184	S	['you're 'over exci¯ted (.) ạren't you]	
185	T	(.) 'guess what (1.2) out alo ng the angelas :::	creak
186		(.) a:ll the waybound { fɒm (.) 'æ:ndʒʊləs::}	sings; creak
187		(0.7)[many m]iles a (hhhh) á(hhh)ngelas	sings
188	S	[si ¯nging]	
189	S	(.) A˙ngelas =	
190	T	= many[mile s] m [any miles] a- angelas	sings; creak
191	C	[stòp] (.) [stò p 'Tina]	
192	C	(0.7) Ạngela- =	
193	T	= many [miles a bak]akeg	sings; creak
194		['Angela whò::]	
195	T	(.) ma [ny Ange]la Bakake::[::::g(hhhh)]	creak

196	S	[whɒ::'s 'Angela]	
197	C	[↓no↓(.) that's 'not] er 'proper nǎ::::me	
198			
199		(0.5) A῀ngela	
200	T	(0.8)mmR.ːæe.ːːd	*creak*
201	C	(.)'that's bȩtter=	
202	S	=aâaæ::[::h]	
203	T	[Ang]ela Angela bloody { ə} Reȩ d	*creak*
204		(.)Angela bloôdy { ə} Reȩe.ːd =	*creak*
205	C	= nˉo sweˉaring	
206	S	(0.5) come and look at this boˊok w[ith me]	
207	T	[Angela] bloody { ə} Reˉed	*creak*
208		(0.6) Angela blooâdy { ə} Reȩe.ːːːds	*creak*
209		(.) Angela bloˊody {ə} Reȩe::::d	
210	S	(.)'what's i[n hȅre]	
211	T	[Angela]bloody { ə} Reȩed	*creak*
212		(0.5) Angela bloôdy { ə} Reȩe.ːːds	*creak*
213	S	(.)'what's thȧt	
214	T	(.)Angela bloody { ə} Reȩed	*creak*
215		(.)Angela bloôdy { ə} Reȩe.ːːds	*creak*
216	S	(.)Ti`na (0.5) 'what's th[ȧt]	
217	T	[An]gela bloody {ə} Reȩed (.)	*creak*
218		Angela bloôdy { ə}Reȩe.ːːːds	*creak*
219	S	(0.7)↑'what's [thi̧s]↑	
220	T	[Ange]la bloody { ə} Reȩe.ːd	*creak*
221		(.)Angela bloôdy { ə} Reȩe.ːː [ːds]	*creak*
222	S	[Ti`na]	
223		(0.5) 'what's thi`s	
224		(0.6)↑what's thȧt ↑=	
225	T	= I don't kn̩ow what ʄhat's called	*creak*
226	S	(1.6) it's a hɒ::rse	
227	T	(.) it's a ho.ːːrse	*creak*
228	S	(0.3)'it's a hɒ::rse	
229	S	(2.0)what bout thȧt	*pointing to octopus*
230	T	(0.5)I don't kno.ːːw	*creak*
231	S	(.)'neither do Ⅰ	
232	T	(0.6)I don't kno.ːːːːːw	*creak*
233	S	(.)what coˋlour is it	
234	T	(1.3){ræḑ	*creak*
235	S	(0.8) myéˊah	

236		(2.1) 'what's it got	
237		(.)'what's this	*pointing to sea creature*
238	T	*(.) I don't kno :::w*	*creak*
239		*(1.1) I 'don't kno w =*	*creak*
240	S	='I don't 'think I 'know 'either it's a 'very 'strange òbject	
241	T	*(.)'what's thi :s*	*creak*
242	S	(.)I 'think it's an òctopus	
243	T	*(.)I 'think it's an octopu :::s*	*creak*
244	S	(3.0)what e⁻lse {əv} we got	
245	T	*(0.8) I don't kno :::w*	*creak*
246		*(1.2)((4 syllables)) Su :shi :e*	*creak*
247	S	(.) 'that's another òctopus	*pointing at picture*
248	T	*(0.7)o :::::h {əɔ}ri :ght*	*creak*
249	S	(.)'where d'you think thèy 'live	
250	T	*(1.8) I don't know*	*creak*
251		*(1.1) do they live in the { wæts:}*	*creak*
252	S	(.) they dò live in the 'water (.)	
253		you're abso'loutely ri`ght =	
254	T	*=wwwwhe :::re*	*looking at tree picture; creak*
255		*(.)whereabouts is the 'branch*	*creak*
256	S	(0.6)'whereabouts (.) is the [whạt]	
257	T	*[{ əɛə:::}] branch(.)*	*creak*
258		*it's up the tree :::*	*creak*
259	S	(.)the 'branch i`s up a 'tree(0.5)	
260		th[ere's a -]	
261	T	*[whe:re]abouts is that ma :::n*	*creak*
262	S	(.) whereabouts i `s that 'man	
263	T	*(.)I don't kno :::::v*	*creak*
264	S	(0.8) he's-(.) 'what's he nèxt to =	
265	T	*={ mmmmmm} don't kno :::v*	*creak*
266	S	(.) s'next to whạt	
267		(0.5)'what's thạt	
268	T	*(.)I don't kno :::w*	*creak*
269	S	(.)you ↓do ↓ 'know	
270		(0.6)whàt's 'that	
271	T	*(1.1)what's that little thing the re čalled*	*points to page; creak*
272	S	(1.5)'which little 'thing whẹre =	
273	T	*=we :::::ll where ca :lled*	*creak*
274	S	(.)what's 'what cạlled	
275	T	*(.)w :rhe :::re*	*creak*
276	S	(1.5)'what's that little thing (.) <u>whẹre</u> 'called	

277	T	(0.9)wha*t's* (.) *that one called* {dʒə} *mea*ːn	*creak*
278	S	(.)'that's a màn	
279	T	(0.7){æ} *ma*ːn	*creak*
280	S	(0.5) an 'what's thạt	
281	T	(3.0) {æ} *ma*ːn	*creak*
282	S	(1.0) uh	
283	C	(0.5)I tell you what she lĭ kes Sùe (.)	
284		tĭ geːrs	
285	S	(.).HHHH	
286	T	(.)*ti* ːːgers	*creak*
287		(1.2)*tige* ːːrs =	*creak*
288	C	= 't[alk] pro perly	
289	S	[I w-]	
290	T	(.)*tige* ːːrs(0.8) [*tige* ːːrs]	*creak*
291	S	[wish I'd kn]ŏːwn that](.) cos I 'had some pictures of tĭ gers at	
292		họ me	
293	T	(1.2) *tige* ːːrs	*creak*
294	S	(2.0)'what d'you lị ke about 'tigers	
295	T	(.)*I don't kno* ːːw	*creak*
296	S	(.) d'you like their tĕ eːth	
297	T	(.) *he likes to eat Whi*ₛkas	*creak*
298	S	(0.6)*(hh)* 'likes to 'eat Whiₛkas*(hh).hhh*	*whisper*
299	C	(.)that's a cạt not [a-(.) 'one in jụ n]gle	
300	S	[.hhh(hhhhh)]	
301	C	(0.9)likes t' 'eat pẹ [ople]	
302	S	[(hhh)](hhh).hhh	
303	S	(0.6)what thẹ y 'doing(.) 'Tina (.) lŏok (.) eɧ (.) loọk(.)wha-(.) 'what they dọ ing	
304	T	(2.4)*I don't kno* ₒːːːːw	*creak*
305	S	(.)whẹre are they	
306	T	(2.9) *don't* {nɔɪːː}	*creak*
307	S	(0.8)↑yẹ ah↑ whạt's 'that	
308	T	(0.5) a bĕ achː	*creak*
309	S	(.) a beₒaːːch (.)'yeah(.) so whẹ re are they	
310	T	(1.0) *and whe* ːre are they (1.1)*what are they* 'doing	*creak*
311	S	(0.5)↑yẹ ah ↑(.)whĕre are they	
312	T	(4.5)'*what's* 'that called { sʌ/ɪ}	*creak*
313	S	(.)what's 'what caˉlled	
314	T	(1.2)*wha*ɪ's *th*ʌː*rca*ɪled *the*ɪre	*creak*
315	S	(.) 'that's 'called sẹa	
316	T	(.)*nno* ːːːːːː*that is called* {wɔtəːː}	*creak*
317	S	(.) ànd 'water (0.7) sĕa's got 'water in it iₛn't it (2.0) what bout thạt	

318		(1.0) 'what's thạt	
319	T	(.)parro{ʦː}	*creak*
320	S	(.)m̂`mmh	
321	T	(0.5)a parro ːːːː{ʦː}	*creak*
322	S	(0.7) an 'what about thạt 'what's thạt	
323	T	(4.1)[I don't knọːːːːw]	*creak*
324	C	[when-when you 'sp]eak-	
325		(.)you 'know when you 'talk properly you can 'haveyour other 'book bacₖ	
326	T	(0.7)lio ːːːːːns ːr=	*creak*
327	C	=when- (.)when you 'talk proꞋperly	
328	T	(0.5)lio ːːːːn ːs ːr	*creak*
329	S	(0.7)lioꞋns (1.2)what do lions 'do	
330	T	((roars 3.8))	
331		(0.6) 'what be able to do it a 'leopard	*creak*
332	S	(.) what do leꞋopards 'do	
333	T	(0.7)((roars 1.2))	
334	S	(0.5) do they 'go ((roar 0.6))'what do they eàt	
335	T	(0.7) 'what be able to do it {məmæːnkɪ}	*creak*
336	S	(0.5) éh	
337	T	(0.5)'what {dʤ} able to do it a {məmæːnkɪ}	*creak*
338	S	(0.6) 'what's she sáy =	
339	C	=móꞋnkey	
340	S	(.)[oh-(.) with a móꞋnkey]	
341	T	[{wiːːɛə} he has to] climb up(.) his braˌnch	*creak*
342		(.) that 'monkey has got a taˌiːl	*creak*
343	S	(0.6)that 'monkey hạs got a 'nice 'tail	
344		(.)'what's the 'monkey doing	
345	T	(1.4) climbing up his 'treeːːː =	*creak*
346	S	=mm̂mhm	
347		(1.1)'why d'you think he's 'climbing up theře	
348	T	(1.2){sʊdneɪəuː}	*creak*
349	S	(1.6)'what's thàt	
350		(2.0) d'you know what thàt is	
351	T	(1.2)whaːt	*creak*
352		(1.5)wha ːːːt	*creak*
353	S	(0.3)↑what ịs it ↑	
354	T	(0.9)wha ːrt is that ca ːːːlled	*creak*
355	S	(.)I don't knọw 'what d'you thiꞋnk it's['called]	
356	T	[{ə}you ːː]tell me ːːwhat it's	*creak*
357		ca ːːːlled =	*creak*

358	C	= 'speak pro˙perly	
359	T	(0.7) 'you ˙tell ˙me what it is ca`:lled	*creak*
360	C	(.) d'you want Su¨e to put her 'book awa`y	
361	S	(0.8) it's a(.)bẹ e:: (0.8)i[t's a-]	
362	T	[it's]a bee:::{:: :]	*creak*
363	S	[it's] a (0.7) 'really (.) 'big(.)	
364		pi`c[ture(.) of a bẹe]	
365	T	[it's a picture o]f a bee:::::{:]	*creak*
366	S	[a]really bi`g 'picture of a 'bee	
367	T	(0.6)((groan))(hhhhhh)hhhh.hhh(.)	
368		it has to sti͟:n:g	*creak*
369	S	(.)yẹ̀s:(.) what el`se do they 'do	
370	T	(2.4) I don't `know wha̧t they have to ˙do::	*creak*
371	S	(1.1)what so¯und do they 'make	
372	T	(1.1){bsszzss[szzsssss}]	
373	S	[(hhhh).hhhh]	
374	C	{bz[zzzzzz}]	
375	S	[(hhhhh)] .hh (.)that's rị̀ght (1.2) and 'what do they dọ	
376	T	(1.3)(hhhhhhh){stuŋ:::}	
377	S	(0.5) swi̊ ::ng	
378		(0.5)no:: (.) they 'fly arọu:nd (1.2) do¯n't they	
379	T	(.)((groan))(1.0){ ˈssʌʃiːˈ}	*creak*
380	S	(.)yeǎ:h =	
381	T	= d'you like to eat -	*creak*
382	S	(0.8)'what do I 'like to e̦at	
383	T	(.){ əmn̊}	*creak*
384	S	(1.0) what do yo̊u 'like to 'eat	
385	T	{mm}(1.1) d'you like to éat (.) spring ca̧bbage	*creak*
386	S	(1.1) errr (0.6) not rȩ̂ally (.) do yọu =	
387	T	= someti͟:mes :̊ (0.5)	*creak*
388		some ˙times it 'does	*creak*
389		(1.2) it ˙likes to 'eat spring 'cabbage	*creak*
390	S	(.)h- (.)whá̧t (.) the bê̊e(1.5)the 'bee 'likes to (hhh)eat (.) spring ca̧b̧bage	
391		(8.0) what ê̊ lse do they 'like to 'eat (.)what's it ọn	
392	T	(2.6) a bee ma̧tch	*creak*

Appendix 2.2
Tina
Transcription Two 31.1.96

T= Tina

S= Researcher

C= Careworker (Cindy)

C2= 2nd Careworker

1	C	tell Sushie 'what you got to do when you 'cross road	
2	T	(1.8) 'look both ways	
3	C	(0.6) cos (.) if you 'don't you'll get	
4	T	(1.1)°squashed°	
5		....	
6	T	there's a little 'red man 'coming (1.6) ↑u:::h↑ (1.0)	
7		you'll never guess (.)wha::t (.) Aunty Cindy	
8	C	(.) wha:t	
9	T	(0.6)there's a 'red ↑ma:n(.) 'coming↑	
10	C	(.)there is (.)yea::h (0.7) ↑flashing 'ma::n ↑	
11		....	
12	T	Su:shie::: (1.1) what's the *'right time* °on your 'watch°	*fast*
13	S	(0.5) 'what's the 'right time on my watch (0.9)	
14		'you tell me 'what the 'time is	
15	T	(.)*when-*(.)*when is it* 'quarter to t t enn	*creak*
16	S	(0.8) no (.)	
17		it's 'not [quarter to 'ten-]	
18	T	[*whenisit(.) whenis*] it (.) quarter to { ə::: }e ight =	*creak*
19	S	= it's(.) twenty	
20		'five to twelve(0.7) have you got a 'watch	
21		(2.3)°you haven't got one(.) have you °	
22	T	(2.1) *I'd like shake your ha ::nd*	*creak*
23	S	(.) 'shake me hand (.) you 'shake me hand 'then	
24		(2.2) have I` got any 'nail 'varnish on	
25	T	(0.5) °*na :::h*°	*creak*
26	S	(0.9) I have 'actually but you ca[n't 'see it]	
27	T	[*come ere*](.) *'Sushie: 'lo .vey ::*	*creak*
28	S	(1.0)(hhhhh).hhh am I ni`ce to'day am 'I: (0.9)	
29		I'm 'not 'Sushie horrible to'day =	
30	T	=what-(0.5) 'colour are your shoelacess	
31	S	(0.6) do you 'like(.)my sho:elaces	
32	T	(.)they're 'purple	
33	C2	((laughs at unrelated incident))	

34	S	they're purple they're all di`ff[rent] 'colours
35	T	[BLUE]
36	S	(1.8) very-=
37	T	=yɛllo:w (0.9) 'black
38	S	(0.9) mm::::hm(1.4) lovely 'shoelaces
39		....
40		
41	S	tell me bout the swi`mming (2.6)
42		tell me bout the swi`mming Tina =
43	T	='where's my (.) ↓mummy em↓ (.) ↓be::ar↓
44	S	'where's your m- =
45	T	= *'where's my daddy 'be:ar* *harsh voice quality*
46		(0.9) *where's my dad* *harsh voice quality*
47	S	(1.3) (hh)I(hh) don['t know]
48	T	[when can] I go when it's my turn ↓Sushi::e↓
49	S	(.) I don't 'know when i`s it your 'turn
50	T	(0.5) 'when 'it's- (.) when can I go ups-((sniff)) (0.5)my tu:rn
51		(1.1) when are you ma- (1.0)m(.)you know what I` am (.) 'Sushi::e
52	S	(.)[what]
53	T	[a little-](.) 'nice 'little (0.4) little m((2 sylls)) 'Sushie
54		(.) nice 'little(.) little little (0.7) 'what's you 'call it (.) 'Sushie (0.6)
55		'little little (0.5) 'little little (1.2) c'm ere Tina( )l lovey] nice little
56	C	[( )]
57	T	chick'chick Tine lovey =
58	C	= ↑don't go 'doing ↑that then =
59	T	= I'm a nice little 'chickchick
60		[T ine] lovey =
61	C	[mm]
62	C	=is that what your mum 'calls you=
63	T	= chicken 'Tine lovey
64	C	[is that what your mum 'calls] you
65	S	[what does she call you]
66	T	(0.8) she calls me(.) chickenn Tine {lə'vɒn}
67	C	(0.6) she calls her chic[ken] pi::e =
68	T	[chickn]
69	T	= chick(.) chick 'Tine lobby
70	S	(1.8) chic[ken pi::e]
71	C	[don't do] [tha::t](.) don't do tha:t
72	T	[((sniff))]
73	S	(.)↓aah↓ (1.2) why does she 'call you 'chicken pi`::e
74	C	(0.8) 'what does Mary 'call you

75	T	(0.3)(hhhhhh°h[hhhh).hhhh°]
76	C	['what does Mary] 'talk like =
77	T	=gddy gddy gâsi

....

78		
79		
80	C	'stop being shy:
81	S	(0.9) 'tell me about Mary =
82	T	= 'Sushie(.) whereabouts is my three likkle pig 'book
83		(1.3)[it's in]my 'boxsss
84	S	[(-)]
85	S	(.) in your bòx
86	T	(0.6) whereabouts is my 'box
87	S	(.) I don't know whereabouts is your 'box (3.9) that your 'box
88	T	(1.7) want to go and 'get it
89	C	↓no↓ you can have it when you've 'talked to Sushie an 'told her er-(.)
90	T	ga[î:::]
91	C	[some-] some thiˋngs- =
92	T	= GAI::
93	C	(.) ↓no↓ you 'talk properly =
94	T	=GAIgdy GAI g{kxj::ə}
95		(0.6).hh(1.0){jɒ}-(.)gai gdy GAI [gi::]
96	C	[rjght] I think I'll 'put that
97		bag in['dustbin]
98	T	[{jə}gai gai] G[AI:]
99	C	[rjght]
100		{ə}GAI GDY GAI GI::
101	C	(.)'pop to your rǫom 'then [çm on]
102	T	[gai eee]er [go on] up to my gǫom
103	C	[↑cǫme on↑]
104	C	(.)ri:ght (.) do you want to come and 'work with Ray
105	T	no(.) I don't want to 'gork with gay
106	C	(0.6) shall I 'shout him jn
107	T	(0.6)nᶐi:
108	C	(.) shall I shòut 'Ray in
109	T	(.) no (.) I don't want to dirk with gǫy::
110	C	(0.9)'talk properly sᶐid
111	T	(1.1) yes (.) I will do:
112	C	(0.5) ri: ⁻ght then (.) geˉt on with it =
113	T	= I 'will do {ʤusʃɛι}
114	S	(0.8)what were you gon- you were going to tell me
115		what you diˋd this 'morning what did y- =

116	T		= THAT (0.8)	
117		*'wha ave you been 'doing down in the day centre*		*in birmingham accent*
118	S	(1.5) ↑where's she got this 'birmingham 'accent from↑		

119 ....

120

121 S   tell me what you 'did this 'morning (.) 'what did you do

122 T   (1.3) when can I do some 'reading and writing

123 S   (.) you can do some more 'later can't you

124 C   (0.8) tell her you 'went to library last 'week and you got 'two books (1.6)

125   and (.) 'what they call em

126 T   (0.6)w-(.) when can I do me 'eating 'out book

127 S   (1.0) 'eating out 'book is that what th-=

128 T   =when can I 'do: me socialising 'book

129 C   (.)yeah her socialising 'book (.)   [for eating out we have-]   *to S*

130 T   [whereabouts is my   ]book

131   about Li`nda =

132 C   =w-'what do they call them other boo:ks (0.6) 'eating out (.) and (.)

133   wha::t 'Tine

134 T   (.)((unintelligible))(.) whereabouts is [(1.1)   ] that 'Linda

135 C2   [((cough))]

136 T   (.) whereabouts is Li`nda

137 C   (.)in the book

138 T   (0.6)b-(.)[w-   ]

139 S   [isn't]'that what it says in the 'book =

140 T   =wh[e-]

141 C   [Li`]nda (.) and Sue =

142 T   =whe- (.)

143   whe-

144 C   [(1.1)wh-(.) whe-(.) where 'where do they]'go for a meal

145 C2   [((coughing))   ]

146 T   [(0.7)wh- wh when it's] 'lunch is nearly over

147 C2   [((coughing   ]

148 C   (0.8) when's 'lunch nearly over

149 T   (.)'little(.) I'm a 'little little (0.7) 'little little=

150 C   = 'Michael an

151 T   (.)   nice[little   ]

152 C   [Ste::ve]

153 T   (.) 'little 'little

154 C   (.)['Michael and Steve]

155 T   [nice 'little 'little   ]

156   (0.5) nice 'little(.) little['little]

157	C	[nö::](.) li`sten (.) you don't [talk like 'that]
158	T	[little little]
159	C	(0.8)you don't talk like 'that 'Tina dọ you =
160	S	= little gi:`rl =
161	T	=you ask a chick chick
162		TINE LO`VEY
163	C	(.)nö take- =
164	T	= chick 'Tine lovey
165	C	(.)'what do 'Steve [and Mi`chael 'do] in 'that socialising 'book =
166	T	[Ti̱ :::ne lovey] = an a (.)nice little
167		'chick 'chick TI::NE lovey
168	C	(.)lî sten (.) li`sten 'look at mė: (0.8) li`sten
169		(.)you're not [talking 'nicely ạre you]
170	T	[chick chick chicken 'Ti]ne lovely
171	C	(1.1)ri::ght are you being si`lly
172	T	(0.8)yeâ::h
173	C	(.)right (.) do you want me to get cròss
174	T	°nö::°
175	C	(0.7) dö you
176		(.) do you want 'me to get crö:ss (1.3) é::h =
177	T	=((sniff)) {'nai:}.hhh =
178	C	=↓ri̱ ght then↓ (.)
179		'what you got to dọ
180	T	(0.5){gəɛɪạss}
181		....
182		
183	S	'tell me 'a::ll about that böok 'Tina (.) tell me a'bout your böok
184	T	(1.1)((2 syllables)) me eating 'out böok
185	S	(1.2) and 'what's it got i̱ n it (1.2) 'what's it abòut
186	T	(4.4) s got 'lots of 'things in it
187	S	(8.8) whàt like(0.9) has it got (.) any pẹople in it
188		(4.3)↑it got any péople in it↑
189		(3.8)°I 'think it's got some pẹople in it ạn't it °=
190	T	= 'sausage and 'chips is on the
191		'menu:::
192	S	(.) is 'that what it sạys in the bọok
193		(1.2) 'what ẹlse is on the 'menu
194	T	(3.8) *I don't kno:: w* *creak*
195	S	(.) ha:ve they got any pụdding on the 'menu
196	T	(1.4)°no:::°
197	S	(.) haven't they gòt any 'pudding on the 'menu

198	T	(.)°no°	
199	S	(0.3)↑nô:: (.) no cạke↑	
200		(3.7) haven't they got any cạke	
201	T	(1.4)nô:::	
202	S	(.)mmhmm m (.) that's not very gọod is it	
203		(1.4) have yôu been to a 'cafe (3.3) ↑you been to a cạfe↑(5.8) hâve you	
204		*((talk between C and S))*	
205		....	
206	C	oo::h nô::	*to S*
207	S	(.) [no:: cos you 'know what to-]	
208	T	[no::::: o:::::h]	*creak*
209	C	[( )]	
210	T	gi me the hands Sushi:::: [::e]	*creak*
211	S	[wh]àt 'sweetheart	
212	T	(1.2)*shake the hands Sushi ::e e ::h*	*creak*
213	S	(.)you 'shaking my hànd	
214	C	(1.2)what do you sạy when you 'shake somebody's hạ:nd =	
215	T	={ái::}=	
216	S	=↑no:: (.)I don't	
217		wạnt to ['stick my 'knee] in your 'leg	
218	C	['what do you sạy] (1.4) 'what do you sạy	
219	T	(0.6) shake the 'hands Sushi[::e(.){ɑ:ɑo:}]	
220	C	['what do you sạy when you 'shake 'Sush]ie's hànd	
221	S	(.)'what do you sày =	
222	C	=ho⁻::w	
223	S	(1.4) 'how d' you dô:	
224		(1.9) 'how d'you dọ T i˘na	
225	T	(0.6) 'pleased to mẹet yer	
226	S	(.) oh (.) I'm vèry 'pleased to 'meet you toô: (1.0) Miss 'Windfall	
227	T	(1.9) hm (.) s pleased to mẹet you 'busy plẹased to 'meẹt yer	
228	S	(0.5) I'm 'pleased to 'meet you toô	
229	C	(0.7)but it -(.) she's 'really gọod when she he- 'hears 'different àccents	
230	S	(.)yèah	
231	C	(.) she mî mics them (0.7)˙yeah (1.3) mịmics them ˙	
232	T	(0.8) what- [Ci˘ndy]	
233	C	[she's 'very 'very (.)] obsẹrvant [i`sn't] she	
234	S	[mm̂mm]	
235	S	(.) [very]	
236	T	[( )]'hit 'A:lice	
237	C	(0.8) well you haven't 'got to hịt 'Alice	
238	T	(1.4)Alice{ss} =	

239	C	= 'Alice is your friend =
240	T	=wha-(0.5) Alice (.) she 'got a 'pony 'tail in
241	C	(.)yesterday (.) she an't got one in toda:y(.)
242		but she had [one in yèste]rday =
243	T	[when er wh-]
244		=when is 'Alice my 'friend
245	C	(0.7) 'every day
246	T	(0.6)when's
247	C	(1.8) èvery 'day
248		(1.2) an-(.) an 'tell Sushie you went walking yesterday
249		(0.6)'what did you see on that pond
250	T	(1.5) [some 'ducksss]
251	C	[°what did you see°]
252	C	(0.5) some ducks
253		(.) [all different] 'kinds
254	T	[*daddy 'du cks:.*] *creak*
255		(0.8) *daddy duckss* *creak*
256	C	daddy ['ducks]
257	S	[((cough))] =
258	T	= *daddy ducks (.) and muver ducks* *creak*
259	C	(1.4)[an] she asks to go out in 'minibus no:w (.)
260	S	[( )]
261	C	at òne time (1.5) but (.) she 'still is a 'little bit (.) without me
262		(.) she'll 'play up before she goes
263	S	(.)mmm =
264	C	= an (.) they used to lèave her a lot
265		(.)but (.) [no:w]
266	S	[aà:h]
267	C	(0.5)they'll- (.)you know (.) because they'll say (.) aah (1.5)
268		but now (.) they say (.) no: (0.6)[she'll(.) she'll]'still tàke her
269	T	['pleased to meet yer 'Sushie]
270	C	(0.6) cos while she's in thère =
271	T	=pleased to 'meet yo[u ( )]
272	C	[she's] all ri ght
273	S	(0.8) I'm 'pleased to 'meet you
274	T	(0.9) 'pleased to 'busy meet yer
275	S	(.) 'pleased to(.) [meet] 'you
276	C	[°yeah°]
277	C	(.) she 'looks through winda at all them trees and cows
278		(.).h an(.) she'll 'say (.) 'find me some còws 'Cindy =
279	S	=(hhhhhh) you got to

280		find- =	
281	T	=((unintelligble)) meet you	
282	S	(0.7)have you:: (0.5) been on the bus	
283		(1.4) you been on the bus =	
284	T	='pleased to meet you [( )]	
285	C	[she's been on] train	
286	S	(1.4) you been on a train	
287	T	(1.1)will you sing that song bout wheels on the busss	
288	S	(0.6) do you 'sing a song about it (.) when you're on the bus	
289	C	'sing [it fo] r Sushie:	
290	T	[yea:h]	*creak*
291	C	(0.7) the wheels on the bus	*sings*
292		(1.1) go on	
293		(0.4) go[round-]	*sings*
294	S	[si`ng it]	
295	C	(.) go on =	
296	S	= si`ng it for [me]	
297	T	[go] *round and round*	*sings with creak throughout*
298		(0.9) *round and round* (0.6) *round and round*	*sings*
299		(1.0)*the people on the bus go round and round*	*sings*
300		(.) *a:ll da:y lo:ng*(1.5)	*sings*
301		*m- mums on the bus go nod NOD no(hhhh)d(.)nod nod nod*	*sings*
302		(0.6)*°nou no no°* (.)	*sings*
303		(0.6)*the people on the bus go(hhh) round and round*	*sings*
304		(.) *a:ll da:y lo:ng*	*sings*
305		(0.7)*°wheels on the bus go°*(.) *er* (1.9)	*sings*
306		*nod nod nod{s}* (0.5) *nod nod nod{ss}*	*sings*
307		(0.7)*the people on the bus go NOD{S}(.)nod nod(.)*	*sings*
308		*a:ll da:y lo:ng*(0.6)	*sings*
309		*the people on the bus go nod nod nod{S}*	*sings*
310		(0.7)*nod nod noD{S}(0.7) nod nod nod (.)*	*sings*
311		*the people on the bus go nod nod nod*(0.5)	*sings*
312		*a:ll da:y lo:ng*	*sings*
313	S	(1.2)'that [were bri`lliant]	
314	T	[((stamps feet 5 times))]	
315	C	[yeah](.) she 'knows a lot of so:ngs =	
316	T	=*people on the bus go*	*sings*
317		*stample stamp stamp*	*sings*
318		(0.5) *stamp stamp stamp*	
319		(0.6)*°people on the bus°*	*sings*
320		(.)*the people on the bus go STAMP STAMP STAMP*	*sings*

321		*(.) a :ll da :y lo ng*	*sings*
322		*(0.8)people on the bus go(1.6)((stamps feet 3 times))*	*sings*
323		*(0.5)chitter chatter chatter*	*sings*
324		*(0.5)chitter chhhatte r*	*sings*
325		*(0.5)the people on the bus go chitter chatter chatter*	*sings*
326		*(0.7)a :ll da :y lo ng*	*sings*
327		*(0.5)people on the bus go talk talk talk*	*sings*
328		*(.) talk talk talk (.) talk talk talk (0.8)*	*sings*
329		*people on the bus GO TALK TALK TALK(.)*	*sings*
330		*a :ll da :y lo ng =*	*sings*
331	C	=it's a lovely 'song 'that- =	
332			
333	T	*=people on the bus go*	*sings*
334		*giggle giggle(0.8) giggle*	*sings*
335		*(.) GIGGLE giggle giggle(0.7) giggle giggle giggle(0.9)*	*sings*
336		*people on the bus go GIGGLE GIGGLE giggle(0.8)*	*sings*
337		*a :ll da :y (0.7) giggle giggle giggle =*	*sings*
338	C	= in't she lovely 'singer 'Sushie	
339		....	
340			
341	C	what do you 'have for your breakfast (1.0) [nŏ::]	
342	S	[(hhh).hhh] =	
343	C	=what does your mum	
344		'make you	
345	S	(.) [tell me what your 'mum makes] you	
346	C	[you're not getting your ba:::g]	
347		(0.7)↑you're not getting your bag↑ (.) if you [misbeha::ve]	
348	T	[fried eggs]	
349	S	(0.5).hh˙hhh =	
350	T	= for yer (.)break[fast do] n't yer	
351	S	[fried-]	
352		(1.0).hh that ti ckles	
353	C	(0.6) and she has- (0.6)what 'else do you 'have with your 'fried e⁻ggs	
354	T	(0.7) mush'roo::ms (0.6) and *garlic 'bread*	*odd voice quality*
355	S	(0.6)hh[hhhhhh]	
356	C	[and gar]lic bre⁻ad (.) and what else	
357		(.)what does your daddy 'make yer	
358		(1.4) °what does your daddy 'make you°	
359		(1.8) er o⁻m (1.7) all ri ght (.) she's not getting [that 'b] ag	
360	T	[omelette]	
361	S	(.)↑ omelette ↑=	

362	C	= ah-(.) I shall 'give 'that bạg to 'Ray	
363		(.) if you keep 'acting abo⁻ut	
364		[(.)I'll 'p]ut it in a cupboard	
365	T	[òmelette]	
366	T	(.) an ǫmelette	
367	C	(0.5) a:ll ri⁻:ght (.)what 'kind of ǫmelette	
368	T	(1.7) a different kind of 'omelette	
369	S	(0.8) ↑a different ki :nd↑	
370	C	(.) chêe:se(.) or mụshrooms	
371	T	(1.4) chee:se	
372	C	(.) chêe::se(0.6) mm̂m (.) and 'what does your ermm (0.6) an what does	
373		yer dạd 'have	
374		(1.5)what does your dạddy 'have	
375		(0.6)to 'ea:t (.) does he have sàme (1.8) does he have	
376		'same as yǫu	
377	T	(1.1) *he's had an omelette*	*creak*
378	C	(0.3) did hè: (0.6) o⁻:h ri⁻::ght (1.9)what did-(.) what does y-(.)your	
379		'Kim have to ea⁻t	
380	T	(3.0) *an omelette*	*creak*
381	C	(0.6) does hè	
382	S	(0.9)who's Kịm 'Tina	
383	T	(1.1)my brụvver (0.5) I've got a little brother called Kj:m	
384	C	(.) ° yèa::h °(.) [yeah]°	
385	S	[how] 'old is hè	
386	C	(1.3) 'twenty whàt	
387		(1.2)what is he [how ǫld]	
388	T	[*five] years óld*	*creak*
389	C	(0.5)↓no↓ (.) he in't (.) he's twénty::	
390	T	(1.2) '*one yea[rs o] ld* =	*creak*
391	C	[one]	
392	C	=yeah	
393	S	(.)twenty ǫne 'years 'old	
394	C	(.)°yeah twenty one°	
395		(0.5) and 'Tina's 'twenty (.) fôur	
396	S	(0.6) are you twen[ty fôur] Tịna	
397	C	[àren't yer]	
398	T	(.) *aaa:h* =	*creak*
399	C	='ll be twenty 'five in Mạy	
400	S	(0.5) oó::h(.) your bi␣::rthday	
401	C	(.) m̂mhm	

Appendix 2.3.

Tina

Transcription Three (WISC): 22.5.96

T= Tina

S= Researcher

C= Careworker (Cindy)

1	S	ri˙ght (0.6) what d'you ˈcall thiˋs	holds up thumb
2		(1.6) ˈwhat is ˌit	
3	T	(0.7)fummm =	
4	S	=yeˉ:::s (1.3) a::nd (.) how many eàrs have yòu ˈgot	
5		(3.3) how [m]any eaˋrs	
6	T	[e]	
7	S	(1.5) how mány	
8	T	(0.9) one	
9	S	(1.1) how mány	
10	T	(0.8) one	
11		(2.7) °two:°	
12	S	(0.5)how mány	
13	T	(0.7)°two°	
14	S	(.)twò(.)° that's it°	
15		(0.9) nòw (.) think haːrd Tina	
16		(1.5) ˈhow many lègs (.) has a dòg ˈgot	
17	T	(3.3)°one°	
18	S	(0.6) ˈhow many lẹgs	
19	T	ONE	
20	S	(1.3) think haː::rd about a dòg	
21	T	(0.7) one	
22	S	(.) o::kạy sweethẹart (1.9) nòːw	
23		(1.2) ˈwhat must you doˉ:: (0.6) to make wàːter ˈboiːl (6.1)	
24	T	°(hhhhhhh)°.hhhhh =	
25	S	= ˈwhat d'you dọ(.) to make ˈwater bòil(.) Tina	
26		(3.5)whạt d'you dọ with it	
27		(7.7) d'you knọw ˈwhat you dọ with it	
28	T	(1.3) you must have a ˈpiece of (0.6) you ˈmust have a ˈpiece of (0.6) swịsh	
29	S	(0.7) you ˈmust have a ˈpiece of whàt ˈlove	
30	T	(0.5) *SWISH*	aggressive
31	C	(1.0)nọ:: (0.6) nọ::	T bangs on table
32		(.)you're not ˈgetting a [ˈpaː:ge] of thạt ˈone	
33	S	[oh is that what-]	
34	C	(.) nọ:: (.) you're being ˈsilly nọw (.) thịnk about it	

35		(0.9) when you 'go in the ki`tchen (.)to make something boil
36		'what d'you do
37	S	(1.6) 'how d'you make some 'water boil
38		(1.9) m'èe::h
39		(1.4) 'how do you make water boil
40	T	(.) Sushi::e(.) I would like you to shake your 'fa::ce
41	S	(0.7) you want to shake my face
42		(.) you ↓can't shake my 'face↓
43		(3.3) 'ho::w many pennies (0.5) make a pound (0.5) 'Tine
44		(2.6) how many pennies (.) in a po⁻u:nd
45	T	(3.8) I've got a two 'pence
46	S	(1.4) you have got a 'two pence
47	C	(0.9) she-(.) she 'kno:ws what a 'pound is in money
48		[(.) but] I don't think she 'knows how many =
49	S	[yeah]
50	S	= no::(.) I mean
51		some [of these que⁻stions] will be(.)tally [((inaud))]
52	T	[I 'have got a p-]
53	C	[yes]
54	T	(.)I have got a {paliants}(.) I have got a 'coin(.) from (.) at (.){kliⁿ} (.) palace
55	S	(.)have you 'love
56	T	[((groaning))]
57	C	[she means Buckingham Palace]
58		((inaudible - groans too loud))
59	T	what do I have to 'do::
60	C	(0.6) wha:t
61	T	(0.6)we have to do our(0.5) we 'have (.) to do our (0.9)°traffic li͜ghtss°
62	C	(.)traffic li`ghts (.) yeah (.)when we do our [ 'roa:d ski`lls]
63	S	[yèa:::::h]
64	C	(0.9)ye⁻ah
65	T	WE 'HAVE TO DO our 'traffic 'lightss (0.8)
66		and we 'have to *have our roa͡:d* 'skills *slurred*
67	S	(0.9)nò:w (0.7) what d'you ca⁻:ll (.) a 'baby co:w
68	T	(2.8) moo
69	S	(0.9) it says moo(.) yeah
70		(.) whas a baby 'cow 'called
71	T	(1.9) 'shee:p
72	S	(0.3)↑a she⁻ep(0.6) okay↑
73		(2.1) ↑do you know how many days (.) in a we⁻e:k ↑
74		(1.6)(hhh) how many 'da:ys in a week
75	C	(4.4) nò::: (.)that's Sushie's p[a:per]

76	S		[you] can have some in a mi`nute
77			(1.0) how many 'da:ys in a wèek 'Ti[na]
78	T		[when] (.) an (.) can I have some lį:::nes{zss}
79	S		(.) 'you can 'have some in a mi‾nute
80			(0.9) you gonna 'tell mę (.) how many dạ:ys: in a węek
81			(3.5)°s'that a hạrd one°
82			(.) shall we lęave that 'one
83			(2.1) ↑shall we lęa:ve 'that 'one↑
84			(1.8) right (.) I've got some (0.9)pịctures to look at 'now 'Tine

85 ···

86	S		you gonna 'tell mè (.) what im'portant 'part's mìssing (0.6) from
87			'these pìctures(1.2)you gonna lòok
88	T		(0.8) Sushie 'where's Jedzịah
89	S		(0.5) she's in the 'other róom lòve
90			(0.6) .HH(.) now lòok (1.3) [it's a 'pic]ture of a cát
91	T		[°it's a cat sortt°]
92	S		(0.8) what im'portant 'part's mìssing from that cát Tị̧na
93	C		(1.2) [no Tịna (.) nŏ] (.) 'leave that alŏne
94	S		[can you 'leave that in thère]
95	S		(0.7)leave that thère (.) so it (0.5) so I don't knòck it
96	C		(.) rì:ght (0.5) nǫ:w(.) ['what is 'Sushie àsking yer]
97	T		[when can I-(.) when can I have s]ome lịne{ss}
98	C		(.) no`(.) not nô:w (0.3)you're not having any at àll
99			(0.8) ríght (.) you're not having any at àll (.) if you don't
100			(.) lòok (.) what 'Sushie's tàlking
101	T		(1.1) can have some in a bìt
102	C		(0.7) rí::ght (.) =[no:w]
103	S		=[yeah] (.) you can have some in a bìt =
104	C		='look at that cạt (0.5) and see
105			'what's mìssing (2.6)'what's fúnny about that 'cat
106	T		(0.3)it's got a big bushy tàil
107	S		(.) =[it] hạs got a [big] bushy 'tail
108	C		=[yés] (0.6) [yés] (0.7)
109	C		(.) bû::t
110	S		(0.6) what im'portant pàrt's 'missing 'off it
111	T		(2.1)[it's] got some 'whiskers
112	S		[ha-]
113	S		(.)yęah (0.9)what's 'missing thǫugh

114 ···

| 115 | S | | cn you- (0.5) can 'you tèll me 'Tina (0.8) in 'what 'way(.) are a 'wheel (0.5) and a |
| 116 | | | 'ball (.) alī‾ke (1.1) can you tell me what's the 'sa::me about 'them two thí‾ngs |

117		(1.0) a 'wheel an a ball	
118	C	(5.7) a wheel (2.2) an a bà:ll	
119		(2.0) what àre they	
120	T	(1.5) °it has (0.5) an it hasn't°	
121	C	(0.7)'what shàpe are they	
122		(2.0) a 'wheel an a ba:ll =	
123	T	=°round°	
124	S	(0.8) they're both round (.) you clèver 'thing	
125	T	(1.5) °yea::::h°	whisper
126	C	(.) we⁻::ll done (.) you've got a'nother point =	
127	S	=you ave (0.6) you clèver	
128		'sausage =	
129	C	= got a'nother point (.) wo::w (.) aren't you goo:d	
130	S	(1.9) 'ri::ght (.) Ti' ne (0.7) now 'tell me (0.6) in 'what way	
131		(0.8) are a 'candle (.) and a 'lamp ali`ke	
132	C	(3.7) candle (0.8) and a làmp	
133	S	(1.0) 'what's the sà:me about 'them	
134	C	(5.1)you hàd a 'lamp in your 'bedroom din't you	
135		(1.4) a la:mp (1.6) and 'what did you used to do with your lamp	
136		(2.2) and 'what do you do with a candle (0.8) 'what do they both do::	
137	T	(1.2) blow it 'ou::t	
138	S	(1.0) you blow a 'candle out don't you (.) you both 'put them both out	
139	T	Cindy::	
140	C	(0.6) whàt	
141	T	(.) I used to sing (.) *happy birthday to my pal* =	sings
142	C	= I know (.) yeah(.) [yer 'do:]	
143	T	[can you] sing	
144		happy bir*thday to my pal*	sings
145	C	(.)*to my pal (.)to my pal (0.6)*	
146		*[happy birthday] to my pal(0.6)*	sings
147	S	[(hhhhhhhhhhh)]	
148	C	*my pal (.)Tina*	sings
149	S	(1.3) (hhh[hhhhhhhh)]	
150	T	[Sushi:e (.) I h]ave got a daddy Si:mon	
151	S	(0.6) ↑ha[ve you got a 'dadd]y Si`mon↑	
152	C	[you ha⁻ve an't you]	
153	C	(0.9) 'shell Tùshie- (0.8) tell y-(.) ° 'tell Sùshie(.)what he 'does	
154		(0.6) w-(.) when he goes to wòrk°	
155	T	(0.9)he's a °*plumber*°	whisper
156	S	he's a whà:t	
157	T	(0.7)°*he's a plumber*°	whisper

158	S	(0.5) is he a BINMAN
159	C	(0.6)plumber
160	S	he's a PLUMBER
161	C	(1.0) yẹah (.) an what does your mummy 'do
162		(2.0)when shẹ goes to 'work
163	T	*(3.6) ° she likes to go home°* *whisper*
164	C	(1.1) what does she do at wo̤:rk
165		(2.0) 'who does she look åfter
166	T	3.6)((inaud - whisper))
167	C	(1.2) no- (.) er (.) er (.) when she goes to wo̤:rk
168		(2.7) 'where those bùdgies are
169	S	(0.5).hh(hhhh)I've 'eard about 'these bụdgies (0.3) is this 'Mop an Bùcket
170	C	((0.7)°ye:::[åh]°
171	S	['Mo] p an 'Bucket the bùdgies
172	C	(0.5) she looks after thọ::se (1.6) ọ:ld (0.8) pėople (.) dùn't she

....

174	S	'Tina dårling (1.1) can you tėll 'me: (1.7) in 'what 'way (.) are a 'shi:rt
175		(.) and a hạt [(.) the 'sa:::]me
176	T	[aaaaaa]
177	S	(0.8) what's the 'same about a 'SHIRT and a hạt
178	T	(1.1)((groan))
179	C	(0.7)°what d'you thi`nk (1.6)'what d'you-° (1.8)
180		'what's the sạ:me about a shj::rt (0.7) what 'Tina wėars (.) a shirt
181		(1.0) [and] a hảt
182	S	[an-]
183	T	(0.9)((groan)) =
184	C	=whadyou thi`nk (0.7) 'what d'you dò with em
185		(2.4) what d'you dò with em (2.5) whadyou 'do with
186		a 'shi:rt an a hảt (2.0) I 'bet she knòws 'Sushie (.) she'll tẹll you in a mịnute
187		(1.0)she's just having a thi`nk about it (2.6) ri`::ght (.) 'what you got to 'tell
188		Sụshi::e
189	S	(1.5) what's a 'shi:rt and a hảt (.) how are 'they the sảme 'Tine (1.7) Ti ˛na
190	C	(2.2)you 'listening to Sùshie
191		(1.3) are you li`stening (1.2) what did 'Sushie 'want-(0.7) 'what have yọu got to 'tell
192		Sùshie about that 'shi:rt an hạt (1.4) ė:::h
193	S	(1.3) 'what d'you dọ with 'them 'both (.) Tina =
194	T	= °I ave to ride on my bị:ke°
195	S	(0.7)you av-
196	C	(.) nǒ::: (0.5) 'what do you do with a 'hat and a shi`:rt
197		(2.6) 'what d'you dò with em
198	T	(0.9) I have to 'put it round my shọu::lder

199	S	(1.1) that's 'what you dǫ with your shįrt (.) įnnit
200	T	(1.0) 'I ave to keep 'warmm
201	C	(1.2) °have to keep you wạːrm°
202	T	(0.9)I want my 'cardigan 'oːːnn
203	S	(1.8) oːkạy 'love (1.1) okạy we'll 'do anǫther 'one (1.0) let's see what èlse we've
204		got to 'ask you 'noːːw

205 ....

206	S	shall we 'do (.) see if we can do some sùms 'ere
207	C	(1.1) °oóːːh (.).hhh´hh (.) woːːːw°
208	S	(5.0) riˋght (.) I need my tre¯es
209	T	(2.7) why do I have to do any 'suːmmss
210	S	(2.1) I got some trẹeːːs (.) 'ere
211	C	(.) some treě::s (0.5) wôːːw (0.6) we some-(.) see some tr-(.) trèes (.) in 'Sheːrwood
212		Fǫːrest
213	S	(.) °(hhh)° (.) nôːw 'Tina (.) can you 'count these trẹes with your fiˋnger (0.8) can
214		you 'count em out lǫud so I can èar you
215	C	(2.9) cǫunt [em]
216	T	[*one*] (1.1) *two* (0.9) *three* (0.7) *four* (0.8) *creak*
217		*five* (0.7) *six* (0.5) an *seven* (0.8) *eight* (0.7) *nine* *creak*
218		(0.8) *ten* (0.6) *eleven* (0.5) '*eight* (1.6) [*fifteen*] *creak*
219	C	[ele¯v] en
220	T	(2.7) *eight* = *creak*
221	C	= ele¯ve[n]
222	S	[el]e¯ven
223	T	'*nine* (0.5) [*tr*] ees *creak*
224	C	[tu-]
225	C	(.) tu
226	S	(1.5) shall we do em agạin (0.8) shall we do em agàin (.) do- (.) get
227		'Cindy to 'help you agàin (.) ere we gǫ
228	T	(0.8) *one* (0.7) *two* (0.6) *three* (0.5) *four* (0.6) *five* *creak*
229		(0.5) *six* (0.5) *sẹven* (0.6) *eight* (0.6) *nine* *creak*
230		(0.6) *trees* (1.0) *eleven* (0.5) *fourteen* *creak*
231	C	(.)twǫer (1.8) ele¯ven (.) twǫer (1.1) tú (0.5) 'tu (.) 'oo (.) ẹr =
232	T	='*eight* *creak*
233	C	(0.7) nǫ (.) she 'just got to elẹven dịn't she =
234	S	= yèah (0.7) °she just got [to elèv]en°
235	T	['eight]
236	C	(0.5) twè:lve

237 ....

238	S	can yôu (0.6) 'use 'this 'bit of cạːːrdboard (0.7) to cǫver 'up (.) some of these trẹeːːs
239		(1.1) and 'just 'leave fôuːr (1.0) [so that-]

240	T	[can I] have some li::ne{zsss}
241	C	(0.8) mmh (.) not yęt

....

243	S	noːw 'Tina (0.9) can you cǫver up (.) 'doː like you just dịd (0.4) with 'Cindy 'then
244		(0.7)but 'this 'tiːme (.) can you 'leːave me (0.5) niˋne 'trees
245	C	(0.5) niˆːne
246	S	(0.5) 'see if you can do it for ni ˋ::ne 'trees =
247	T	= can we go to the library in a bịːt
248	S	(0.4)↓yeaˉːh↓ (.) you go in a bịt (0.9) 'come and do thịs for 'me 'noːw

....

250	S	shall we lèave 'that 'one (0.7) it's a bit àːrd 'that 'one =
251	C	='one twǫ 'three fǫur fịve 'six
252		'seven 'eight (1.5) niˋne that was niˉne lǫok
253	S	(1.9) shall we 'pop them awạːy 'Tine
254	C	(0.7) hèm
255	S	(1.3) °getting fęd 'up with 'them°
256	C	(0.6)(hhh)
257	S	(0.5) 'noːw swęetheart
258	T	(1.3) can I have some liˋ::nesː =
259	S	= in a mìnute 'darling (1.3) if I 'cut an 'apple in
260		hạːlf(1.0) how many pịⱼeces will I 'have
261	T	(7.4) °noːːw °
262	S	(1.5) ow many dàrling
263	T	(2.1) ° twǫ pieces°
264	S	↑twò 'pieces↑ (.) that's riˋght
265	C	(2.9) wèll dǫne['Tine (0.9)] you got a'nother pǫiːnt
266	S	[↓you 'good giˉːrl↓]
267	C	(2.6) y[ou've got a'n]other pòint
268	T	[°go to the]
269		(1.3) go to the 'l{aⱼ}::dies°
270	C	(0.9) laîːdies
271	T	(0.9) want to go to the liⱼːbrary =
272	C	= liˆːbrary(.) when it's tîme (0.6) it's not ǫːpen 'yet
273	S	(1.8)=[it's ràining] (.) nòw (.) lǫok 'Tine (.) it's 'raining like mạd nòw
274	C	= [when it's time-]
275	C	(0.7) when it's tî me (.) it's-(.) it's clǫsed at the 'moment
276	S	(2.2) now Tiˋ na(1.2) [if Ci- .] if Cindy (.)ad fiˋve 'ribbons =
277	T	[can I -]
278	T	= can I go to the library
279		in a 'biːːt =
280	S	= yès (.) love (.) you cạn (0.8) if 'Cindy ad 'five rịbbons (0.8)

281		an she 'lo[st -]
282	T	[what]'s thạt
283	C	(.) lị:sten (.)[lişte]n
284	S	[listen] (.) 'Cindy had 'five rịbbons (.) an she 'lost òne (1.0) 'how many
285		would she ha‾ve(3.3) 'how many would she have lẻft
286	C	(0.5) if I had 'five ribb{ι}ns in my hại:r(1.6) an I 'lost ọne (1.5) 'how many would I
287		have lẹft (6.0) if I had 'fi::ve rịbb{ι}ns (1.2) in 'my hǎi::r (0.9) and one 'dropped ọut
288		(1.2) how many would I have lẻft (2.6) rị::ght (2.4) [how] mány =
289	T	[°one°]
290	T	= one
291	C	(1.4) °she said ọ:ne (.) 'Su[shie]°
292	S	[okȁy]
293		....
294	S	I'm gonna 'ask you what some wọrds 'm[ean nòw]
295	T	[back to] the 'library to
296		be ọpen
297	S	(0.6) nyi- it's 'not ọpen yèt
298		(0.8) they're all still in be‾d (1.3) they're in be‾d
299		(.) [all them 'people who wọrk 'there]
300	T	[m. me witches book if I be]hȁ:ve
301	S	(0.7) 'what lọve
302	C	(2.7) °could she ave her 'wi(hh)tches 'book if she behà(hh)ves°
303	S	(.) a wịtches 'book
304		(0.8) do you 'like wịtches (2.3) do [you 'like-]
305	T	[↑lovely] likkle wi:::::::::::tch↑ *odd voice quality*
306	T	(1.5) ↑sh' àngry↑
307	S	(0.7) whȍ: =
308	C	= she's ạngry (.) th[at wịtch]
309	T	[↑sh'] angry little wi:::::::::::tch ↑ *odd voice quality*
310	S	(0.7) 'angry 'little wịtch
311	T	(1.2) ↑shangry little wi:::::::::::tch↑ *odd voice quality*
312	S	(.) 'why's th{ι} (.) wịtch 'angry
313		(2.6) 'why's that wịtch ạngry
314	T	(.) cos she's a {ʧi:ltəmm̩] (.) guess what
315	S	(0.7) whȁ‾t =
316	T	=because {sʃ}ụshi:e (.) she's a likkle chicken pȋ ::e
317	S	(hhhhhhhh).hhhh (.) is that little wịtch a 'chicken pị:e
318	T	(0.9)yes she ịs a likkle (.) {k}steak an kidney 'pi::e (.)
319		because she ↑ịs↑ a likkle (.) chicken 'pi:::e (0.6)
320		cos she iş a likkle steak ann (.) kidney 'pi::e
321	S	(.)'chicken pie 'a[nd a-]

322	T	[CO]S SHE IS A LIKKLE STEAK AN KIDNEY Pi::e
323	S	(0.5) I thought she were a chicken 'pie
324	T	(0.9) cos she is a likkle steak ann kidney 'pi::e
325	S	(.)'steak an kidney and 'chicken pi::e (1.6) now Ti¯na (.) I'm gonna ask
326		'you what some wo:rds 'mean okay (0.9) you 'listen carefully an 'tell me what
327		each 'wo::rd mea::[ns]
328	T	[.hhh] 'ye::s
329	S	(.) oka:̈y
330	T	((inaudible))
331	S	(0.9) can you tell me 'what a [kni` fe is]
332	T	['where's 'Harr] y
333	S	(0.7)'I don't 'know (.) 'tell me what a knife is
334	T	(1.0) 'where's 'Harry
335	C	(0.7)no:: 'list[en Ti¯ne]
336	S	[you 'tell] me 'what a kni` fe is (.) 'what's a [kni fe]
337	T	['where's] (.) Harry
338	C	(.)Ti´na
339	S	(.)'what's a kni::fe
340	T	(1.0)'no:: (.) 'where's(.) Harry
341	S	(1.6) 'I don't know where 'Harry is
342	T	(0.8)['whe]re's Harry
343	S	[wh-]
344	S	(0.5)'what's a kni˘::fe
345		(1.2) te[ll me w-]
346	T	[w-(.) what d]o you mean (.) WHERE'S HA˘RRY
347	S	(1.0) hh 'tell me what a [kni` fe is]
348	T	[w-(.)w-(.)] yes (.) but 'where's arry
349	C	what's a- =
350	S	=if I tell you 'where Harry is will you 'tell me
351		[what a kni` fe is]
352	T	[yes but yes] but Sushie (.) 'where's Harry
353	S	(.)↑he's at-↑ (.) he's go- (.) e's [not 'ere]
354	T	[yes but] (0.5) yes but Sushie (.) 'where's Harry
355	C	(0.6) listen (.) listen(.) ss[shhhh]
356	T	[yes but-(.)] Sushie (.) ['where's] Harry =
357	C	[listen]
358	C	= listen (0.6)
359		'what did 'Sushie (.)just a¯sk you
360		....
361	C	'what i`s a 'knife
362		(1.9) you kno¯w what a 'knife is do¯n't you

363	T	(2.3) you do it with a ˈfo::rk
364	S	(0.5)you ˈdo it with a ↑fo:rk ↑(.) yɛs ((clap))
365		(1.0) vè:ry ˈgood
366	C	(0.9)ˈri:::ght (1.6)ri:ght =
367	T	= te[ll- (.) can y]ou tèll me [(0.7) ˈSu]shie
368	C	[ˈlisten to-] [listen]
369	C	listen =
370	S	= whàt ˈlove =
371	T	= can you tèll me (.) oo::ˈs Mister ˈTickl::e
372	S	(2.6)ˈwho is ˈMister Ti`ckle
373	T	(0.7) who's that (.) can you tèll me
374	S	(0.5) ˈwho is ˈMister Tickle
375		(1.5) I don't know (0.8) is e a ˈMister Man
376		(1.6)is e that ˈo[ne] with the ˈlong [ˈwavy ǎ::rms]
377	T	[{k`}] [eh- (.) nò:::]
378		(.) can you tell me: (0.5) what do you have to dò:(0.4) with ˈfa:n(.)ˈtastic
379	S	(0.8) I don't kno¯:w
380	T	(0.8) {kənəʔ}- (.) can you tèll me
381	S	(0.8)what =
382	T	= Sushie (.) where {ɪz˩ə} (.) where is a ˈfan ˈtastic
383	S	(0.4)ˈwhere ˈis fantastic
384	T	(0.7) ˈno::(.) can you (.) ˈtell me(.) where is a ˈfanˈtasTIC
385	S	(.) I don't knô::w
386	T	(1.0).hh{ʦ}ushie (.) can you (.) ˈtell me(.) where is a ˈfanˈtasTIC=
387	S	=ˈwhat's
388		a ˈfantas[tic]
389	T	[°(hh)](hhh[hh[h)°]
390	C	[(hhhhh]hhhhhhh) (.){ə}you-(.) are you ˈfanˈtastic
391		(1.5) is [Tina ˈfanˈtasti´c]
392	T	[{↑ɛləʊ (0.7)] ɛlələ} ↑
393		(0.9) =[ca]n you tell me ShUSHIE {ə}(.) WHERE'S A ˈFANTASTIC
394	C	=[á::y]
395	S	(.)I don't know (.) p'raps there's one in another roo:m
396	T	(0.9) can you tell me Sushie (.) where is a ˈfanˈtastic
397	C	ri:̀[ght]
398	S	[ca]n you answer ˈme: (.) ˈwhat an umbrèll[a is] ˈnow =
399	T	[{kəʔ}]-
400	T	= can you tell me
401		where{əaʊts} is that ˈfanˈtastic =
402	S	= you know how you ˈanswered me ˈwhat a kni`fe
403		was

404	C	(.) li`sten (.) wh-(.) 'what is an ùmb{ə}rella (0.4) 'what is an ùm[b{ə}rella]
405	S	['tell m]e wh-
406	C	(1.5) wha-(.) 'what is an umbrèlla
407		(2.5) ° 'what is an umbrèlla°
408	T	I would like to get crosss
409	C	(1.3)'what is an ùmbrella
410		(2.0) °lì sten (.) lì sten (.) 'what is an umbrèlla°
411		(2.2)'Cindy's got one in her bàg (0.9) 'what is an umbrèlla
412	T	(3.3) it is called a broll{ì:}
413	C	(0.6) °a brò [lly °]
414	S	[it is 'c] alled a bro̧lly (.) it i `s called a 'brolly (1.6) that's vèry 'good
415		(.) 'let me 'write do̧wn what 'you [sàid]
416	T	[it] is called a shake yer hạnds
417	S	(1.1) this is (.) 'called shạking 'hands (.) it 'is(.) 'yeah
418	S	(2.0) [that's a-]
419	C	[don't]you sque¯e:ze [(0.7) don't you squèe::ze]
420	S	[(hhhhhhhhh)ts called] (.) squҽezing
421		my 'and =
422	C	= don't [you squĕeze]
423	T	[don't you] Súshie's 'hands =
424	C	= don't you squèe:ze
425		it's(.) nàughty
426	S	(.) T`ina
427	T	{ə} 'squeeze Súshie's 'hands
428	C	`ye::ah`
429	S	(.)'Tina lo̧ve (0.5) 'what's a clo¯ck
430		(1.3) whạt's a ['clock]
431	T	[((little groans))]
432		(0.4){ss}-(.) Sushie (.) {gə?} don't you bi̧::te
433	S	(0.7) no:: I won't bi̧te (0.5) yo̧u don't 'bite 'then (0.3) 'either (0.3) we nȩither of us
434		will 'bite
435	T	(0.5)why-(.) why don't you bi̧::::te
436	S	(.) because it's 'not ni̧::ce (1.1) ↑hú:rts↑ (0.7) ↑o::w↑ (.) ↑oóoòoóh dè::ar ↑
437		(0.7)↑makes you go ó::w ↑ =
438	T	= I like you to 'laugh
439	S	(0.6)whá(hhh)t
440	T	(1.3) I like you to lạugh
441	S	(0.5)you want me to lạugh (1.0) ↑hà hà hàhàhàha:: ↑
442	C	(1.4)(hhhhhhhh).hhh ha ha 'where you [góing]
443	T	[Sushi::e] (.) me give you a ki̧ss::
444		....

445	C	'what is an ạt (2.3) wha-(.) 'what is an 'at (1.1) 'what is an ạt{(0.7) ri´::ght (1.0) 'tell
446		me what an ạt is 'then (1.5) 'tell me what an a¯t is (1.9) 'what is an ạːt
447	T	(0.7) a 'brown ạt
448	C	(0.5) a brọwn 'at
449		(1.0){ə} 'where do you wẹar it
450	T	(1.3) on your 'head (3.3) did you ẹar what 'she sạid
451	S	I dịd (.) yéah (1.0) I 'eard what yọu 'said as wẹll (2.2) I dịd yẹah =
452	T	=°on your head°
453	S	on yer ẹd (0.6)(hhhhhh)
454		(1.2) nó::w (.) d'you 'know what a bịcycle is (2.3)you 'know about thêm (.) dọn't
455		yer (3.4) 'what's a bịcycle (2.1) WHAT IS JT (3.5) 'what's a bịcycle 'Tina
456	T	(0.6) (hhhhhh)
457	S	(3.5) 'what's a bịcycle (0.8) you 'know what a bi` cycle js
458	T	(2.0) it means you've got to {ʊ}eddle
459	S	(0.8) it 'means you've got to pe¯ddle (0.5) yè::::s: (.) it dọes
460	T	(.) Sùshie
461	S	(0.7)whàt 'love
462	T	(0.9)you- (.) you have got some 'pastrieːss
463	S	(0.8)pàstries
464		(1.7) I've got some whàt
465	T	(1.0) can you tẹll meː: (0.8) ave you got some 'taː::rtss
466	S	ave [(h)I go(hh)t some-(hhh)]
467	C	['pastries en	tàːrts =
468	T	= can you tell me (.)
469		↓ave you got a 'sherry::↓ =
470	S	= I 'wish
471		I dị d ave some 'taː:rts (.)'what was that 'last óne
472	T	(0.6) °ave you got a sherry::°
473	S	(.) ave I got a chẹrry (1.1) I don't think I've even got a 'cherry in my ọuse
474	T	(0.6) can yọu tell me(.) ave you got a (1.0) 'roː::lling °pinn°
475	S	(.)I ạve got a 'rolling pin
476	C	(1.6) but she doesn't (.) ↓ 'use it very 'often ↓=
477	S	=(hhhhh[hhhhh)h]
478	T	[can you] tell me=
479	C	='liː::ke [me]
480	S	[(hh]hhhh[h)]
481	T	[have]n't you got a (.) 'nok(.) clọck
482	S	(1.0) I ạve got a 'clock (.) ↑yeah↑
483	T	(0.8) where ịs yours
484	S	(0.7it's at ọme (2.0) I got a wạtch 'ere (.) that's dị fferent though =
485	T	= can you tell me

486		where'sss (0.5)that steak an (.) kidney: {ɱaʊːːː} =
487	S	=that 'steak and 'kidney 'piːːːe's(.)
488		'in your tummy
489	T	(1.8) it's gonːːe
490	S	(.)(hhhhhhhh) has it gòne (1.0) noːw (0.5) 'Tina(.) 'tell me what a nàil is (0.9)
491		'what's a nàil (3.7) 'what's a nail
492	C	(2.0) 'what's a nàil
493	S	(5.3) 'what's a nàil =
494	T	=to cut your hànds with
495	S	(1.1) to 'cut your ↑hạːnds↑ with (1.0) is 'that what it is (3.0) o⁻ːːkay
496	C	(.) she 'means when I'm 'cutting er nạils dọn't y[ou]
497	S	[aaːh](.) is that what she- (.) ạaːh
498		(.) to
499		['cut] your hàːnds with (.) °right°=
500	C	[°yeaːh°]
501	C	=°yeạːh°
502	S	[(3.5)] °oːː⁻kaːy 'love°
503	T	[.hh hh.hh]
504	T	(0.5) Sushịːːe
505	S	(.) whàt =
506	T	= can you 'tell me(.) what (.) is (.) an 'ot dòg
507	S	(0.5) 'what is an 'ot dòg(.) (1.0)↑ an òt dog ↑ [↑ (.) it's a 'sausage in a bụn↑]
508	T	[.hhh hhh .hhh. hhhhh (hhhhhhh).h]
509		....
510	S	tell me 'what a dònkey is
511	T	(1.6) isːː wha you riːde onːːː *creak*
512	S	(0.6) ↑ is whàːt ↑
513	T	(0.5)(hhhh) (0.7) ↑something that you rihhh(hhhh)[(hhhhhhh).hhhhhhhhhh]
514	S	↑[something that you rịːːde]
515		on ↑ =
516	T	= *I ave got an ohhhhhrse called Mahhhhhrmalade* *breathy*
517	S	(0.8) ave you got an ↑họːrse ↑ [called Màːːrmalade]
518	T	[WHEːːRE'S A- WHERE']S AUNTY MO C
519		(0.6) ḷisten (.) don't 'talk [lòuːːd]
520	T	[I say] Sụshie (.) [where's ty Mọ]
521	C	[don't talk lòud]
522	C	(.) don't 'talk lòud (0.7) 'softly
523	T	(0.5) 'where's Aunty 'Mo
524	S	(.)[I don't] knọw 'where she is 'love
525	C	(.)[inaud]
526	S	(0.7) I don't knọw 'where she is

527   (1.6) can you tèll me (0.8) what a thi`ef is

528   T   (1.3) I don't kno::w

529   S   (0.7)you don't know °what a thief is°=

530   T   = can you 'tell me::: (1.8) can you 'tell me

531   what's {əm} (0.9) can you tell me what is a piece of 'beef (.) i`sss

532   S   (.) a piece of bèef [is]

533   T   [hhh] (0.6) we- (.)wha- (.) where is that 'bee::f:: (1.3) can you tell

534   me where° it is°

535   S   (.) d'you think it might be [in the bùtcher's 'shop]

536   T   [can you tell me what] is a 'beef:: (0.5) can you tell me

537   what is a piece of 'bee:f::

538   S   a piece [of bèef]

539   T   [is::   ]

540   S   (.) is some[thing   that   you ave   ] for di`nner

541   T   ['where- (.)   'where is that-]

542   T   (.) 'where is that (.){bəg ə} 'bee:f:::

543   (1.4) [can] you tell me 'where is that 'bag of (.) bee::f:::

544   S   [its-]

545   S   (.) the 'bag of bèef is in the ['butcher's 'shop   ]

546   T   *[where is that bag of bèef::]*   *fast*

547   S   (.) it's in the bùtcher's 'shop =

548   T   = where is that bag of (.) 'bee:f:::

549   S   (.) in the bùtcher's shop

550   T   (0.8) in that bag of 'bee:f::

551   S   (0.6) can you tell me what (0.5) jòin 'mea::nss

552   T   (0.7)no:: no:: (0.6) I dò:n't: (0.7) can you tell me [whe-]

553   S   ↑ [do] you know what jòin

554   'means↑

555   T   (.) can you tell me whereabouts is [that-]

556   C   [   ] (.) 'listen to Sùshie

557   T   (0.8) yᵉ:s:

558   C   (.) li`sten

559   S   (.)you tell me what jòin 'means:

560   (6.2) know what jòin 'means(1.8) you 'flattening my hâir

APPENDIX THREE
Appendix 3.1
Phoebe
Transcription One: 23.8.95

1	Ph	d'you know what˘sweets I buy n e:rr {lιkɹιs sɔ`lʃɔts}
2	S	(.) n˘o te`ll me
3	Ph	(1.2){lιkɹιs sɔ`lʃɔts}=
4	S	= are they your ˈbest swe˘ets
5	Ph	(.) they're my ˈbest ˌsweets
6	S	(0.9) what o˘ther ˈsweets d'you like
7	Ph	(0.9)ˈma:rshmallows with ˌchocolate on
8	S	(0.9)gor˞:sh they sound ˌreally nice
9		(1.0)wha˘t else
10	Ph	(2.3)malte:˘sers
11	S	(1.7) d'y- are you allowed to bu̲˘y ˈsweets
12	Ph	are- are y'allowed to bu̲˘y ˈsweets
13	S	(2.4)d'y'how ˈoften d'you ˈhave swe˘ets °then°
14		(2.0)can you go to the sho˘p and ˈbuy them
15	Ph	(1.2){mjɛp˞}
16	S	and what d'you ˈdo when you go to the sho˘p
17	Ph	(1.4)ˌpay for em
18	S	(0.7) d´o you (1.2)
19		with your ˈown mo˘ney
20		(2.7) d'you ˈpay for them with your ˈown mo˘ney
21	Ph	(.){mjɛp˞}
22		(1.9) mmm (.) ˈwhat d'you ˌsay ˈwhen you ˈgo into the ˌshop
23	Ph	(1.3)tha˘nk you
24	S	(.)aa˘:::h ˈthat's ní ce
25		(0.9)that's ˈreally pȯlite
26		(2.1)and then wha- what d'you ˈdo after you've said tha˘nk you
27		(2.7) to the ˈlady in the sho˘p
28	Ph	(0.8)I ˈeat them
29	S	you è̇at them
30		(0.9) d'you ˈeat them ˈa:ll at o˘nce or do you sa˘ve some
31	Ph	(0.6) eat em all a o˘nce
32	S	dô yer(1.0)
33		and then d'you ˈgo and ˈget some mo˘re
34		(0.9)hhhhhhhh.h.h.h.h
35	Ph	(2.1) go and get some mó́re yéah

36	S	(3.0) I ʰheard you ʰwent to ˌbridlington yesterday
37		did you go to bri͡ dlington
38		(3.9) did you ʰgo to br ͜idlington
39	Ph	{mjɛpˀ}
40	S	(0.8) ʰwhat did you ʰdo thére
41		(6.5)what did you ʰdoˌthere ˌPhoebe
42	Ph	(.)we ad some ʰchips
43	S	di͡ d you
44		(1.5) did you ʰwalk by the sêa
45	Ph	{mjɛpˀ}
46	S	(.) what e`lse ʰdid you do
47		(6.9) ʰwhatˌelse did you ʰdo
48		(1.6) what did you d`o at ʰbridlington
49		(5.8) can you remêmber
50	Ph	(1.8)°yeah°
51	S	(.)tell me ʰwhat you di `d
52	Ph	(2.0) walked by theˌsea=
53	S	=mm̂m
54		(5.4)ʰwhat did youˌdo (.) by theˌsea
55		(6.1) ʰwhat did youˌdo
56		(3.9) d'you remêmber
57		(3.5) what youˌdid by th- (.) by ˌbridlington
58		(.)by the ʰsea at bri`dlington
59		(3.4) did you ʰave aˌwalk along the [ˌbeach]
60	Ph	[yeah]
61	S	(.) ᵔyeahᵔ (0.6)
62		did you ʰgo in anyˌshops
63		(4.7) ↑did you ʰgo in any sho`ps↑
64	Ph	(.) no
65	S	di͡ n you (1.4)
66		did you ʰgo and ʰsee: (.) aˌshow
67	Ph	(1.0){mjɛpˀ}
68	S	(.)ʰwhat was it abôut
69		(2.0) ʰwhat was the shôw about
70		(7.2) can't you remêmber
71		(2.7) have you for`gotten what it was about =
72	Ph	={mjɛpˀ}
73	S	(.)aa`::h (1.2)
74		oh de`ar
75		(1.0)ʰwho did you go to bri `dlington with
76		(3.3)can you reʰmember who you wènt with

77		(5.4)Phóebe
78		(1.9) can you re'member who you wènt with
79	Ph	(2.7)went by my'self
80	S	(0.6) ↑di `d you↑
81		(2.1) did ãngela go
82	Ph	(1.0) °{mjɛpˑ}°
83		(0.9)no
84	S	no`
85		(1.2) did you 'go on a bu`s
86	Ph	(.) {mjɛpˑ}
87	S	(0.6) did you 'go on one of the (.) 'Forest Hou`se buses
88	Ph	{mjɛpˑ}
89	S	'which o`ne
90		(1.6) 'what ˌcolour was it
91		(4.3)↑ 'what ˌcolour was it Phˌoebe↑
92		(4.7) Phoebe (.)
93		'what co`lour was it
94	Ph	it was a ˌred colour
95	S	a re`d colour
96		(.) ↑bri `lliant↑
97		(1.5) an did you 'sit at the frònt
98	Ph	(1.6){jɛpˑ}
99	S	o::h 'that must have been ˌgood
100		(1.0)have 'you 'been on your ho`lidays this year
101		(1.2) have 'you been on a ho`liday
102	Ph	(2.1)yeah I have
103	S	↑'where did you gó↑
104	Ph	{wʊˌɛɾi}
105	S	(0.9) ↑with èlly↑
106	Ph	{wʊɟ'ɛli}
107	S	(0.9)p- pwhèlli
108	Ph	no {wɪddɛ`di}
109	S	(1.2)ˌsay a'gain =
110	Ph	={wɪddɛ`di}
111	S	with èddy
112	Ph	(1.4){wɪddɛ`di} *slightly increased in vol and slight increase in pitch on stressed syllable*
113	S	(1.3) wh- whŏ's that
114	Ph	(1.1) he's the man who takes me on ˌholiday
115	S	ˌoo:::h ˌri::ght=
116	Ph	= °o::h ri ´ght°
117	S	(2.2) and 'who e`lse did you 'go with

118		(4.7) and 'who ĕlse did you go with	
119		(1.6) ↑Phŏebe↑	
120		(3.3) ↑Phŏebe↑	
121		(.) 'who e`lse did you go on 'holiday with	
122		(7.3) did you 'go with your daddy	
123	Ph	(.) °yeah I did°	*fast*
124	S	(.) an- (.) mu´mmy	
125	Ph	(.) mummy	
126	S	yea´h	
127		(2.4) and wh´o else	
128	Ph	(2.8) Dan	
129	S	ˌwho's ˌDan	
130		(4.6) who'sˌDan Ph ˌoebe	
131		(3.4) Pho´ebe	
132		(.) ↑ who'sˌDan↑	
133		(4.5) who'sˌDan	
134		(3.4) is Da`n your 'brother	
135	Ph	{mjɛpˀ}	
136	S	(1.8) how 'old isˌDan	
137	Ph	(0.6) 'sixteen	
138	S	(.)ˌis he	
139		(2.0) 'what does heˌlook like	
140		(6.0) 'what doesˌDanˌlook like Phoˌebe	
141	Ph	(0.9) a boy	
142	S	he 'looks like aˌboy	
143		(1.6) what 'colour ha`iːr has he 'got	
144	Ph	(2.3) red colour	
145	S	ˌred colour	
146		(.) is it - does he 'look likeˌyou a bit	
147	Ph	{mjɛ}	
148	S	(6.5) who li `ves in this 'house	
149		can you 'tell me who 'lives in thiṣ house	
150		(8.5) Pho´ebe	
151		(2.0) ↑can you 'tell me who 'lives in this ho`use with you↑	
152		(5.6) 'quite a 'lot ofˌpeople aren'tˌthere	
153	Ph	(0.7) {ɛəːpiplnǂə}	
154	S	(.) 'who 'lives in the ho`use	
155		(7.8)'who 'lives in the ho`use	
156	Ph	'Andrea	
157	S	(.) A´ndrea	
158	Ph	'Andrea	

159	S	°who ˎelse°
160		(6.9) 'who ˎelse
161		(4.5) is there aˈnother gi `rl in the 'house
162		(5.3) ye´ah
163		(1.0) is there aˈnother gi `rl in the 'house
164		(2.1) 'who is 'it in theˎhouse
165		(1.5) Phoebe::::
166		(0.7) you're ti `red aren't ˎyou
167		(1.2) are you ti̊ red
168	Ph	(0.7){mjɛpˑ}
169	S	'why you ˎtired
170	Ph	(1.8) I like being tired
171	S	(.) do you ˎlike being 'tired
172	Ph	{mjɛ}
173	S	(0.8) 'why d'you 'like being ti̊ red =
174	Ph	= I do
175	S	(2.1) d'you 'like 'going to sle`ep
176	Ph	(1.1){mjɛpˑ}
177	S	(.) ye`ah (.)
178		'what 'else do you 'like do`ing
179		(6.4) 'what 'else do you 'like do`ing
180		(2.9) Pho`ebe
181		(3.6) ↑what 'else do you 'like ˎdoing ˎsweetheart↑
182	Ph	{ɡəuntɔːlət}
183	S	(0.8)d´o you
184		(2.1) is that ni `ce
185	Ph	°{mjɛ}°
186	S	(3.1) and what 'else d'you 'like do`ing
187		(7.3) what 'else d'you 'like do`ing
188		(5.0) what's your 'favourite thi `ng
189		(4.9)tell̊ me
190		(3.1) ↑can you ˎtell me↑
191		(.) you got a ˎlovely smi̊le
192		(1.6) it's 'lovely when you smi̊ le
193		(3.1) what 'else i- (.) do you li `ke
194		(.) what's your 'favourite 'thing in the wo`ːrld
195	Ph	(12.9){tsvɪmɪn}
196	S	(0.9) spinning
197	Ph	(0.6){swɪmɪn}
198	S	(1.3) 'what's ˎthat
199		(4.9) 'what is ˎit

200	Ph	(2.5){sʃɪmɪn}
201	S	(.) swi `mming
202		(1.3) are you 'good at swi `mming
203	Ph	{mjɛpˀ}
204	S	(0.6) 'what d'you ˛do
205		(1.8) can you 'do (.) the 'front cra`:wl
206	Ph	(.) {fɹʌnʔkɹɔ:}
207	S	(1.0) and what 'else can you d`o
208		(4.4) d'you- can you 'swim on your ˛back
209	Ph	(0.6){mjɛpˀ}
210	S	what's y- what's- 'what- (.) d'you 'like about ˛swimming
211		(.) what's 'good about swi `mming
212		(16.7) what's 'good about swi `mming fio`na
213	Ph	having sweets later
214	S	ăre you
215	Ph	{mjɛpˀ}
216	S	oh what sòrt
217		(3.0) what sòrt
218	Ph	(2.9) {lɪkɹɪs˛sɔ:lʃɔts}
219	S	(1.0)˛a:h ˛dear they 'sound n̆ice
220	Ph	°yeah they ˛are they're ˛nice°
221	S	(2.6) and what ˛else do you li`ke
222		(0.7) what 'other 'thi:ngs d'you like to ea`t
223	Ph	easter eggs
224	S	o::hhh ea´ster e´ggs
225	Ph	{mjɛpˀ}
226	S	'when d'you 'have ˛easter 'eggs
227	Ph	at 'easter time =
228	S	=yèa::h
229		(1.5) ˛goodness 'me
230		(.) did you 'have a 'lot at ea`ster
231	Ph	n'a lot at easter
232	S	(5.3) what 'else d'you li`ke
233		(13.5) what 'else d'you ˛like
234	Ph	(1.2) mars bars
235	S	°oh mars bars° they're ˛scrummy
236	Ph	(0.7) I 'like them
237	S	do ˛you =
238	Ph	=yeah
239	S	(7.7) how 'often do you go ˛swimming
240	Ph	(1.2) lots of da:ys

241	S	(0.6) 'lots of ˌdays
242	Ph	°{mjɛ}°
243	S	(0.9)'where do you ˌgo
244		((Ph chokes while drinking))
245		(1.3) 'where do you 'go ˌswimming
246	Ph	(3.1) {ʊŋ gɔɬ}
247	S	(1.1) in whe´re =
248	Ph	={ʊŋ gɔɬ}
249	S	(0.8)'where's ˌthat
250		(4.3) do you have to 'go on the ˌbus to get [there]
251	Ph	[{mjɛpˑ}]
252	S	(1.4) and 'who 'goes with ˌyou
253	Ph	(11.9) 'angela
254	S	döes she
255	Ph	(0.7) m
256	S	(2.4) 'which one's ˌangela
257		(.) can you 'tell me what ˌangela 'looks like
258		(6.8) can you 'tell me what she ˌlooks like
259		(9.1) can you 'tell me what 'angela ˌlooks like fi 'ona
260		(9.1) ↑can you 'tell me what she ˌlooks like↑
261		(6.5) can you 'hear that ˌradio 'playing
262	Ph	(2.4) {jɛpˑ}
263	S	(2.0) d'you 'like mu`sic
264	Ph	(0.6) °{mjɛpˑ}°
265	S	(1.2) have you 'got a re´cord player
266	Ph	(0.6) {jɛpˑ}
267	S	(.) 'what 'records d'you ˌlisten to
268		—————————————————————————————————————
269		
270	S	'what do we 'have to ˌdo Pho`ebe
271	Ph	(2.5) buy 'sweets s'afternoon
272	S	(0.6)you gonna have some 'sweets this afternöon
273	Ph	{mjɛpˑ}
274	S	(0.7) wöw
275		(6.0) that up thëre (0.9) 'where do thëse things go
276		(3.7) they just go in like ˌthat
277		(4.1) 'tell me 'what we have to do with this Pho`ebe
278		(2.0) what do we have to ˌdo
279		(4.3) do we have one of ˌthe:se =
280	Ph	={mjɛpˑ}
281	S	(.) you have tha`t one then

282		(5.4) ri`ght (.) do you want to go f îrst
283		

284		
285	S	that was ‚good ↑wâsn't it↑
286		(1.5) how many ‚are there
287		(1.6) can you co`unt them for me =
288	Ph	= ‚{m·ʌn}(2.1) ‚two (1.6) ‚°three° (1.7) ‚four
289		(1.3) ‚five (1.5) ‚six (1.5) ‚seven (2.1) ‚eiːght (2.6) ‚°nine° (2.1) te`n (1.1) el ‚even
290		(1.5) twe`lve
291	S	↑bri`lliant↑
292		(6.4) `played that bêautifully
293		(7.2) they're `funny ȧren't they
294		(1.1)funny ‚fiːsh
295		(1.9) what's that one- (.) `s got funny ‚eːyes ‚hasn't it
296	Ph	{mjɛpˀ}
297	S	(0.7)whs- `what's ‚funny about its ‚ey::es
298		(6.9)is it-(.) it's not the `same as thăt one ‚is it
299	Ph	°noː°
300	S	(1.5)what's ‚different about it
301		(6.8) óh
302		(4.7) do you like lêgo
303	Ph	(2.2) no
304	S	don't you lí ke it
305	Ph	no
306	S	why ‚not
307	Ph	*want to lay ‚down* *fast*
308	S	(1.2) `say a‚gain
309	Ph	I want to `lay down
310	S	you want to `lay ‚down
311		(1.3) you going to ‚sleeːp
312	Ph	{mjɛpˀ}
313		

314		
315	S	who's that `man who lives he`re
316		(6.4) `who's that măn who lives `here
317		(3.3) what's `he ca`lled
318		(2.9) what's `his na`me
319		(5.2)↑ `what's he călled↑
320		(.) ↑is he `called Dăve↑
321	Ph	yeah

322	S	´is he
323	Ph	°uh°
324	S	(0.9) and what's the 'lady ˋcalled who 'lives‿here
325	Ph	{gə} buy some sweets {sɪs} afternoon
326	S	are you gonna ˋbuy some‿sweets {sɪs} 'afternoon =
327	Ph	= {mjɛpˀ}
328	S	(1.4) have you 'got some‿money to 'get some
329	Ph	yeah I have
330		(4.6) °got some 'money to ˋbuy some°
331	S	good
332	Ph	(0.6) °good°
333	S	(1.2) 'where you gonna ge´t em from
334	Ph	(0.6) from the ˋsweet‿shop
335	S	(0.8) wh- 'where's the‿sweet shop
336	Ph	(2.8) in ˋFoxton
337	S	in Fǫxton
338		(3.1) d'you 'go there 'every‿day
339	Ph	(0.9){mjɛpˀ}
340	S	(4.5) what do you 'like about 'sweets Ph‿oebe
341	Ph	(1.1)I 'eat them
342	S	(0.9) what's 'nice about them when y-(.) when you‿eat them
343		(.) w-why do you‿like them
344	Ph	they're nice
345	S	(2.2)what do they‿taste of
346	Ph	all right
347	S	(0.7)they 'taste‿all right
348	Ph	{jɛpˀ}
349	S	(3.5)what 'else d'you 'like to‿eat
350	Ph	(4.0) {tʃɒklɪt}
351	S	o:::h lǒvely::
352		(5.8) this is a 'nice‿watch
353		(1.6) 'where did you ˋget this‿watch from
354	Ph	(3.7) from the 'shop
355	S	did somebody‿give it to you (.) this [‿watch]
356	Ph	[{mjɛpˀ}]
357	S	(.) who ˋgave it to‿you
358		(4.3)who‿gave it to you
359		(.) did your‿daddy give it to you
360	Ph	(0.8){mjɛpˀ}
361	S	(1.4) 'where does your 'daddy‿live
362	Ph	(1.0) in a ho:use

363	S	(0.8) whereab_outs
364		(1.4) in Foxton
365	Ph	in Foxton
366	S	(3.9)'where does ˌDan 'live
367		(5.6)'where does Dăn live
368		(3.7)Pho`ebe
369	Ph	(1.1) in a house
370	S	(1.0)ˌwhere
371		(.) who´ with
372	Ph	(0.7) mummy
373	S	does he 'live with ˌmummy
374	Ph	{mjɛpⁿ}
375	S	(1.8) what's 'mummy's na`me
376		(1.5) 'mummy got a nåme
377		(6.4)has 'mummy got a nåme
378		(5.2) do you help 'keep this 'house all tí dy Ph[oebe]
379	Ph	[{mjɛpⁿ}]
380	S	beåutifully tidyˌ isn't it
381		(2.4)have you 'helpedˌ make it like 'this
382	Ph	(1.1){mjɛpⁿ}
383	S	do you haveˌjobs to do 'every 'day
384	Ph	{jɛpⁿ}
385	S	what 'jobs d'you 'have toˌdo
386		(5.1) what 'jobs d'you 'have to do Pho`ebe
387	Ph	(3.6) cleaning (2.4)
388		{ɹaɪdɪn} in here
389	S	(2.4) 'what in he´re
390		(1.7) 'what do you have to 'do in he´re
391	Ph	(.) cleaning
392	S	cleaning (.) what e´lse
393		(4.2) what e´lse
394	Ph	(1.3) hoo:vering
395	S	hŏo:vering
396		(.) and whatˌelse
397		(4.7) what 'else d'you 'have to d´o
398		(3.0) ↑what else d'you have toˌdo↑
399	Ph	(2.4) hoovering u´p
400	S	(2.1) d'you have to 'do anything in the ki`tchen
401	Ph	(.) {mjɛpⁿ}
402	S	what
403	Ph	(0.7) 'big 'mug of 'tea

404	S	(1.0) 'make a 'mug of ˌtea
405	Ph	yeah 'make a mug of tea
406	S	(0.8) d'you 'make 'tea for (1.0) yoˊu
407	Ph	m 'teaː for 'meː:
408	S	(0.6) 'tea for yŏu
409	Ph	(.){mjɛpˀ}
410	S	(3.7) d'you ˌlike 'cups of 'tea
411	Ph	yeah
412		(.) 'like 'cups of 'tea
413	S	doˊ you
414		(.) 'what's thaˊt
415		(.) oh got the ((4 syllables))
416		(1.2) and what oˋther 'jobs d'you do
417		(.) d'you have to 'clean your ˌbedroom
418	Ph	(.) {mjɛ} clean my bedroom
419	S	have you got a 'bedroom 'all to yoursĕlf
420	Ph	{mjɛpˀ}
421	S	(1.4) and wh- 'what's in ˌthere
422		(4.3) 'wha's in your bedroˊom
423	Ph	(5.2) {ðæt}'make 'mugs of 'tea
424	S	(1.3) eˊh
425	Ph	like making mugs of tea
426	S	do yoˊu
427	Ph	{mjɛpˀ}
428	S	(1.6) do you 'make 'mugs of 'tea for ˌeveryone or ˌjust you
429	Ph	(1.2){tə} 'everyone
430	S	(0.9) ĕveryone
431		(2.4) and does 'everybody 'say ˌthank you Ph 'oebe when you 'give em their 'tea
432	Ph	{mjɛpˀ}
433	S	(2.1) is 'tea your 'favouriteˌdrink
434	Ph	{mjɛpˀ}
435	S	(13.7) do you 'go and 'see your 'mummy and 'daddy ˌsometimes

Appendix 3.2.

Phoebe

Transcription Two (WISC-R); 20.9.95

1	S	right (.) you réady then =
2	Ph	=yeah réady then yeah =
3	S	= are you- (.) can you mânage
4		((to careworker))
5		(3.8) rì ght (1.6) rì ght (.) what do you call thìs Phòebe
6	Ph	(1.0)i - (.) it's a thùmb
7	S	it ì s a 'thumb (.) ↑‿yea::::h↑
8		(1.0) how m[any -]
9	Ph	[there's more] in th kìtchen *fast*
10	S	(0.9) so´rry
11	Ph	s 'more in the ‿kitchen if you wànt it (.)
12		and you got to 'drink thàt one 'fi::rst
13	S	well you 'got to -(.) you 'got to e:m. (0.8)‿*drink 'that* (.) *fast*
14		'drink it ‿slo:wly (.) cos it's hòt
15	Ph	(.){jɛp}
16	S	how many eàrs d'you 'have
17	Ph	I got 'two 'e:ars
18	S	(0.7) ùhuh (.) brì lliant
19		(0.8)how many 'legs does a 'dog hàve
20	Ph	(1.0) 'two:
21	S	(2.0) ŏk
22		(1.2)what 'must you ‿do to make 'water bòil
23	Ph	(2.3) mm mm m (.) e:r (.) in a kèkkle
24	S	(0.7)yèa:::h
25		(6.2) o‿kay
26		(1.1) how many 'pennies make a ‿pound
27	Ph	(1.5) 'sixty 'pen (.) por some 'swee:ts (.) ↑àll ri::ght↑
28	S	(0.9)↑ye´ah↑
29	Ph	I need to 'buy a { 'paxɪʔ ə 'tʃɒxlɪt} eclàirs to'day =
30	S	= ↑mmh[m]↑
31	Ph	[or f] ùdge =
32	S	= ↑d'you
33		*know how many p- (.) 'pennies make a pound*↑ *quite fast*
34	Ph	(3.2) I 'might buy a big {'paxɪʔ ə}‿fudge to'day (.) ↑àll right↑
35		(.) if I get fùdge
36	S	ŏka:y
37	Ph	I 'love fùdge (.) ↑I‿do↑ (.) fro[m 'sw]eet ‿shop

38	S	[wh -]	
39	S	*Phòebe* (.) what do we 'call a 'baby cò:w	*fast*
40	Ph	((one syll)) knows *(.) wa (.) wa*	*((barking like a dog))*
41		(.) just being a 'baby *cow* (.) àll right	*fast*
42	S	(1.4) oka´y	
43		(.) do you know what we 'call a bǎby cǒw	
44	Ph	(1.5)mm m mm =	
45	S	=what d'you 'think it ìs	
46	Ph	(1.0)know what we think it i:s (.) 'don't we	
47	S	(0.6) n´o	
48		(1.5) d'you know how many ˎda:ys make a 'week	
49	Ph	(1.5) ˎsaturday ˎsunday (1.5) ˎmhm	
50	S	(2.9)n´o	
51		(.) ↑know how many ˎdays (.) 'make a ˎweek↑ =	
52	Ph	= that's saying hère (.) ts-(.) i s(.) a	
53		wèek (.) innit s'well	
54	S	yèah	
55		(1.1) can you 'name the ˎmonth that comes after màrch	
56	Ph	(1.1)((drinking tea))	
57	S	ooh 'careful Phˎoebe (.) don't 'drink it 'too quì ckly	
58		(1.5) can you 'name the 'week-(.) the 'month (.) that comes after màrch (.) °for me°	
59	Ph	(1.5) le's ˎthink (.) ↑*suǹday*↑	*((sing song, getting quieter))*
60		(0.6) ↑*moǹday*↑(.) ↓°*tuèsday*°↓	
61	S	(1.4) an what - (.) from what ˎanimal do we get bàcon	
62		(3.2) °d'you know what 'animal we get bàcon from°	
63	Ph	(1.0) from the bàcon shop	
64	S	↑from the ˎbacon 'shop↑ (.) ↑brì lliant↑ =	
65	Ph	= I need to buy some 'sweets sis ˎafternoon	
66		(.) d'you wanna bùy en(.) some ˎfudg::e	
67	S	I 'don't know if we're ˎgoing to the 'sweet 'pla[ce sis ˎafternoon]	
68	Ph	[I need to beˎhave my]'self if I want	
69		to ˎgo(1.1) all rìght (.) 'you behave yourself i you want to gò (.) dunno if we're	
70		ˎgoing 'yet (3.3)((*drinking tea*)) I got my ((3 sylls)) àll right =	
71	S	= ↑ha´ve you↑	
72		(1.8) all right let me 'see if we can do some of 'these ˎnow	
73		(0.9) ↑ooh↑ (.) where areˎwe (0.9) there (2.4)now I'm gonna 'show you	
74		some 'pictures in which there's (.) a 'part ˎmissing (.) Phoȩbe (0.8) okày	
75		(1.0) I want you to 'look at 'each 'picture cǎrefully (1.6) and 'tell me what's mìssing	
76		(0.6) oka´y (.) now you ˎlook at 'this 'one (.) and tell me	
77		what im'por[tant 'part's mìssing]	
78	Ph	[mmh ri::ght]	

79		((mumbles - inaudible))
80		there's a càts
81	S	(.) ↑ye´ah↑ (.) an 'what's mìssing
82	Ph	(1.6) 'nothin very mù::ch (.) i ths
83	S	whats -(.) what im'portant ˌpart is 'missing from the càt =
84	Ph	= the bom- (.) the bòdy
85	S	(0.9)no it's 'got the ˌbody[ˌisn't it (.) the 'body's] thère
86	Ph	[° 'got the bòdy °] *fast*
87	S	(.) you ˌlook (.) the - (.) the 'whiskers are mìssing =
88	Ph	= 'mis pì s
89	S	(0.6)the 'whiskers are mìssing (.) àren't they=
90	Ph	= ̇yes they ˌare *dying away to*
91		*inaudible mumbling*
92	S	have a l -(.) ˌlook (.) Phòebe
93	Ph	(0.9)yeah
94	S	(3.3) the:re we ˌgo(.) the 'whiskers are ˌmissing
95		((Ph goes into kitchen with cup)) g- 'don't have any ˌmore Phòebe
96	Ph	((inaud from kitchen))
97	S	no (.) 'leave it ˌno::w (.) 'come and 'sit ˌdown
98		((long pause while Phoebe does what she wants))
99	S	↑come on Phǫebe↑
100	Ph	(4.4) just having that 'la::st ˌbit (.) âll right *from the kitchen*
101	S	(2.3) °okày°
102		(2.7) ˌri:ght (.) oˌkay (.) no 'more 'after thàt (.) oka´y
103		(1.3) nò::w (1.0) can you 'see the 'cat's ˌwhiskers are ˌmissing
104		(0.9)oka´y
105	Ph	((mumbling while drinking))
106	S	ye´ah
107		(4.1) see the m-(.) 'whiskers are mí´ssing
108		(1.0) nòw (.) what im'portant 'part's 'missing hère (0.6) Phòebe
109		(0.6) what's 'missing ˌthere
110		(1.2) in 'that pì cture
111		(.) 'look at the 'picture Ph ˌoebe
112	Ph	(1.0) a:r (.)i -it's (.)ˌfunny those (.) they'reˌstanding 'up (.) n see if they 'are
113		'standing up (.) cn .hhh (.) can wèe wee ((4 sylls (.) 2sylls)) (.) àll right
114	S	what's 'missing 'there Ph òebe
115	Ph	((drinking noise))
116	S	↑can you 'see what's ˌmissing↑
117	Ph	(2.9) { ðə wìn:də səu:lɛʃ}
118	S	(1.3) ri::ght (.) oˌkay
119		(1.2) shall we try aˌnother one

120		(1.6) can you see what im'portant 'part is 'missing in ˎthat 'picture
121	Ph	(10.0)nah (.) the 'clock
122	S	(0.8) which 'bit
123	Ph	(4.1) the {fɹi:} (0.6) the ˎsix (.) an the fòur
124	S	(1.2) ˎri::ght (.) okằy
125		(2.4) can you see what im'portant ˎpart is 'missing in thàt 'picture
126	Ph	(1.2) he's 'bendˎdown like a (.) giràffe
127	S	(0.6) mm̀hm
128		(0.8) 'what ˎis it (.) 'what's 'missing in thàt 'picture
129	Ph	e got 'one(.) 'two (.) frèe:: (.) an he's going tòilet (.) he wànts to 'go: (.) an`I 'use it
130		sometimes as wèll
131	S	(0.7) what's 'missing from thère (.) Phòebe
132	Ph	[(((drinking noises (2.1)))]
133	S	[Phòebe]
134		(1.1) 'what's mìssing
135		(1.0) what d'you ˎthink's 'missing
136	Ph	(1.1) er (1.0) I don't know whàt it is (.) 'missing
137	S	(0.6) right ǫ kay =
138	Ph	= can you tell me what it is mìssing (.) 'please =
139	S	= it's his ↑ˎleg↑ (.)
140		look =
141	Ph	= it's his↑ˎleg↑(.) look
142	S	(.)ˎthere(.) should have another [↑ˎleg↑(.)ˎshou]ldn't it
143	Ph	[(((inaudible))]
144	S	(2.6) °there finish those°(.) cos they're quite ˎha:rdˎaren't they
145		(4.5) ri::hhhght
146		(3.9) right (.) gonna 'ask you someˎother 'questions ˎnow
147		(0.6) em (4.6) right (0.7) you fìˎnished 'that(2.5) Ph ˎoebe
148	Ph	(0.8) e (.) finished that ((from the inside of her cup))
149	S	(1.6) okay ˎput it downˎnow
150		(0.9) Ph ǫebe
151		(1.3) thàt's it (.) and I'll 'stick it in the 'kitchen ˎnow o ˎkay ((takes cup into kitchen))
152	Ph	(2.0) nah (.) m (.) m (.) m you 'musn have another one jùs yet (.) because it's 'not
153		ˎtime f'a'nother one àll right
154	S	(0.8) 'have some 'more at lùnch [time oˎkay]
155	Ph	['have some] 'more at lùnch time okày
156	S	(.)nò:w (1.9)right I'm gonna 'ask you some ˎquestions 'now oˎkay
157		y ˎready
158	Ph	(0.9) m (.) that- (.) that's er tèa::(.) because you can have some 'more at lùnch time
159		okày
160	S	yeah (.) you can have some mòre at 'lunch time àll right

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161		(0.6) �‚now (.) in what ˎways are a ˎwheel (.) and a ˈball a ˈlike
162	Ph	(1.3) er (.) it ˈnoes up an dòwn
163	S	(0.9) sày again
164	Ph	{ɪʔ} ˈgoes ˈup an dòwn
165	S	(.) goes ˈup and dòwn
166		(.) well (.) they ˈboth ròu::nd (.) ˎaren't they (.) and they ˈboth rô::ll
167	Ph	(0.6) °they rô::ll°
168	S	(.) o‚kay
169	Ph	{mjɛp}
170	S	so (.) now ˈtell me (.) in ˈwhat waːys (0.9) are a càndle (.) and a làmp alike
171	Ph	(1.0){ *kanəlzənlàmpəlaɪ ̢* } *fast*
172	S	(0.9) in what ˈway are they alike
173	Ph	(2.5) I think I'll buy {swʌs}some ˈsweets {sɪs} afternòon (.) àll right
174	S	yea´ːh (.) o‚kay
175		(.) ↑[b' you ˈtell me]↑
176	Ph	[ˈgive yòu some ˈsweets]
177	S	(.) in what wày (0.8) are a ˈcandle and a làmp alike
178	Ph	(4.0) err (5.7)
179	S	↑no shall I tèll ˈyou↑
180		(1.6) they ˈboth ˈgive ˈlight
181	Ph	(.) they both {ɡd} lî ghts
182	S	(.) they ˈboth give ˎlight (.) dòn't they
183		(0.8) so (.) in ˈwhat wàːy (0.7) are a shìˌrt (0.6) and a hàt (.) a ˈlike
184	Ph	(9.4){ʃəzlaɪk}
185	S	(1.3) do you know (.) in ˈwhat wày (.) are a ˈshirt (.) and a hàt (.) a ˈlike
186		(.) ˈhow are they the sàme
187		(4.9) n´oː
188	Ph	(.) no
189	S	o‚kay (2.7) ˈhard ˎquestions ˎaren't they (.) rìght (7.2) ˈput that ˈback a ˎminute
190		(7.4)((3 sylls))(4.1)
191	Ph	ˈhope you're ˈgoing some ˈcoca cola toˈnight =
192	S	= aːːːre yer (.) nòːːːw
193	Ph	d'you know what swèets I'm ˈbuying toˈnight (.) some {lɪkɹɪsɔlʃɔts} (.) àll right
194	S	(.) now (.) thèse ˈpictures (.) ˈtell a ˎstoːːry (0.8) oka´y (.) about a
195		ˎlady who [ˎweighs herself]
196	Ph	[have a còke (.) an] {lɪkɹɪsɔlʃɔts}
197		(.)°((4 sylls))°
198	S	(0.6) aˈbout a ˎlady . who wèighs herself on a scàle (.)oka´y (3.1) the ˎpictures (.) are
199		in the ˎwrong ˎorder (.) they're ˎmixed ˎup (0.8) ˎnow ˈwatch how Iˈ ˈput them in the
200		ˈright ˈorder (.) so that they ˈtell a stoːːry (0.6) okâ´ːy =
201	Ph	= {mjɛp}

APPENDIX FOUR
Appendix 4.1.
Gary
Transcription One: 25.5.95

1	G	don't want any more 'training toda⁻y (.) had e'nough of tṛaining
2	S	(0.6)you wḥat
3	G	had e'n<u>ough</u> (.) of tṛaining
4	S	(.) have you had e'nough of tṛaining
5		(.) it's ḥot tod'ay any'way iṣn't it
6	G	it's gonna 'thunder tonìght
7	S	(.) d'you 'think ṣo (2.5) d'you tḥink s'o
8	G	wḥat
9	S	(.) d'you 'think it's gonna 'thunder tonìght
10	G	(0.9)noː̈
11	S	(.)nó̈ː
12	G	(1.5) it won't 'thunder toṇight cos it's 'hot wẹather jnnit
13	S	(.) yẹːːah (0.8) it 'sometimes 'thunders when it's hǫt though ḍoesnt it
14		(1.7) yéːah
15	G	no no thùndering to'day
16	S	(.) 'no thùndering to'day
17	G	(.) 'why has it gòne 'now
18	S	(0.5) wḥat
19	G	(.) tḥunder
20	S	(3.11) errr (.) yèah
21		(.) did it 'thunder 'here yẹsterday
22	G	(.) it ḍid djdn't it(.) ((*makes thunder noise*))
23	S	ooh ḍear(1.6) what did you tḥink of tḥat
24	G	*thuːːnde ːːr* *whisper*
25	S	.hhhhhh (1.1) 'what did you 'think of the thṵnder
26	G	(3.9) what's thṵnder
27	S	(.) ye⁻ah
28	G	(.) 'thunder ⌊ightning=
29	S	=yẹah
30		(.) what [d-]
31	G	↑[s] cá̇red of it ↑
32	S	(.) ↑wére you ↑(1.1)
33		wh⃛yːː
34	G	((makes thunder noise and gestures))
35	S	ooːːh dẹar (1.4) was it 'really ló̇ud
36	G	(1.1) ti⁻ːs 'loud it i⁻ːs

37	S	(0.8) and did it 'make you ḻump
38	G	(0.7) say sh̞ut up 'thunder
39	S	(.) ↑d´id you↑ (2.5) and di´d it
40	G	(2.4)[I:-] I didn't hĕar it
41	S	[n-]
42		(0.7) you didn't 'hear it
43	G	(1.0)b̞ang
44	S	(.) you dì dn't hear it 'bang
45	G	(2.0) .hhh hhhhhhhhh
46	S	(0.6) 'what you been d̞oing to 'day then 'Gary =
47	G	= done some trai- some g̞olfing
48	S	(1.62) sö me what
49	G	(1.5) g̞olf˘ing
50	S	(.) g̞ö lfing
51	G	(.)hhhhhhh[hhh]
52	S	↑[you] been (.) n 'played gòlf tod´ay ↑
53	G	(0.9)((4 syllables))
54	S	wö :::w
55		(.) did it go a 'long w̞ay
56	G	(1.4) I had do tr̞ai::ning s'traight 'after and it's r̞e̞a::lly h 'ard to˚ do training˚
57		(1.0) .hhhh ((4 syllables)) *'miles an h̞our* *breathy*
58	S	(0.8)↑ 'how many mi´les ↑
59	G	(1.6) I 'want to le:::ave me(.) I 'want to lea:̶ve
60	S	(0.6) ↑why´↑
61	G	(1.1) I don't li̞ke it (.) I don't - (.) I want to le̲:̲ave 'somewhere
62	S	(1.0) 'where d'you want-(.) 'wh̞at (.) you 'want to 'leave hère
63	G	(1.1) y::eah
64	S	(.) ↑why´↑(2.8) ↑why˘ 'Gary 'tell me why̋ ↑
65	G	(1.0) I want to 'leave no̞w
66	S	(2.1)why̋ (1.5) ↑can you t'ell me why:↑
67	G	(0.8)wh̞at
68	S	(0.8)why d'you 'want to le̞ave
69	G	(3.5) I want to 'leave no̞w
70	S	(1.6) and 'where would you go̞
71	G	(1.0) nother ḻo̲b̲
72	S	(2.9) a̞ :::aah (1.1) what 'sort of ḻob
73	G	(0.9) 'cleaning wi̞ ndows
74	S	(0.7) 'cleaning wi˘ndows
75	G	(1.2) ↑d'you want to clean w̞indo:ws↑
76	G	(1.1) y:::e̞ah
77	S	(0.6)why̋

78	G	(1.3) I 'want to le::ave
79	S	(3.2) have you he̥ard somebody 'say 'that
80	G	(1.2)wh̥ a:t
81	S	(.) haveyou he̥ard somebody 'say 'that
82	G	˙wh̥at˙
83	S	(0.8) they 'want to le˞:ave
84	G	(.)m̥e::
85	S	(.)ye̥ah
86	G	(1.3) I want to 'lea:ve he- I want - I want a le̥aving 'present
87	S	(1.4)(hhhhhh) i(hh)s tha(hh)t wh(hhh)y you want to
88		le̥(hhh)ave(hhhhhhhhhh).hhh.hhh
89		cos you 'want a pre̥sent
90		(3.5) 'tell me what you've been do̊ing 'Gary
91	G	(1.2) something to sḁ:y is did some 'running (1.0) n jo̥g ging
92	S	(1.0)ye̊ah (.) are you - you been getting 'fit for the- for the ol˯ympics
93	G	(0.7)is it˯good for yer
94	S	(.) wha̋t
95	G	(0.7) tra̋:ining
96	S	(.) oo:h ye̊:s (1.1)you're gonna be re̥ally stro̥ng
97	G	(3.0) FIT (.) ↑FIT↑ *voice quality*
98	S	(.) yes =
99	G	= *tickly fee ts:˞* *whisper*
100	S	(.) tickly fe̥ets (1.4) (hhhhhh) .hhhhhh
101		who̥ 's ays 'tickly 'feets
102		(1.6) who̥ 's ays 'tickly 'feets
103		(2.2) who̥ 'says 'that (.) 'Gary
104	G	(.) wh̥at (.) ʈɪkl̥i: fɪts̪sss = *voice qualit y for "tickly feets"*
105	S	= ye̥:ah
106	G	˙ʈɪkl̥i: fɪts̪sss˙ *voice quality as above*
107		(1.7) ʈɪkl̥ məlkm̥z ↓˙ fɪ̥ tʰ ˙↓ *voice quality as above*
108		(.) ʈɪkl̥ məlkm̥z ↓˙ fɪ̥ tʰ ˙↓ *voice quality as above*
109		(.)˙tickle ↓ feet↓˙ (.) ˙ tic[klĕ] *voice quality as above*
110	S	↑[you] to̊o ↑(.) 'tickle 'Malcolm's fe̥et
111	G	(2.8) I want to le̥a::ve
112	S	(2.2) no you d̥on't
113	G	(2.1)I 'want to le̥ave cos I 'want to leave- 'want a le̥aving 'present
114	S	(0.9)(hhhhhhh)
115	G	ara-would they arrḁ::nge it for me
116	S	(0.7) would they arrḁ::nge it for you
117		(0.9) if you were le˞:aving (0.8) but- (2.7) you're 'not gonna le̊ave are you
118	G	(1.9) {jʊdɪs} - ye̊:ah

119	S	(1.6) ↑o͜h↑ (0.9) 'what 'happened the͜n	*lights go off*
120	G	(1.8) li͜ghts went 'off	
121	S	(0.6)↑ye͜ah↑	
122		(2.3) that was strą::nge was͜n't it	
123	G	(1.6) I want to ͜le:::ave	
124	S	(0.6) no͘ you 'don't	
125	G	(1.9) I'm a- 'I'm ͜le:aving	
126		(2.2)I want a {ssss}-	
127	S	(1.4)͘tell me(.)͜what	
128	G	(1.2) I feel͜sad I'm (.) 'feel ş͜ad	
129	S	(.)͜why d'you 'feel şa:d	
130	G	(5.7)I want to͜ lea::ve (.) somewhere͜ ni::ce	
131	S	(.) you 'want to 'live somewhere͜nice	
132		(1.2)thi͡ s is ni:ce	
133		(1.4) thî s place is ni:ce	
134		(2.8) got some 'lovely tre̅:::es n (.) flo̅:wers n (.) 'lots of 'nice peo:ple n your	
135		fŗ ie:nds (2.9) it's nice he̅ re (.) ↑ĩsn't it ↑	
136		(1.6) 'why no͘t	
137	G	(.) it's (.)too͜noisy	
138	S	(1.5) why:	
139		(3.9) 'what 'makes ņoise	
140	G	(3.8) ((2 syllables)) (2.1) I 'want to - I 'want to͜ma::rch	
141	S	(1.2)you 'want to whą t	
142	G	˙ma.:::rch˙	*whisper*
143	S	ma͘:::rch	
144		(2.2) d'you 'want to mą a:rch	
145		(1.0)'what d'you mͅean	
146	G	(.)͜ma::rching	
147	S	(0.8) 'what's͜ma:rching	
148	G	(3.6)((5 syllables)) {'saɪə?nt͜s}	
149	S	(1.0) sci͡ ence	
150	G	(1.2) {'saɪlənt͜ s:} =	
151	S	= si͜:lence (2.6) and d'you ͜like 'silence	
152	G	(0.8) ye:ah˙ye:ah͘	
153	S	˙ye͜:ah͘ (0.6) and d'you like nǫise	
154	G	(1.1) ((3 syllables)) can we͜ do that (.) si͜lence	
155	S	(1.0) what d'you mͅe:an by ş:ilence- oh 'what 'where I 'say ↑si͜lence plę:a:se↑	
156		(0.9)ye͡ [ah]	
157	G	[no-] (.) no(.) silen- in rem͜embrance	
158	S	(0.6) in remé͘mbrance	
159		(1.4)˙yeah˙ (.) 'what ha- 'what d'you 'have to ͜do	

160	G	(0.6) be quiet
161	S	(1.4) o kay
162		(.) ↑we'll be 'silent th en shall we↑
163		(.) [you s-]
164	G	[no- (1.0)] 'stand
165	S	(1.1)↑ 'what we 'got to do´↑
166	G	(2.7) got (1.2) got to sta:nd cos (.) 'people 'die in the wa::rs
167	S	(0.8) oo::h rig:::ht
168		(.)have you 'been to 'one of those ceremonies 'then
169	G	(.) can do: that ca n't we
170	S	(1.8) we could do that
171		(1.6) why don't you 'tell me when- a'bout 'when you 'went to do 'that
172	G	(0.8).hhh in here
173	S	(0.8) aaah(.) did you do it in h ere
174		(2.0) 'what did you d o
175	G	(0.8) {saɪ'lɛnt sss}
176		(2.6) can we d o:: 'that
177		(1.5) can we d o: 'that
178	S	(.)ye ah
179		(.) we can 'just 'have si lence (.)we can just stand (1.4) and 'have si lence
180	G	(1.4) whe re
181	S	(0.6) ↑he re↑
182	G	(1.7) in e re=
183	S	=↑y eah↑ (0.9) ↑is that 'what you 'want to do ↑
184	G	(2.5)'whe::re (.) 'down he- (.) '{daʊ}(.) 'on ere
185	S	(.)↑y eah↑
186	G	(1.8) ok ay
187	S	(.) ↑all ri¯ght 'then↑
188		(0.9) ↑we'll just st and and 'have si lence 'then ↑
189	G	what does s ilence 'mea:n
190	S	(1.2)I don't kn ow y ou 't ell me 'what it 'means=
191	G	= people sta nd 'up do n't they
192		(.)si lence=
193	S	=ri ght
194		(0.6) 'silence 'means (0.9) d'you 'know what si´lence 'means
195	G	(0.9).hh hhhhhhh (.) wha t
196	S	(0.8)yo u 'tell me 'what 'silence 'means
197	G	(.)˙t- t- *tickly feets* *whisper*
198		(1.1) si lence ((3 sylls)) in the 'war
199	S	(1.7) have to 'stand this 'far then (.) without ta lking
200		(4.4) 'right (.) 'that's it

201 G (.) 'what's s ilence 'mean
202 S (.) that's when you're qui et

Appendix 4.2.
Gary
Transcription Two: 23.8.95

1	S	what's áppening (1.4)
2		↑whát↑
3	G	(1.0) °whát°
4	S	what's áppening toni ´ght
5	G	°*come dian*°
6	S	(0.8)whó is
7	G	°comèdian°
8	S	(.)↑a comèdian↑
9		(0.5)'which ͵one
10	G	(0.6) 'Duncan Nóvell
11	S	(0.6) what's he cóming for
12	G	to give us a ͵show
13	S	(0.5) mmmhm
14		(0.7) whý::
15	G	(.) he li`kes me
16	S	(0.6) ͵does he
17		(1.6) 'who i`s 'Duncan 'Novell
18	G	(.) he's the um (2.3) li -lives in Fó:xton
19	S	(.) dóes he
20		(1.3) 'what does he͵ do
21	G	(.) 'tells { ͵dʒəuk.kssss}=
22	S	= are they any góod
23	G	(0.8) °yeah°
24	S	(2.0) 'what 'sort of jókes can you re͵member 'any
25	G	(4.6) can I introdu`ce him
26	S	(1.3)͵who
27		(1.7) 'go on ͵then
28	G	(1.6) w-wha⁻t
29	S	'go and intro͵duce him
30	G	(3.4) ↑ó::::↑kày then
31		(1.6) it's not ((*4 sylls*))
32	S	just sit- 'sit dòwn (.) and (.) intro'duce him 'sitting dòwn
33		(.) °then you can just͵ do it ͵can't you°
34	G	(1.6) 'no::: I 'mea:n (.) in 'Forest ͵House
35	S	(.) ͵what
36	G	(.) cos I want to r-arrà::nge it
37	S	(1.0) oo::h

whisper

38		(0.6) ar'range what
39	G	(.) the comè:::dian
40	S	(.) ò:::::oh
41		(1.8) what for im to ˛come
42	G	°yes°
43		(0.9) can I m'move all the ˎchairs out the 'way for im
44	S	(1.0) yeah but 'not nôw
45		(1.0) 'do that làter
46		(1.8) ↑what you been ˎdoing this ˛morning ˛then↑
47		(.)↑'who were you ˛with↑
48	G	(1.0) Tòm
49	S	(.)oh 'what were you dŏing
50	G	(2.9) I was (0.5) 'To:m (.) to˛day
51	S	(0.7) 'what were you ˛doing with ˛Tom
52	G	(1.4) 'washing the ˛buses
53	S	(1.0)whŷ
54	G	(0.9) cos they were ˛di::rty::::
55	S	(0.6) 'ow did you ˛do it (.) 'what did you- (.) 'what did you 'do: (0.7)fi `::rst
56	G	(1.8) spò::nge
57	S	(2.9) n ˛then 'what did you 'do
58	G	hhhhhhh °*it's 'ot in this* plà::ce° *whisper*
59	S	(.) tî s ot
60	G	(0.6){tɪəs}
61	S	(2.0) 'what did you 'do ˛fi:rst
62	G	(0.7) 'clean the˛buses
63	S	(1.0) 'what did you ˛get (.) be'fore you 'started ˛cleaning em
64	G	(0.7) get- (.) a 'bucket of wà::ter
65	S	(.) ôh yeah and what êlse
66	G	(.) n a ˛spo::nge
67	S	(0 .7) and ˛then 'what did you 'do
68	G	(3.1) d'you 'know ˛what
69	S	(0.8) ˛what
70	G	(0.5)I 'want (0.8) I {'wɒnt.təm} (.) {kə'mi:}to 'come to vïsit me
71	S	(0.6) whó:
72	G	(0.5) comè:::dian
73	S	(0.9) n 'what d'you 'want him to ˛do
74	G	(1.1) 'tell some jokes at 'Forest ˛House
75	S	ó:::h rí::ght
76		(.) 'maybe one will ˛come
77	G	(0.6)whát
78	S	(.) 'maybe one will ˛come

79		(1.6) 'maybe a co'median will come (0.7) n visit you	
80	G	(1.2) me	
81	S	↑yeah↑	
82	G	(1.0) vi`sit me	
83	S	(.)↑yeah↑	
84		(1.6) °got to open that window (.) it's ever so stu`ffy°	whisper
85		(1.7) 'maybe a co'median will come to Forest 'House	
86	G	(5.0)yeah- he might come here	
87	S	(1.7) `might do:: `	
88		(1.8)be 'good if he did	
89		(5.2) o:h 'that's a bit 'better in't it	
90		(3.7) would you like it if a co'median 'came	
91	G	(1.0)`ye::s`	
92	S	hhhhh.hh	
93		(1.8)'what were you 'doing with Tom this 'morning	
94		(2.0)'what did you do::	
95	G	wash the buses	mumbled
96	S	(.) o:::h yeah	
97		(3.3)what else have you been 'doing	
98		(.) ↑have you been on holiday↑	
99	G	(1.6) n::o (.) I haven't	
100	S	(2.4) haven't you been any'where	
101	G	(1.0) 'drinking pi^:::nts	
102	S	(.) ↑'drinking pi::nts↑	
103	G	(1.1) fo:ur	
104	S	↑whe::re↑	
105	G	(0.9) in the p(hhh)u(hh)b	
106	S	(0.8)you haven't been 'drinking 'pints have you	
107	G	(.) course I've drinking 'lo::ads	
108		(1.1)hhhhh	
109	S	(1.1)wha- what 'pub we- did you go to	
110	G	I don't 'kno::w	
111	S	'who did you go with	
112	G	(1.1)malcolm`	
113	S	(0.8)malcolm	
114	G	(2.0)`know what`	
115	S	(.) what	
116	G	(1.4) can I (.) arra::nge (1.0) me and you (1.7) can I s- (.) at Forest House (.) w-	
117		would they move all the cha::irs (.) d- get organised for im	
118	S	(1.0) they might 'do	
119	G	(.)` they might do woun't they`	

120	S	(.) mmmmh
121	G	(0.7) all the chairs 'move out the 'way for 'him
122	S	mhm
123		(.) who for
124	G	f'the comedian
125	S	aa:::h ri::ght
126	G	*f'the comedian*	*whisper*
127		*(.) would th- would they allow it (.) would they allow it*	*fast*
128	S	().6) they might 'do (.)you'd have to a::sk them
129		(2.3) you'd ave to ask them if they'd allow it
130		(2.5)they might do
131	G	(0.6) can we 'do it now
132		(.) if you - if you've got ti::me to 'do it
133	S	(0.7) no (.) we can- we an't (.) 'really got ti:me 'now
134		(0.8) cos we're doing this 'now aren't we
135	G	(0.6)*after*	*whisper*
136	S	(1.3)well we'll se::e (1.0)okay
137		(2.8) 'what've you been doing then
138		(.) have you been 'doing any training
139		(0.8) ↑have you been on any wa:lks↑
140	G	(4.0) me (.)w- wa::lks
141	S	(.)have you been on any walks
142	G	(3.4)n- no::
143	S	(0.9) ↑haven't you↑
144	G	(2.4) hhhhh (5.9) *comedian*	*whisper*
145	S	(1.6) (3 syllables) do that later
146		(.) li sten to it 'later
147	G	(3.2)la:: - (.) we'll get everybody in e:re(.) right (.) and get everybody in ne:re
148		(0.8) gonna say ↓*ladies genleman*↓	*unusual voice quality*
149	S	(1.0) (hhhh) and 'then what
150	G	↓*come ::dian*↓	*unusual voice quality*
151	S	(1.4) and 'then 'what will happen
152	G	'all cheer for im
153	S	oh ↑wo::w↑
154	G	(0.9) I want to do that - (.) 'one day
155	S	(0.6) you 'want to what
156	G	(0.6) arra:::nge it to 'come he::re
157	S	well perhaps you can one 'day
158		(3.1)↑ave you 'been to the seaside↑
159	G	(0.8) .hhhhh (1.0) no I 'aven't been to 'seaside for long 'ti:me
160	S	(.) o::h dear

161		(.) can you remember the 'last 'time you went to the 'seaside
162	G	(0.8) no
163	S	(2.9)have you been able to 'see yer mum
164	G	(2.6)n:no::
165	S	(.) haven't you
166		(.) have you 'just been at Forest Ho:use
167	G	(1.8) yeah
168	S	(2.1) with Malcolm
169	G	(2.5) .hhhh ye::p à::h hhh
170	S	(0.7) what else have 'you been 'doing
171	G	(1.7)mé
172	S	(.)yeah
173	G	(1.6) what 'me:::: 'doing
174	S	(0.6) ↑what you been doing↑
175		(0.7) you been 'doing 'anything good
176	G	(2.0) wash the- (.) 'washing the buses
177	S	(1.4) ↑anything else↑
178	G	(.) dri- (.) this- (.) 'tidying em all up
179	S	(.) ô:h rì:ght
180	G	(2.1) you wa:rm (.) hhhhh
181	S	(0.6) it's getting a bit cooler 'now (.) cos the window's 'open isn't it
182	G	(0.6) can I: e:::m (0.9) can I:: (1.0) can I have a microphone in here
183	S	(2.3)we've got a 'microphone here look
184	G	(1.9)' 'Duncan Novell'
185		(2.0) can I say it
186	S	(0.8) ↑yeah↑
187		(2.2) ↑'go on then↑
188	G	(0.8)what
189	S	(.) say 'Duncan Novell
190		

Appendix 4.3.

Gary

Transcription Three (WISC-R): 5.9.95

1	S	right (.) you 'ready to 'answer my que̩stions the̩n
2		(.) we gonna do some qu̩estions 'then (1.1)
3		ye̩ah
4	G	'what's the {tə} re̩corder gonna 'do
5	S	it's just gonna s̃it 'the:re (1.5)
6		an it's gonna 'tape what we s̩ay
7	G	(1.2) it's gonna 'tape my v̩oice
8	S	(.)y̩eah (0.7) ri̩ght what d'you 'call this̃ 'Gary
9	G	(.) it's like a thu̲mb
10	S	↑ti˜s like a thumb↑ ↑ye̩ah↑
11		(0.9) .hhh how many e̲ars̲ d'you 'have
12	G	(1.5) ↑not ĕ::ars↑
13	S	(.) how many [ear-]
14	G	[got] tw̲o̲ 'e:ar[s]
15	S	[yè:]ah you 'ha[ve]
16	C	[we] thi˙nk 'twenty 'four but no̩t
17		'certain =
18	S	= I 'think you're 'probably ri̩ght 'actually (.) one said twenty s̩ix (.)
19		other˙ said [twenty] seveñ (.). I'll 'check at the -
20	C	[ye̩::ah]
21	G	(4.0) 'who to-(.) 'who 'twenty fo̩::ur
22	S	(2.8) how many˙ le- (.) lègs does a [do̩g 'have]
23	G	[I'm twenty fo̩]ur to̩d̩a:y
24	S	are you 'twenty fo̩:ur
25		(.) how many (.) how many lègs does a 'dog 'have
26	G	˙two ˙
27	S	(0.7) ok̩ay
28	G	().7) {sŭʃi̩:::::}	*almost whisper*
29	S	(1.4).hhh 'what 'must you d̩o::: (.) to 'make wä ter boil (.) 'Gary
30	G	(2.4)˙tin't my 'birthday to̩d̩ay i̩s it that's t-twenty 'three to̩d̩ay ˙	*to himself*
31	S	(1.4) do you 'know what you 'must d̩o to make 'water 'boil
32	G	(2.1)˙{mɛ-} (.) wḩat (1.0) 'take off ˙
33	S	(0.7) ñ o ok̩ay (.) d̃o n't 'worry
34		(9.4) ok̩a::y
35		(1.4).hh 'how many pe̩nnies make a 'pound ˋGary
36	G	˙(hhhhhhhhhhhhhhhhhhhhh)˙
37	S	nó

38	G	(1.1) 'fifty po ::unds ::::	
39	S	(.) 'that's be autiful	
40	G	*that's beautiful sushie ee=*	*voice quality*
41	S	= .hhh and 'what do we 'call a 'baby cq:w	
42	G	(1.8) err (.) er- (.) 'not (.) baby c̄ a:::lf::	
43	S	a 'baby ca lf (.) 'very 'good	
44		(.) .hhhh and 'how 'many da:ys make a wee k	
45	G	(5.1)'oh ' (0.8) was a dren said (.) wa-was-it was a dren 'looking for me	
46	S	(0.6) o'h I don't knów (.) no' no' he was jus- (.) he was just (.) dq ing something	
47		'else(1.1)how many da ys 'make a 'week (.) 'Gary	
48		(0.9) tha't's lo vely	
49	G	(1.7) {tɛən} que stion	
50	S	(1.1) oka ::y	
51		(2.0) hhhh mmm (.) can you 'name the mq nth (.) that 'comes after ma rch	
52	G	(1.5)' {tsɛtsɛmbə}'	
53	S	(0.9) 'that's lo vely	
54	G	(1.3) I'm a tà l|k to| it	
55	S	[and] (.) from what a nimal 'do we get ba con	
56	G	(.) from pi gs	
57	S	aa:::h you 'clever thi¯ng	
58	G	(1.1)I 'talk to it a bit if I'm 'good	
59	S	.hhhh 'how many thi ngs (.) make a do zen	
60	G	(0.9) {dəzəðə paʊnz}	
61	S	(.)↓that's lo vely↓	
62		(1.2) oo:h (.) can you 'tell me (.) 'what are the fo ur sę asons of the yeâ ::r	
63	G	*(1.3) octo ber (.) toda:ȳ*	*sing song*
64	S	(hhhh) =	
65	G	*= it's octo ¯ber tod à :ɟ*	*sings*
66	S	.hh o h Gą ry.) can you tell me (.) 'who disc 'overed Amè rica	
67	G	(1.1) mè rica	
68	S	mm̂ hm	
69	G	(1.3)I 'know	
70	S	(1.9)[who]	
71	G	[John	Mą:jor	
72	S	(.) nâ::::a	
73	G	(.)'John <u>Mà</u> ::jor=	
74	S	='John Mà ::jor	
75	G	(.) ʤɒm meì::ʤ↓/ɑ::: ↓]	*voice quality*
76	S	[o o::]h (.) Ga¯ry(.) could you 'tell me (.) 'what (.) 'does (.) the	
77		sto mach(.) 'do	
78	G	(1.1).hh'm̩ m̩ʜ	

79		(0.9)
80	S	hhhhhhh
81	G	(.) makes you 'ill

82   (2.8) *shushee* .::: (0.6) *tickly feets* .::   *whisper*

83   S   (1.3)o̞kay (.)that's lo⁻ve̞ly

84   (1.3) .hh a:::nd (.) can 'you t̞ell me (.) 'Gary (.) in 'what direc̞tion (.) does the

85   su̇n set

86   G   (0.7) thȧt wa:y   *voice quality - very precise enunciation*

87   (1.8) 'what's the 'sunset d̞o::

88   S   (1.0) that was when the su̇n goes down (.)i̇ sn't it

    G   (1.2) te̞ll me(.) is it the su̇nset do

89   S   (2.7) tha's when the 'sun goes d̞own at the 'end of the d̞ay

90   (0.8) it goes all r̞ed and <u>beȧ</u>.::utiful

91   G   see the- (.) .hhh see th'a̞.:ll lovely 'co̞lours on it

92   S   (1.2) and it's 'so::: 'be̞autiful Ga⁻ry

93   G   (0.8) I don't like̞

94   S   (0.6) you gonna look at some 'pictures for me nŏw

95   (1.5)yéah

96   (1.7) let me just 'have a look in my bo̞ok

97   (1.9) did 'very well on tĥat 'test I mu̇st say

98   G   (2.3) I mu̇st say˙

99   S   ȯk ay

100   (1.0) oóh(.) 'dropping me thî ngs (.) 'goodness m̞e =

101   G   = a̞.::h (.) I've 'seen that

102   befo̞re

103   S   rj̞.::ght (.) ok̞ay

104   (2.3) no::w˙ (.) can you te̞ll me 'Gary

105   (1.2) I'm gonna 'show you some pi̞ ctures (.) ok̞ay (.) in 'which there's a 'part

106   m̞issing (1.0) .hh I want you to 'look at each 'picture ca̞refully (0.6) and tell

107   me 'what's mj̞ssing

108   (1.0) okǎy (.) ↑can you 'tell me what's 'missing in thî s 'picture ↑

109   G   (1.6) is a ta̞il 'missing

110   S   (2.1)we can se̞e the 'tail ca̞n't we

111   can you see the 'cat's whi̞ skers are 'missing 'there

112   G   (0.6) whi̞ skers are 'missing =

113   S   = ye⁻ah(.) the whi̞ skers are 'missing 'there

114   (1.0)ok̞a:y (1.3) ↑shall we 'look to the (.) ne̞xt 'one ↑ and s'ee if we can se̞e

115   (1.4)no⁻::w (.) can you tell me what im'portant pa̞rt is 'missing from thât   'picture

116   G   (1.0) the do̞ll is 'missing

117   S   ↑can you show me whėre ↑

118   G   ((points and taps))

119	S	thăt's ↓very good↓
120	G	(.) what's thạt for
121	S	(1.8) e:::rrm 'that's (2.1) to- (.) ti‿me it (.) to make 'sure I give you enough
122		ti`me to 'answer
123		(1.7) okáy
124		(.) oo:h now(.) what im'portant 'part is 'missing in thi`s 'picture
125	G	an ȧngle
126	S	(0.8) the whạt
127	G	an ȧngle
128	S	(.) an ȧngle
129		(0.8)yéah
130		(2.6) can you 'show me whẹre
131	G	(1.9)((3 syllables)) who - (.) who's- who's- er -who's saying I'm twenty 'six
132		(.) todạ:y
133	S	ooh I don't kno::w
134		(2.3) shall we have a'nother lọok at anòther 'one
135		↑ọoh↑ what im'portant 'part's 'missing from thi`s 'picture 'Gary
136	G	its trụ:nk
137	S	↑ooh (.) can you show me whére ↑
138	G	(4.3)I was twenty sị:x to'day
139	S	ooh ȧre you
140		(1.2)I 'think you might be twenty fọur
141		are you twenty fọur 'Gary
142	G	˚ye:s I am˚
143	S	(0.8)mi`ght be˚
144		(1.0) what im'portant 'part's 'missing in thi`s 'pic[ture]
145	G	[a 'lad]der
146	S	(0.6)↑yéah (.) can you show me whẹre ↑
147	G	who's 'twenty (.) who's twenty thrẹe today
148	S	(0.6)ọka:y
149		(1.4)shall we try anọther 'one
150		(2.2) ↓o¯oh↓ (0.9) o¯oh (.)can you tell me 'which(.) im'portant 'part's 'missing
151		in thỉs one 'Gary
152	G	(1.8).hhhhh HHHHH ȧ:::h de:::ar oo:h dē:::ar
153		(3.3) dra::wers
154	S	(.) mihm (.) drạwers
155		(0.7) ↑can you show me whẹre↑
156		(1.4)o:kạy
157		(2.2) right that's lo¯ve[ly]
158	G	[tell] Ạdrian 'come in here
159	S	(1.3).hh ↑rrị̇ght ↑

160		(1.1) 'put those awąy 'noːw	
161	G	(0.8) *put awₐay ńo.ːw*	*voice quality*
162	S	*'put them awₐay ńow*	*voice quality*
163	G	*tickly feets (.) tickly feets*	*whisper*
164	S	(hhhhhhh)	
165	G	*tickly feets*	*whisper*
166	S	(2.3)↑ri`ːːght↑	
167	G	(2.2)'how's your eːːrm (2.0) 'how's your do̦ ctor (.) hǫw is he	
168	S	(.) 'how's me dóctor	
169		(2.4) he's all rjght =	
170	G	= 'what's his nǎme	
171	S	wh́o my dóctor	
172		(1.6) my dòctor	
173		(1.3) ooh I don't knǫw (.) my 'doctor's a wǫman	
174	G	(1.3)'whát ˙	
175	S	(0.6) 'my 'doctor is a wǫman (.) a lɑːdy	
176	G	(.) 'she my fri`end	
177	S	(.) ↑oóh↑ I don't knǫw (.) ↑ d'you think she mi¯ght be↑	
178	G	(.) yȩah	
179	S	(1.0) I think she might be your frjend tǫo	
180		(.) I don't think you've mȩt her thòugh	
181		(.) but I'm sųre if you di̦d 'meet her you'd be fri`ends with her	
182	G	'what do they cǎll her	
183	S	they 'call heːːr (2.2) eːːrm	
184	G	(1.2) o̧ːːh	
185	S	(.) 'Doctor Wàːːde	
186	G	(1.0)'whát ˙	
187	S	'Doctor Wàːːːde	
188	G	↑{həɹɪn 'dɪn ↑(.) də- dèntɪsː}	
189	S	(0.7) ↑yȩ´ah↑	
190	G	(0.8) is it- is it i`m	
191	S	(0.6) no̧ (.) I think it'll 'probably be a di ̦fferent one (.) cos 'my 'doctor's a lǎdy	
192		'doctor	
193	G	(0.8)'Doctor Wa̧ːːde =	
194	S	= m̂mhmm =	
195	G	= {ənəs} ě ard of im	
196		(0.8) my frie̦nd in 'ȩ	
197		(1.6) doc[te-]	
198	S	↑[yé]ah↑	
199	G	(.) he i`ːs your 'frieːnd	
200		(0.8) ąsk im to co̧me to 'Forest Hoųse one 'daːy	

201		(1.9) cup of te̥a one da̤::y
202	S	(1.6)↑ri̥ght↑ Gȧry
203		(.) I'm gonna a̤:sk you about some thi̥ngs now oka̤:y
204		(1.0)can you te̥ll me (.) in ʼwhat wa̤:y (.) are a whe̥:el (.) and a ba̤:ll ali̥ke
205	G	(1.0) the re̥d ʼball
206	S	(1.3) yo- (.) in ʼwhat wa⁻y are a ʼwheel and a ba̤:ll aʼlike
207		(2.8) ↑no⁻↑ (.) well look (.) a ʼwheel and a ba̤:ll are ʼboth ʼround and they ʼboth
208		ro̥:ll (0.9)↑ do̥n't they ↑
209	G	(0.6) ʼrock n ro̥:ll
210	S	(0.8)well just ro̥:ll
211		(1.6) oka̋y
212		(2.0) so I'm gonna ʼask you some more que̥stions ʼnow oʼk ay like ʼthat ȯne
213		(0.7) in ʼwhat wa⁻y (.) are a ʼcandle and a la̤mp ali̥k̯e
214	G	(2.7) twenty ʼfour
215		(4.5) *put the li̥ ghts on (.) ↑please]ʼ* *slightly breathy voice quality*
216	S	[well] they ʼboth give li̥:ght do̥n't they
217		(.) ʼcandle and a la̤mp (.) ʼboth give li̥ght
218		(0.9) do̥n't they
219		(.) ye̋ah
220		(2.2) right(.)ʼ ask you aʼnother ʼone nőw
221	G	(0.7)ʼw[hat's that fo̥r]
222	S	[I know it's] ʼvery ha̤::rd
223		(1.0) oka̋y
224		(.) .hhhh can you ʼtell me Ga⁻ry (.) in ʼwhat wa̤y (.) are a ʼshi̤::rt (.) and a ha̤t
225		(.) ali̥ke
226	G	(2.3) it's a shi̥::rt (.) and a (.)ʼtar⁻diga̯rl
227	S	(2.9) oka̤y
228	G	(1.3)ʼ{kɹaʊːtʰ}
229	S	ri̥ght (.) that's ʼvery ʼgood Ga̤ry because I must admi̥t (.)ʼ those are ʼvery ʼhard
230		qu̇estions
231		(2.0) got some ʼother ʼthings in he̥re for ʼyou to have a ʼlook a̤t
232		(11.9) now (.)ʼ look at the⁻:se he̥re
233		(1.5) the̥se ʼpictures (.) ʼtell a sto̥ry (1.3) about a la̤dy who wei̥ghs herself (1.1)
234		on a sca̤le
235		....
236	S	no̥:w Gary (.) I'm gonna a̤::sk you what some wo̥::rds mean oka̤:y
237		(1.0)is that oka̋y
238		(1.4) cos you're doing ʼvery w̋ell (.) on this ʼtest
239		(1.6) oka̤:y
240		(0.9)first of all(.) can you ʼtell me what a <u>kni̋`::fe</u> (0.7) ʼmeans
241		(0.9)what <u>kni̋`:fe</u> (.)ʼme[ans]

242	G	[.hhh].hhh (6.3) .hhhhhhhh hhh .hhhh (.) a kni:fe
243	S	(.) ǔ huh
244	G	(0.7) 'cut way through bre̞ad
245	S	(0.8) you whạt
246	G	'cut bre̞ad
247	S	(.) 'cut bréad (.)yéah
248	G	(0.9) 'thank yo̞u
249		(2.0) does it-(.) does it-(.) does it-(.) does it -(.) does it 'film me̞
250	S	(1.5) 'that tà pes you ye̞s
251		(1.2)yéah
252		(1.0) we hò pé
253		(0.9) that's 'lovely Gà ɹy
254		(.) no⁻::w (.) can you te̞ll me (1.3) .hh 'what is an umbrèlla
255	G	(1.0) ss'rà i::ning
256	S	(0.9) it's for rạ ining ye̞ ah
257	G	(1.2)that-(.) that 'corders me̞
258	S	(0.6) mm̂ hm
259		(1.8) .hh 'what about a clo̞ ck
260		(1.6) 'what is a clo̞ck
261	G	(7.3) {wɑʐ} it do̞ ing
262		(3.0) {ʃəʃi::}
263	S	it's reco̞ rding us Gạ ɹy
264		(2.5) 'tell me 'what does clo̞ ck(.) 'mean
265	G	(1.3) {tʊʔks:}
266	S	(1.1) tha's lo̞ vely
267		(1.1) 'what is a haɪt (.) 'Gary
268	G	(1.7) ˙ stî tches˙
269	S	(0.6) ˙ stî tches ˙
270		(.) okạ::y
271		(1.2) and 'what is a biˋcycle
272	G	(4.0) ˙ stî tches ˙
273	S	(1.7) ˙ ɪ̌ m ˙ 3.8) ˙ a::nd ˙ (.) 'what is (.) a nà il
274	G	(1.4) wha's a stiˋtches
275	S	(1.9) ↑ 'tell me 'what is a nà il ↑(.) 'Gary
276	G	(1.1) stî tches
277	S	(.) okáːy
278		(0.9)that's fǐ ˘ne
279		(1.0) can you tell me(.) 'what does(.) ̀álphabet 'mean
280	G	(2.2) .hhhh HHHHHH (.) it like a˙ sti̞ tches˙
281	S	(0.7) okạ::y
282		(1.1) 'that's fi̞ ne

283	G	(9.8) where'd'you get this- (.) little mi‿crophone frǫm
284	S	(1.0) I 'got it from 'where I wo‿rk
285		(0.9) they let me bǫrrow it (.) that was nįce of them wą sn't it
286	G	(2.2) wha'd they są::y to you
287	S	(2.5) éh
288		(2.0) careful you don't 'turn it ȯff (.)that' s it
289		(.) yęah
290		(1.3)↑ 'what did you ásk me↑
291		(3.9) ↑'what did you 'ask me Gáry↑
292	G	(0.7) jus-(.) m-(.) 'answering quęstions bout .hhhh (.) {baʊtʰʰ} (1.4)
293		{węldəspɔt}
294	S	(0.7) about whąt (.) 'world of spó:rt
295		(1.0) d'you like 'world of spǫ::rt
296	G	(4.3) got any quêstions
297	S	(1.9) jus gonna (1.2) 'do some thįings hęre
298		

APPENDIX FIVE
Appendix 5.1.
Mary
Transcription One: 29.3.95

1	M	Elly::
2	E	ye::ah
3	M	(0.7) when you going 'home again
4	E	(.) e:::rm (1.1)
5		it's (.) this fri:::day I'm going 'ho:me
6		(0.7) it's this 'four 'week
7		(1.4) 'su:nday ni::g[ht]
8	M	[Ell] ly
9	E	(0.5) ye::ah
10	M	(1.2) at 'friday night (.) what time is your mum and dad picking you 'up
11	E	(1.0) e::r (.)me 'dad picking bout half (.) bout 'four clo ck[ish]
12	M	[((3 syllables))]
13	E	(.) ((2 syllables)) (1.4) sss (.) some 'nights s'it's *six o clock* *whisper*
14	C	(0.6) ↑make a good actor↑
15	S	(1.9) interviewing (.) you interviewing Elly (2.5)
16	C	go on then interview her
17	E	(.)yeah (.) ri´::ght (.) .hh aa:h ri::ght Mary (.) er m (0.9) {k-}(1.0) .hh
18	C	(1.1) 'who's 'interviewing wh o
19		(0.6) are you going to 'interview Elly (.) or is 'Elly going to i'nterview you
20	M	(1.0) n-(.) no (.) I'm 'going to er (1.3)
21	E	what is
22	C	(1.0) 'who's going to 'interview [who]
23	M	[no]body
24		(2.1) .hh not her=
25	E	=hhh
26	M	E lly
27	E	(.) ye::s (1.8) yes 'Mary
28	M	(1.7) 'when is the-(.) 'when is the advocacy group on a'gain
29	E	(1.2) e-(.) e::::rm (2.6) 'think it's on er(.) 'April the twenty si xth (0.6) at
30		(1.1) the 'ba::rn in Ha pfiel[d (.) half six ti:ll (.)]
31	M	[can you take that o ff just to be a microphone if
32		you wanted]
33	E	[ ]
34	E	half past eight =
35	S	= e::h

36	M	can you take that off just to be a microphone if you 'wanted
37	S	(0.8) you'd 'have to 'plug it in to something you'd 'have to 'plug it in to ::
38		(0.6) d'you know what an àmplifier is
39	M	(0.7){ ə} *voice quality*
40	S	(0.8) it's like a-(.) [a mmm]achi ::ne that makes the sound (.) [lòuder]
41	M	[.hhhhh] [what else] can
42		you make it into =
43	E	= yèah =
44	S	= you could (.) 'plug it into::: (.) well that's it 'really
45	M	(2.4) would you 'show me
46	S	(1.3) well I haven't got an` amplifier here
47		(0.8) [you can't - (.) you can't]
48	M	[no would you show me h]ow to get that off
49	S	(.) you just pull it off (0.6)˙just pull it off ˙(0.6)˙that 'comes off ˙ =
50	M	= how
51		d'you do 'that (.) like 'that
52	S	(1.2) that just 'comes off there
53	M	what do you - (.) can it still come on
54	S	(.) huhhuˋh (0.9)but it's 'better with that òn (.) cos you get the 'sound (.)
55		from àll over 'then =
56	M	= cn - (.) can you 'use it for di`scos
57	S	(1.8) nò: [(.)]˙ nò:˙
58	M	[.hhhh](1.5) as sort - what sort of àmplifier d'you 'have to 'u:se
59		(.) so[tha - 'whats an 'amplifier]
60	S	[if you had an àmpl]ifier you could 'use it to si` ng through
61	M	(.)what's an amplifier
62	S	(.) it's like a 'big 'box thi`ng (.) with lots of wi`res in it (.) that 'makes the
63		'sound louˋder
64	M	(3.0) could you 'sing through that if you wanted
65	S	if it had an amplifier on it I 'think you could yeah (1.9) do you liˎke 'singing
66	M	(0.6) yes
67	S	(3.0) do you like 'singing at discos (.) [d'you do -]
68	M	[.hhh (.) 'WHY 've you] got CErtain
69		pe- 'PEople (.) recoˎrded
70	S	(2.5)just to 'see(.) w-(.) 'what they saˎy (0.6) 'what they taːlk like
71		(.) how you speˎak
72	M	(.) 'why haven't you re'corded (.) re'corded (.) some of the others
73	S	(0.9) because I can 'only re'cord so: many 'people =

74	M	= will you re'cord e::r (1.5)
75		the others (.) after me
76	S	(.) I mi.:ght 'do (.) so¯me of them (0.6) but I [can't -]
77	M	[like (.)].Elly and 'that
78	S	(.) yéah (.) I mi.:ght 'do (.) it just depends (0.9) the's -(.) you've 'only got 'so
79		'much ti.me haven't you
80	E	(0.6) ye¯:ah
81	M	(.) .hhh how come El- Elly Elly {n} (.) {n} 'Simon interr'upted on that- (.)
82		that -(0.7) .hh thing (.) microphone (0.6) if e.rm (0.5) if it was me you
83		reco.rded
84	S	(.) well I've 'got the.m as well because the 'sound's (0.7) 'all aro¯und i.sn't it (.)
85		you can't 'block out the sq.:und (1.0) the 'microphone just 'picks up a.ll the
86		'noise (1.0) that it c¯an (1.5) in a ro¯om (.) so 'all the 'noise that's going on in
87		a 'room [the microphone picks up]
88	M	[whabout Tin-(.) Tina-(.)] does Ti.na Wilkins in a 'group as well
89	S	(0.8) no (.) 'she was on her q:wn (.) 'with Sha.ron
90	M	(0.7) so wh w would it(.) 'ou:ld it be th.en (.) if you re'corded 'Tina ['Wilkins]
91	E	[y̆ e::: s]
92	S	(1.1) wh- what would há.ppen if =
93	M	=what would it bè (.) wou- w- w- would it
94		just be a f-(.) a 'full gro.:up
95	S	(1.2) no.(.) it would 'be (.) just the 'sound of 'whoever was 'talking at the ti˙me
96	M	(3.2) 'Mark 'Watson
97	S	(1.2)ye.:ah
98	M	'rina 'Timpson (.) would it 'be
99	S	(0.7)yéah
100	M	(1.5) a 'grou::p (0.7) what {ə} me.::
101	S	(0.9)well- (0.6) if you're 'talking no.w it re'cords yo.u
102	M	(5.3) 'my 'voice is above everbody è lse's
103	S	(0.7) well 'you're the only one ta.lking à ren't you
104	M	(.) Elly 'Elly's 'talking abo- (.) t- 'talking behi˙nd it
105	S	(.) yé::ah (.) you can he¯ar 'Elly as 'well
106	M	(2.8) E˘lly
107	E	ye.::s (3.2) ye.:s 'Mary
108	M	I won't try to 'wind you up anymo::re(.) or 'torment you
109	E	(2.5) 'won't to.rment me ah 'that's˙ all right (0.6) I 'ho::pe not Ma.ry(2.0) ye¯a::h
110		because (1.2) right [((inaudible)]
111	M	[hope that 'Talk's] going 'swimming nó w
112	E	WHA.T

113	M	(1.3) ˈTalk (.) has ˈjust come ˈback from ˈswimming (.) [ˈTalk ˈTimpson]
114	E	[ˈàa::: :h]
115		ˈdee::: ˈMa::ry not haˊving this (('1 syll)) (0.7)yẹ ah I'm going ˈhomethis Fri: :d
116		till Sunˋd'ay˙
117	M	↑Maˊrina ↑(.) k-(.) Cori:ˊ nne (0.8) I just said that ˈTalk ˈTimpson's come
118		ˈback from swiˋ mming now Corˈinne (1.3) Corị nne =
119	E	= ah Maˊry =
120	C	= ↑sorry
121		were you ˈtalking to mè ↑
122	M	(.) yes
123	C	(0.6) ah (.) I didn't hẹar I'm bụ sy
124	M	(2.1) her name's not Taˊlk (.) her name's Maˊrina
125	C	(0.7) ˈpardon what d' you saˊ y
126	M	it's Maˊrina ˈTimpson
127	C	(1.0) I ca-(.) I don't know what you're tạlking bout (.) I'm ˈbusy you see
128		(0.6) con- (.) continueˈinterviewing (1.1) Eˋlly (.) ↑goˏo n ↑ (0.9) while I do
129		my woṛk
130	M	(.) EˋLLY
131	E	ˈyes Mạry =
132	M	= her ˈname's Maˊrina ˈTimpson her ˈname isn't (.)ˈTạlk ˈTimpson
133	E	(0.8) ri [:::ght]
134	S	↑[what] do you caˊ ll her ↑ (1.4)↑ ˈwhat do you caˊ ll Maˊrina↑
135	M	ˈsilly ˈnames like ˈTalk ˈTimpson {ŋ} (.) Singapoˏrelynow {ŋ } ˋall soṛts
136	S	why do [you ˈcall 'er-]
137	M	[and the ˈLords -]
138	S	(0.6)↑ ˈwhy do you call hẹr thạt ↑=
139	M	= dịcky
140	S	(1.2)↑ ˈwhy do [you call hẹr thạt] ↑
141	E	[ah that's noˊt niˋce] èh
142	S	(0.7) whyˏ do you ˈca:[ll her ˈthat]
143	M	[cos I do]
144	S	(1.0) is it ˈjust yọu who says that
145	M	(0.8)ye:s
146	S	(.) whyˏ do yo[u ˈdo that]
147	M	[mmmmm]mmmmm *making hand movements*
148	S	(10.1)ˈ tell me all about your faˊmily ˈthen like you were ˈtelling me laˋ st time
149		(0.6) cos you've got a BRỌther hạ ven't'you
150	M	(.) when did you come last tị:me

151	S	(0.9) err 'you were just going to- I think it must have been on a we:dnesday
152		(.) because you were on your 'way to co"llege (1.7) and I just came and had
153		my di nner with 'you and Ali cia (1.5) and 'Ludovic (.) d'you reme mber (1.3)
154		it was 'quite a 'long [ti me ago]
155	M	[tuesday]
156		(1.0) guess what
157	S	wha t
158	M	I've got (0.6) a m- (.) a 'mum and d- (.) I got a 'mum and da d
159	S	hhm hm
160	M	me 'mum's name is Mrs 'Gracie Ha nsom (.) and er (1.0) me dad's name- (.)
161		my 'dad's 'name is Mr 'Gracie Ha nsom
162	S	'no your da d's 'name isn't [(0.9)] 'what's your 'dad's [na me]
163	M	[er] [no] (.) Mr M-
164		Mi` chael 'Hans 0.8) Mrs -[(0.6)] got a 'mum called Mrs Gra cie 'Hansom
165	S	[Mrs-]
166	M	([0.8)] and a 'dad called Mr
167	S	[`yea`]
168	M	Mi chael 'Hansom [(1.1)] and a- (1.6) and a 'brother 'called (1.1) Max well
169	S	[hm hm]
170	M	'Hansom and a 'sister-in-law 'called Ti` na 'Hansom
171	S	(.) r- ri ght (1.6) and your 'brothe - your 'brother's 'got some chil dren as well
172		cos [you -]
173	M	[NO]
174	S	(.) no no children
175	M	(.) 'no 'children (.) they had
176		'three mi scarriages [(.)two in 'nineteen n- 'nineteen (.)]
177	S	[aa::h that's what you were telling me]
178	M	'ninety tw`o (0.7) they had 'two in nine- (.) 'miscarriages in 'nineteen 'ninety
179		'two and 'one 'miscarriage in (.) 'nineteen 'ninety thre`e (0.9) mum says I got
180		some s - 'sad (0.8) when she 'came up- (.) to 'fetch me-(.) my 'twenty 'fifth
181		bi`rthday in 'nineteen- (.) eigh- (.) 'nineteen 'ninety thre`e (.) she 'told 'me that
182		(.) Mar y I got some 'sad ne ws to tel l you (.) I'm a'fraid that 'Tina has had a
183		mi scarriage
184	S	(1.0) t o:h de ar (2.1) 'that must have been sa d
185	M	(.) so - (.) but o ne 'day they will-(.) they'll 'have a ba by 'though
186	S	ye::ah (.) and 'then you'll be an a unty wo n't you
187	M	(.) yes (1.4) I've 'always 'wanted to 'be an a unty
188	S	(3.5) 'what e lse (.) 'where do they li`ve

189	M	(1.6) they 'live at (.)'White Hǫllow (1.5) they 'live at 'White Hǫllow (.)
190		Lǎncashire
191	S	aá::h (.) is it nîce there
192	M	(0.7) 'yes
193	S	(0.8) do you 'go thęre and sêe them very often
194	M	(1.5) grandma said (.) I've got a grándson who l - who 'lives at 'White
195		Hǫllow
196	S	(0.8) you hàven't 'got a 'grandson
197	M	(.) thas - (.) 'that's what shę 'said
198	S	whǫ 'says 'that
199	M	(1.6) 'Grandma Hǫlly
200	S	(.) aá::h (.) 'who's 'Grandma Hólly
201	M	(1.1) it's my 'grandma::
202	S	(0.7) mm̂ hm (2.2) 'one of your grąndmas
203	M	(.) 'yes
204		((background activity (12.6)))
205	S	so you've got a grandmą: as 'well
206	M	(0.6) yeah
207	S	(1.2) and does 'she 'live in 'Lancashire as wèll
208	M	(.) yes (.) Dąveystone
209	S	(1.0) á::ah (.) is that- is that 'nice [thęre d'you-]
210	M	[near Spàrk] ley
211	S	(0.9) d' yo- d'you 'go and 'visit her thêre 'sometimes =
212	M	= 'sometimes 'yes
213	S	(0.9) and 'what d'you dǫ when you 'go and 'visit her thêre
214	M	(0.7) 'all sǫrts
215	S	(1.0) 'what lį ke
216	M	(1.7) what you loo- a lǫoking at Coriŋne
217	J	(1.4) I'm 'looking at thąt˚over 'there
218	S	(5.7) what d'you like 'doing when you 'go and 'see [your grąndma]
219	M	[sometimes (.)] 'some
220		of my ręlatives (0.9) 'come when they were thęre (3.5) the last time that -(.)
221		wę: were 'there (.) 'Sylvie 'Mark (1.8) 'Andie (.) 'Simon (1.8) 'Lesley and
222		Ją:ne (0.8) ca- (1.6) 'came to grąndma's (1.0) [to see]her
223	S	[who-]
224	S	'who are all thêy (.) 'who are all 'those pe¯ople
225	M	(2.7) (3 syllables) is (.) my fìrst 'cousin (.) and er (0.8) 'Andie 'Simon (1.8)
226		'Lesley and Ją:ne are my (.) 'second còusins
227	S	(3.5) do you lį ke 'them

228	M	(.) 'yeah (.) .hh they 'don't kno̜w me you 'see (.) because er we don't se̜e them
229		'very 'much
230	S	(0.6) oh rḭght (2.2) so- are they o̜lder than you
231	M	(0.6) they're 'younger
232	S	(0.8) a̰:ll of them
233	M	(.) 'yes
234	S	(2.2) and 'what d'you d⌐o: (.)ˈ'what d'you do̊ (.) d'you go to the pa̰ːrk [(.)] or
235	M	[a-]
236	S	do you 'go for [wa̰ːlks] (.) or
237	M	[.hhh (.)] 'NO
238	S	(2.5) 'what d'you d̥o: (5.1) d'you 'go for a drḭːve
239	M	(0.6) 'NO
240	S	'watch te̜lly
241	M	(1.1) yeah 'sometimes (.) and so - (.) I do my wrḭting 'sometimes
242		(1.3) and (2 sylls) have a drḭˋnk an' that
243	S	h̥hm (3.4) and d'you 'go into to̜ːwn (1.7) 'go an' sh- 'go sho̜pping
244	M	(1.4) we go to Ka̰th's 'sometimes (.) and we 'go to to Maˉureen's
245	S	(1.1)you 'go to whĕre =
246	M	= and me 'mum and 'dad at Reˉnton
247	S	(1.1) w- 'what's tha̰t
248	M	(1.2)went to Ma̰ureen's 'last yḛar (.) when we went to Reñton
249	S	(.) mhm̂ m (.) what's (2 syllables) (.) wha̰t is it (.) is that so̜meone's 'house
250	M	(0.8) 'yes (2.5) a 'posh ho̜uːse
251	S	(.) ḭs it
252	M	(1.1) 'yeah
253	S	'what did you do̜ 'there
254	M	we 'went for a 'wa̰ːlk (.) and then we went to the -' straight to the 'pub
255	S	(2.5) then wha̰t
256	M	(3.9) we just had a 'look ro̜ːund (1.9) 'play- 'played- (.) 'funny 'games and âll
257		sorts
258	S	(3.3) 'what 'sort of ga̰mes did you 'play (.) d'you remḛmber any of the[m]
259	M	[no]
260	S	(0.8) nó ːː (2.3) did you 'play cârds
261	M	(1.8)˙no˙
262	S	(.) ↑nˉo ↑
263	M	(1.9) 'sometimes we 'go and 'see 'Auntie 'Kath 'Uncle 'Jim(.) 'Martha 'Vivian
264		and Ma̰ureen

Appendix 5.2.

Mary

Transcription Two: 25.5.95

1	S:	what happens at tho:se the͵n (.) what will happen at the͵m
2	M:	we- well(.) you 'choose the er (3.6) you 'choose the e͵r (0.8) the eve͵nt (.) that you
3		'want to go͵ in (1.8) the eve- it depe- 'pending on what you're 'good enough(.) but I
4		'want t -to 'learn how .hhh (.) to get 'better at 'badminton so I can 'play with E͵lly
5	S:	(0.8) aa:h (.) does῁Elly 'play 'badminton [(2 syllables)]
6	M	['yes she] 'does
7	S	(1.2) is she go͵od at it
8	M	(.).hhh yes but I've got to get a lot a got to (.) 'get a 'lot be͵tter (.) a 'lot 'better .hhh
9		and 'last ni͵ght they 'went to the er 'speak u͵p ad͵vocacy 'grou:p .hhh and er (3.2) we
10		'signed (.) a 'birthday 'card(.) f- for 'Elly (.) from the spe͵ak up .hhh 'advocacy
11		'speak up grou:p .hhh and {ə}(.) a-and {ə}(.) Elly was (2.9) cutting her cake-
12		'cutting her (.) bi�rthday cake.hhh (.) and we sang(.) and we 'all 'sang 'happy
13		bi͵rthday to 'Elly
14	S	(.)↑ no�:h 'that's ↑ lo�vely (.) how o:l͵d was she
15	M	she was 'twenty 'ni:ne (0.9) she'll be thi�rty next ye�ar
16	S	she wi�͵ll (0.6) is she o͵lder than you
17	M	yes she is
18	S	(0.6) how [o�ld are] you =
19	M	[two year-] (.) = .hhh two years old-(.) she's 'two years 'older than
20		me(.) 'I'm twenty 'six(.) I'll be twenty se͵ven in er (.) 'september =
21	S	= aa͵:h ri͵�ght
22		(1.1) so (.) you had a bi͵rthday pa͵rty the͵n
23	M	(1.2) .hhh we sa- (.) we 'sang (.) 'Elly 'took her 'birthday 'cake to the sp- (.)
24		'advocacy spe͵ak up gro͵up for 'everybody to 'have
25	S	(1.2) ma- 'who 'made her bi͵rthday 'cake for [her]
26	M	[er](.) 'Julie went down to the (1.0)
27		'cake 'shop to o͵rder it for her (.) and 'Patsy (.) 'brought it up to the erm (.) the da�y
28		centre for her
29	S	(1.6) that's lo͵vely that was ki͵nd of them wa͵sn't it =
30	M	= 'ye͵s
31	S	and was it a surpri͵:se
32	M	it was a surpri͵se 'yes (.) .hhh
33		(1.2) it was a- (.) it was a 'very 'nice 'birthday ca͵:ke
34	S	(0.6) what was it li͵:ke
35	M	(1.2) I had a lo͵ok at it (.) and it was pi͵nk and it was very 'ni:ce (.) and 'Gladys
36		(1.1) wh gl-(.)gl-(.) 'Gladys came 'do͵wn .hhh to the 'day centre she says to me

37		'what's 'that (0.7) she says to 'Elly wh- 'what's tha̠t is that -is that a -(1.0) is that a
38		caːk̠e oːr (.) is that a pi- (.) is that- (.) ca̠ke or piece o- or -or -is it a 'rabbit
39	S	(1.0)(hhhhhh) .hh 'why was it- 'why did she 'say tḫat
40	M	just a 'joːke
41	S	(.)why- (.) what was- (.) [why-]
42	M	[when] I was 'walking up with 'Katy Po̠rtman
43	S	(2.0) aaːh ri̠ght 'why did she 'make a 'joke like tha̠t
44		'why [was that]
45	M	[she was just] sa̠ying it
46	S	(1.7)'what did the 'cake lo̠ok like
47	M	.hh it looked very 'niːːce
48	S	(1.1) wh- 'what sha⁻pe was it
49	M	(1.1) it's like a he̠aɾt 'shape (.) but she still got some le̠ft for toni⁻ːght
50	S	aa̠ːh (1.3)
51		what [color]
52	M	[en we-] en we 'had that (.) its 'pink (.) en we had 'that eːr (.) 'chocolate
53		ga̠teau for- (1.0) that we- (.) we 'bought with Clare- (1.0).hhh (.) l - (.) last 'niːːght
54		(.) with Katy Po̠rtman that we 'bought with 'Cla̠ re 'Bentley the day .hhhh from
55		the Lo̠-Cost (.) the eːr the 'night be'fore .hhh the 'Elly's biɾthday (1.3) that we 'had
56		after 'tea last (.) we 'had it after 'tea last 'niːght
57	S	(0.9) 'chocolate ga̠teau
58	M	'yeːs
59	S	was it 'ni⁻ːce
60	M	'yeːs (.) it was ve̠ry 'niːce.hhh I'd made s -(1.6) {əv} yesterda̠ːy (.) I 'made some er
61		(4.7) 'apple(.) fr- 'fruit 'crumble with er ↓Ja̠ne↓(.) then er -(.) 'Mike Losely
62		'hoovered the- the- the la̠nding 'downstairs .hhh I 'hoovered the 'hallway (1.2)
63		downstairs (.) I 'hoovered the 'stairs and 'hoovered the la̠nding up̠staiˉrs .hhh and
64		then eːr (.) then I 'hoovered (.)t he-(.) the 'lounge room and I p- 'dusted and
65		po̠lished(.) the 'lounge room .hhh then I 'hoovered (.)th- (.) the 'dining room then
66		er (.) .hhh then 'helped 'Jane 'Brown to eːr (.) to 'mow the back- (.)the 'back la̠ːwn
67		with a la̠wnmower (.) at Finewo̠od yesterda̠ːy
68	S	(1.2) you were re̠ally bu̠sy theˉn
69	M	(.)'yes (.) a-and I'm going swi̠mming this 'afternooːn (.) .hhh with eːr (2.5) with
70		'Clare (.) 'Martin (2.1) with Clare 'Dorey (.) 'Martin
71	S	(3.8) 'where you gonna go swiˉmming
72	M	(1.1) and 'Linda 'Marks (1.8) 'Ned Ca̠stle (0.7)'Dennis Bla̠ck (.) Ka'rina Go̠uld
73		(1.2) 'Darren 'Harris (3.4) D-.hhh (2.4) 'Elly 'Garrick (.) 'Mike 'Lowe and 'Jeremy
74		Co̠rkhill (.) we're going to go 'swimming at the 'Dome in Do̠dchester
75	S	(.) a̠aaːh (.) is 'that (.) 'one of those po̠ols that's 'got (.) slid̠es [and] 'things
76	M	['yes](.)

77		'slides and 'things (0.9) I've been do̱wn 'down the 'little 'sli:de.hhh but but I don't
78		go 'on it don't go on (.) 'down it (.) 'now
79	S	(1.2) 'why no̱t
80	M	(.)because I'm a bit (.) 'frightened (2.3) .hhhh so er (.) I just 'have a 'swim(.) an-
81		and it's really nj:ce
82	S	(.) can you swi̱m
83	M	(2.0) 'sometimes I don't want to 'go: b- (.) but I do̊ 'go
84	S	(.)'why do̱n't you 'want to 'go 'sometimes
85	M	because (1.0) I just fe̱el like 'that
86	S	(.)m⁻hm (2.0) why- 'why d'you fe̱el 'like you 'don't 'want to go swj̱mming
87		some'times
88	M	(.) I just do̱ some'times
89	S	(.)'don't you want to get we̊t(2.9) ds- does it 'not ['feel]
90	M	[bec] ause I 'want to 'do the
91		'same 'things as what 'Max Lo̱wther and 'Pete Sånderson 'do(.) [and] 'not what
92	S	[oȯ:h]
93	M	E-'Elly Gar̊rick 'does
94	S	a⁻:h rj::ght =
95	M	= or that 'grou:p
96	S	(.) why - (.) why -
97	M	(1.8) because I 'do
98	S	(1.6) you don't know why̱
99	M	(.) no
100	S	(0.8) no̱:: (1.3) what do you ['like -]
101	M	[or] spla-(.) 'splash each other (.) last time m-
102		(.)m-(.) m-(.) 'I ' splashed 'Neil and he 'splashed me ba̱ck (.) and 'Linda 'Marks 'did
103	S	(1.4) was that fu̱nny or was it [nåsty]
104	M	[it] was just being 'funny =
105	S	= ye⁻::ah (2.4) what
106		does 'everybody e̊lse do at the 'swimming 'pool(.) do they 'a:l[l]
107	M	[.hh] just have a
108		'swim abo- (.) abo̱ut (0.8) E-'Elly 'Garrick (2.1) guess wha̱t (.) 'Elly 'Garrick ca-
109		'came 'back to Fi̊newood once and she 'told (1.1) whoever was on that she- she-
110		that she'd 'done (1.0) 'thi̱rty 'lengths (.) a'cross the 'swimming po̊ol
111	S	and håd she
112	M	(.)'yes
113	S	.HHHH (.) ↑thi̱rty le̱ngths ↑(.) that's mi̱::les (1.5) it's a rea̱lly 'long wa̱y i̱sn't it
114	M	(1.5) 'yes
115	S	(3.9) is 'she a 'good 'swimmer the̱n
116	M	she's a very good 'swimmer
117	S	(2.4)[who taught-]

118	M	[.hhh they're] 'thinking (.) th- th- th- they're thi ˋnking of- of- of en- of
119		èntering (.) .hh some other pèople (2.9) .hhh for swiˋmming (.) in the mini
120		olyˎmpics
121	S	(1.2) 'who lj:ke
122	M	(1.4) Da- like 'Darren and people like 'Darren Hạrris and e:r (.) 'Elly Garˋrick
123	S	(.) mmˉhm (1.0) and what-(.) because they're 'so 'good at swiˋmming =
124	M	= 'yes
125	S	(.) mmˎhm (.) [(2 syllables-)]
126	M	[a- an- and 'Mich]ael sạys 'not 'you 'Mary because you're 'not faˋst
127		enough yet(.)
128	S	aạ:h riˉght (.) but you mjght be mïˋghtn't you
129	M	'yes
130	S	wh- 'what are yọu gonna 'do in the mini ol'ympics then
131	M	(1.9) I- I were 'thinking of doing hòrse riding and er (.) 'running the '800 metres
132		thiṣ tɪme (.)
133	S	can [y -]
134	M	['next] 'tɪme
135	S	can you rùn 'fast then
136	M	I 'can run fast yes but (.) it will make my: (1.6) leˎgs 'ache if I 'run theː (.) 2Q0
137		'metres
138	S	mmˎhm
139	M	(2.5) and I'm 'thinking of 'training for 'badminton as 'well (.) and 'table teˎnnis
140	S	(1.5) 'which- (.) 'which- (.) of thọse do you like -=
141	M	= I'm getting a 'progressing at
142		bạdminton an (.) s- so I can 'play with 'Elly E- Gạrrick (.) .hhh in the e:r(1.0) m-
143		mini ly- 'mini lẙ mpics
144	S	(.) is it ['Elly Gạrr-]
145	M	[so I can] get gòod enough
146	S	is it 'Elly 'Garrick that you liˋve with
147	M	'yes =
148	S	= yèah (.) y[eah]
149	M	[and] 'Max Lọwther and 'Pete Sạnderson =
150	S	= yèah (1.2) and 'Elly's
151		'really 'good at bàdminton
152	M	'yes(.) shsh- she 'goes every 'sunday njːght (.) d' nɪːght t-(.) to theː e:r (.) the youˋth
153		club (1.0) for bàdminton (.) for trạining for 'badminton ton for theː e:r (.) mini
154		ol'ympics .hh and she also 'goes ɛrm (2.6) she 'goes er (1.0) an I'm 'thinking of
155		doing 'dressage again (.) for the e:r (.) mi- mini ol'ympics
156	S	for the- (.) on- (.) on your họ:rse

157	M	.hh 'yes but (.) 'Michael told 'Kevin last we:ek (.) just before we went 'horse riding
158		(.) says (.) ↓Ke̦vin (.) if 'Mary becomes ob'sessive about dre̦ssage she wo -↓ (0.7)
159		she 'won't be 'doing it
160	S	(1.5) m¯hm de¯ar (.) why̱:: (.) 'why did he say tḁ:t
161	M	well-(.) because I 'do get ob'sessive about things sometimes
162	S	do you know what 'that me̦:ns
163	M	(1.1) 'no
164	S	(0.8)no' (1.0) do you kn -do you kn- 'why (.) d'you know 'why 'people sa̱y that
165	M	because I do̱ s-get ob'sessed about things 'sometimes
166	S	d'you kno- do you 'know what ob'sessed me̱ans 'though
167	M	(1.4).hh ob'sessed 'means when you're -(.) 'when you're abso'loutely 'full of things
168	S	ye¯a:h (0.6) ye¯a:h (1.3) and you don't 'know 'why 'you get fu̱ll of things
169	M	'no
170	S	(.)no̱: (.) but 'is it cos you 'like do̦ing them (.) a 'lo[t]
171	M	['y]es (.) because I like doing
172		them a 'lot
173	S	(.) m̱h
174	M	I 'liked (.) dre̦ssage doing the dress - I 'did the dre̦ssage last 'ti:me .hhh (.) and I
175		came 'third with the 'bronze me̱dal (.) and 'Darren 'Harris [(.)] 'came er (1.0) ca-
176	S	[wow]
177	M	'came 'first with a go̱ld cup go̱:ld cup .hhh (.) cos 'Darren's 'dad (.) 'Darren
178		Ha̦rris's 'dad 'came to -(.) .hh watch Darre- 'Darren 'Harris (1.0) ri̦de in the
179		'dre̦ssage (1.0) and er (.) m- (.) my 'mum and 'dad 'came to 'watch me̦ (.) r-'ride in
180		the 'dressage .hh (.) and they thought I was very go̱od
181	S	I bet that was- =
182	M	= I got an 'awkward 'horse called Cha̦rles (.) who wouldn't 'trot so I
183		had t-to have a .hhh have a 'stick to make it 'trot [(0.8)] and I came 'third
184	S	[mm]
185	S	that's bri̱'lliant (.) were you pro̦u:d
186	M	in 'September 1994 last year [.hhh(.)] and I was 'very pro̦ud of me (.) my par̦ents
187	S	[ye̱ah]
188	M	were very 'proud of me .hhh (.) so was 'Tina H̦all and 'so was my er .hh re̦latives
189		and er (.) co̦usins and that
190	S	w- were yo̱u 'proud of you
191	M	ye̦s be- because m- 'ma mom (.) 'saw 'Ellen and H- (.) Ha̦zel .hhh (.) and she 'told
192		her .hh that I'd 'won a- (.) a- a-' bronze me- a 'bronze me̱dal an - a- a- (.) and er
193		(1.0) when I saw when I saw 'Ellen (.) 'last we̦ek .hhh (2.7) the s - (.)she had (.)
194		er -(.) er 'youngest 'daughter Ha̦zel with her s I- I said 'yes she 'had .hhh I says
195		(0.8) she was very sḁy :: (.) she didn't kno̦:w me
196	S	(.) wh- who's E̱llen
197	M	(0.9) me 'cousin

198	S	aa‾::h ri‾ght (.) and she's got a 'daughter called H‾azel
199	M	(1.0) yeah
200	S	and 'they came to watch you at the dre̞ssage
201	M	(0.9) 'mum and 'dad did 'ye:s
202	S	but 'Ellen and 'Hazel di`dn't
203	M	(0.7) 'no she just 'saw 'Ellen and she- (.) [told- (1.0) tòld] 'Ellen
204	S	[oh she tòld 'E:llen]
205	S	(0.8) ye‾ah (1.3) that's bri̲lliant (.) how long have you been 'riding hòrses
206	M	I been 'riding er (3.0) 'nineteen 'years (1.4) [altogether] 'yes
207	S	[↑ho̲nestly↑] (1.2) ↑that's
208		bri̲lliant ↑(.)↑you must be 'really 'really go̲od ↑(.) well you mùst be 'good to have
209		'won that me̞dal
210	M	(2.0) why- (.) 'why is it if you've been 'riding for 'nineteen ye̞ars (.) 'why do you
211		(.) ge- get (.) 'good enough for mèdals
212	S	(1.1) .hh well no̲t 'everybody would but (.) if you 'do something for a l'ong ti‾me
213		(.) because you've d- been doing it for a 'long ti‾me .hhh you 'usually get 'good at
214		it (1.8) because if you've 'just 'started do̲ing something you're not very 'good at it
215		to beg`in with a̲re you =
216	M	= no
217	S	so the lònger you do something the 'better you gèt at [it]
218	M	['yes]
219	S	so if you've been ri̲ding for 'nineteen ye̞ars (.) you're- 'you must be very go̲od
220	M	(2.4) 'yes
221	S	(2.9) and it 'pro̲ves that [you-]
222	M	[I been] 'riding since since I was at Hèathercroft
223	S	'where was tha̲t
224	M	(1.0) started riding at He̞athercroft n- n- an then- an then I (.) started r- (.) 'riding
225		again at (.) Fo- (.) at Fòrest
226	S	(0.8)ri̲ght (.) where's- wheres Heath- is it Hèathercroft
227	M	(1.0) Low'orten
228	S	(.) is that - (.) is 'that where you used to li̲ve
229	M	(1.4) 'no but it's not fàr away
230	S	(1.1) it was stàbles near where you used to li`ve
231	M	(1.3) º yeahº
232	S	(4.8) can you remèmber the 'first time you got on a hòrse
233	M	(1.0) 'no
234	S	no:(1.4) can you re'member what it was li`ke when you 'first 'started ri`ding
235	M	(2.3) I couldn't 'do (.) dò much (2.6) mum says I used to be 'sick before I 'got on
236		(.) 'got on a po̲ny
237	S	why::

238	M	(1.6) because I didn't like (0.6) because (.) I didn't 'like the idea of getting onto the
239		po̯ny (.)
240	S	(0.9) but you 'liked it when you got o̊ n
241	M	(.) y-yes but I 'like it no̊ w
242	S	(.) mm̂ hm (1.0) how 'often do you go ri̯ding
243	M	I go (.) every fri`:doo (1.2) with 'Kevin (.) I 'used to go- go with Mi- (.) Mi̊`chael to
244		'Shelby but I 'go with er (.) 'Kevin (1.0) g- (.) 'Michael to 'Shelby for 'horse riding
245		.hhh but I 'go with er (.)'Kevin (1.9) na̯-(.) 'every 'friday with er (1.9) .hhh 'horse
246		riding to 'Shelby
247	S	mm̂ hm
248	M	(2.3) .hhhhh
249	S	'what's your 'favourite 'horse ca‾lled
250	M	(3.7).hhhh
251	S	have you go‾t a 'favourite 'horse
252	M	(2.4) .hhh Beth-(.) Beth- 'Bethan (.) but er (.) they're 'trying to (1.8) .hh 'many
253		ti -(0.6) they've got 'Bethan to re'tirement as befo̊ re(.) put her out in the field but
254		she just got ch- (.) 'chucked 'back in the 'box aga̯ in and er (.) they've been 'trying
255		that for 'five ye̯ars .hhh
256	S	they've been 'trying whåt for 'five 'years
257	M	trying to let 'Bethan reti̯re [b- (.)]but they er ke- (.) kept (0.7) 'putting her
258	S	[oh rî‾ght]
259	M	'back into the̱: er::m (.) the pe- people who 'work at the ståbles .hhh have been
260		'trying to put her back into the er .hhh ho̊ rse box (.) a'gain
261	S	(1.1) ô ::h (.) whẙ
262	M	(1.3) I ro- I- I- 'rode on that 'horse called Di̯zzy sh - .hhh (.) very 'nice to 'ride
263		when I was riding 'outside o̯nce an- an- I'd to ri̯::de on her (1.1) .hhh a 'few 'times
264		to get us̱ed to her an I was very 'nervous of ri̯ding her you see
265	S	mmhm
266	M	.hhh which was one 'first time I've ra̯iden her (.) because er (2.7) .hhh 'Lee says
267		(.) she can 'try 'riding 'Dizzy this week and if it wo̊ rks (.) we'll let her 'ride (.)
268		'Dizzy inst -inst instead of .hhh (.) Be̊than
269	S	mmhm
270	M	and let 'Bethan re 'tire

Appendix 5.3.

Mary
Transcription Three (WAIS-R): 31.8.95

M: Mary

S: Researcher

C: Careworker

1	S	right (.) shall we 'start (.) with some questions then
2	M	(.) 'yes
3	S	(.) okay (.) what are the 'colours of the 'British flag (4.2) d'you 'know
4		what [they are]
5	M	['red] 'blue and 'whi:te
6	S	(1.3) 'that's ri˘:ght (.) 'very good (4.6) 'what is the 'shape of a ball
7	M	(1.2) a 'rou:nd shape
8	S	(0.7)˙↓that's ri ¯ght↓ (2.7) 'very good˙ (2.4) how many months (.) are there in a
9		'year
10	M	(1.0) there are 'twelve 'months in a year
11	S	(2.7) I've got to 'write down what you say you see (3.6) um:: 'what's a thermometer
12	M	(2.2) dunno
13	S	˙*don't know* (.) okay whisper
14		(1.4) how many weeks (.) are there in a 'year
15	M	(3.5) are there one 'hundred and eighty
16	S	(4.2) okay
17		(2.4)˙ just put this book over he::re (1.4) ri::ght˙ (1.6) can you 'name a prime
18		mi˘nister of 'Great 'Britain during the 'second 'world war
19	M	(6.9) was it 'John Astley
20	S	(3.6) 'good answer (2.4) ri˘ght (1.3) okay (.) 'who wrote Hamlet
21	M	(2.6) I don't 'know
22	S	(1.4)˙ ri¯::ght ˙ (2.1) a::nd (.) 'what's the 'capital of Italy
23	M	(2.4) 'Rome
24	S	very good (3.4)˙ excellent ˙ (1.6) d'you know 'who was Louis- 'Louis A˘::rmstrong
25	M	(0.9) he was a singer
26	S	(2.1) very good (1.2)˙excellent˙ (2.2) e::r (.) d'you know 'who was 'Amy Johnson
27	M	(1.2) no
28	S	(4.2) 'where does the sun 'rise
29	M	(1.0) 'in the morning
30	S	(2.0)˙oka::y˙ (3.4) can you 'name (.) four prime 'ministers of 'Great 'Britain (.)
31		since195˘0
32	M	(3.4) e::r (2.0) Win (.) 'Winston Churchill (2.6) .hhh [(5.1)] 'Harold Wilson
33	S	[yeah˙]
34	S	(0.6) very good

35	M	(2.3) 'Edward Heath (2.4) .hh 'Howard MacHallahan (2.1) .hh 'Margaret Thathcher
36		(0.6) and 'John Màjor
37	S	(1.9) that's 'abso(hhhh)loutely brilliant (2.0) that's really good 'well 'done Màry
38		.hhhh e::rm (.) d'you know (.) on 'what 'continent is Brazi`l
39	M	(1.7) the 'far èast
40	S	(6.0) e::r 'who was 'Emmeline Pànkhurst
41	M	(2.0) 'who was she
42	S	(2.3) d'you know 'who s[he wás]
43	M	[a com] edian
44	S	(1.4)'ri`ght ˙ (3.2) okay (0.8) in 'what dirèction would you tràvel (.) if you went
45		from Southampton to Gibràltar
46	M	(2.4) 'that way *pointing*
47	S	(1.6) kay
48	M	(0.9) towards (.) the: e::r (.) 'Channel Tunnel (.) towards (2.7) Fòlkestone an that
49		way
50	S	(0.6) yeah you're ri‾ght yeah
51	M	(0.8) dri- (.) an the- then you'd have to take your 'car to drive over to 'France to (.)
52		Gibràltar
53	S	(.) yeah (0.9) very gòod (1.6) no‾:::w (0.9) 'why are dàrk clothes 'warmer than li`ght
54		coloured 'clothes
55	M	(1.7) because they're thicker
56	S	(1.4)'ri:::ght ˙ (6.2) ok ây(.) 'who was 'Martin 'Luther Ki`ng
57	M	(3.2) I don't 'know
58	S	(0.8)'oka:ːy˙ (1.7) on 'what còntinent is the Sa'hara Dèsert
59	M	(1.5) 'far east
60	S	(6.7) what's the mài:n 'the:me (.) of the 'Book of 'Genesis
61	M	(1.8) I don't know
62	S	(3.4) 'whose nàme (.) is 'usually a'ssociated (.) with the 'Theory of Relativity
63	M	(2.9) John 'Major
64	S	(.)' ri ‾::ght (.) that's lo‾vely (1.8) right that's all tho‾:se 'questions you did 'very
65		wè:ll (.) that was very 'good Màry (4.7)' right (.) put those over the::re'
66		((someone comes in))
67	C	h [ello::]
68	S	[hello::]
69	M	hello 'Kate
70	K	hello Mary
71	M	(1.5) I'm with Sùskie (3.0) I'm with Sù:skie
72	S	Su[sh`ie]
73	C	[Sush]i`e
74	M	(.) Sùshie =
75	S	= 'Sushkie's quite nice actually (.) it sounds Russian dœsn't it (2.0) that

76		wasn't too hard was it
77	M	no
78	S	no (.) you did really 'well then as well
79		((pause while others leave))
80	S	oka:y (.) no¯::w (.) I'm going to 'show you some pi`ctures (.) in this [book] (.)
81	M	[ye::s]
82	S	okay(.) now in these pi`ctures some im'portant 'part is going to be mi`ssing (1.1)
83		okay
84	M	yes
85	S	now I want you to 'look at each pi`cture (.) and tell me what's mi`ssing (0.8) okay
86		now this is the fi`rst 'one (0.9) now can you 'tell me what's 'missing in this pi`cture
87	M	(5.0) is there a 'door - (.) there's a door with no handle on
88	S	'that's ri_ght ye¯s (.) oka:y (1.3) so (0.8) right ↑next one↑ (1.1) can you do the next
89		'one
90	M	if I went home for 'good w-w-w-w would e:r (.) would- would 'these er (1.2) sh-
91		(0.6) would my 'voice still be on these ta:pes
92	S	óh yes (0.8) yes
93	M	'why would it
94	S	(1.4) because (.) the 'tape (.) records it and it 'keeps it for as 'long as the tape's alive
95		(0.9) yeah
96	M	(1.3) ea::h
97	S	(.) right
98	M	(2.9) they're 'playing e::r (.) a 'game of tennis
99	S	yeah (.) so what im'portant part is 'missing
100	M	(1.5) e::rm (2.1) that 'man hasn't got a t- (1.9) a 'tennis racquet
101	S	(.) yeah (.) very good (4.5) kay the next 'one (.) do you want me to (.) shall I help
102		you (.) cos it's a bit hard to (.) 'turn those over (1.9) you don't want to 'miss any out
103		(.) okay (.) shall we see what that one is
104	M	(1.2) a 'frog
105	S	(1.5) yeah (.) can you show me whe:re (2.5) 'show me =
106	M	= is a frog(.) there's a 'frog
107		'there with no 'a::rm
108	S	(.) very good 'yes(.) 'brilliant
109	M	(1.2) with no 'left 'arm
110	S	'that's right (0.8) is that- (1.1) that's it
111	M	(6.0) what do you call that 'game
112	S	(1.2) e::rr (.) cards
113	M	(0.9) a 'game of 'ca::rds
114	S	(.) so::: (.) 'what's missing can you show me where (1.6) you show me where it's
115		'missing 'there
116	M	(1.5) it's 'one (.) two (.) 'three (.) 'four (.) 'five (.) 'six (.) 'seven (.) eight (.) there

117		should be 'ni:ne (.) there's only eight (1.2)[th]
118	S	[ri`]ght (.) [okay]
119	M	[there's] ei`ght when there's
120		supposed to be ni`ne
121	S	can you 'show me 'where it's mi`ssing from
122	M	(2.7) there
123	S	that's ri¸ght (4.7) okay (.)˚ooh (.) shall I come and help you with that ˚
124	M	(2.8) there's a ca:rd 'there
125	S	yep
126	M	(3.0) with'out a 'steering wheel
127	S	ri::ght
128	M	(5.9) there's a jug- (.) a 'jug there with e:r (.) with wa:ter =
129	S	= yeah
130	M	(0.8) .hh but the: er (5.8) can't 'think what's missing
131	S	(6.4) no (.) 'try the next one (4.0) can you manage
132		(3.2) fi`ddly isn't it
133	M	you've met m-my 'mum and 'dad an't yer
134	S	'no I haven't 'met them
135	M	(1.2) and e:r (1.4) there's 'glasses the::re
136	S	mm[m]
137	M	[b]ut erm (.) an- (.) an the nose bit is 'missing =
138	S	= very good (0.7)˚yea::h˚
139	M	(2.3) tha's pli`ers 'there
140	S	hhmhh
141	M	(1.0) and the: e:r (4.1) 'something is missing
142	S	(0.8) d'you 'know what's mi¸ssing
143	M	(8.5) tool bit
144	S	(0.9) which - (.) where is it can you 'show me where (2.0) ri `:ght okay (0.9) 'try the
145		next one
146	M	er (.) there's a-(.) there's a rowing boat the:re
147	S	hhmhhm
148	M	(14.2) there's 'something mi`ssing
149	S	hhmhhm
150	M	(1.4) can't 'think 'what it 'i::s
151	S	oka:y 'try the next one (0.6) these are 'quite ha¯rd (1.5) they're very 'hard actually
152	M	there's a ma - (.) there's a lady there 'walking with a dog
153	S	hhmhhm
154	M	(6.5) and there's something mi`ssing
155	S	hhmhhm (.)˚oh 'careful you don't miss one out that's it˚
156	M	(4.3) there's a 'lady 'there with e:r (1.2) in the mi¸rror =
157	S	= hhmhm

158	M	(0.7) and there's someth- (2.0) and she's got her ri`ght 'arm 'missing
159	S	(0.6) ri‾:ght (3.2)‘ you've mi`ssed one(.) ha‾ng on˙
160		(4.0)‘ *there you go* *whisper*
161	M	(1.8) there's a t - (.) tòad the:re (0.9) with (1.2) with the: e::r (.) th- (.) with the left
162		'thing 'missing
163	S	hhṁhhm
164	M	(4.1) a guità::r (1.2) a- a vi̦olin the̦re =
165	S	= hhṁhhm
166	M	(2.0)with something mi`ssing (3.1) with the thj::ng that go̦es over
167		it that's mi̦ssing =
168	S	= ri�‾::ght
169		(3.1)˙that's ri‾ght yeah˙
170	M	(1.8) e::r (.) the 'man's walking the̦:re (1.2) the 'tree's the̦re (5.3) there's something
171		'missing I 'can't see 'wha::t
172	S	(0.7)˙ oka̦::y (0.9) the ne̦xt one (.) oh ha‾ng on we've mi‾ssed one (1.7) there you
173		go̦: ˙
174	M	(1.4) there's a 'watch the̦re that 'ticks
175	S	hhṁhhm
176	M	(5.7) and 'that is mi̦ssing
177	S	(.) show me whe̦re
178	M	(0.9) that 'thing that - (0.7) walks into the̦:re is 'missing
179	S	bri`lliant (0.7) 'well do‾ne (3.1)˙ think that's (.) oka̦y i̦sn't it (.) yèah (.)yèah (.)
180		that's oka‾y˙
181	M	there's a le̦af the‾re
182	S	hhṁhhm
183	M	(13.3) and there's something missing 'the:re
184	S	(0.7) oka̦y
185	M	(5.8) there's a 'man the̦:re
186	S	hhṁhhm =
187	M	= with a 'shoe 'missing
188	S	(0.8) aa̦::h
189	M	(7.5) .hhh there's a 'horse 'there w- (.) wi - (.) with 'missing sti`rrups
190	S	vèry good (8.3)‘ thàt's it˙
191	M	(2.9) there's a 'lady there with er (3.0) with her èye 'missing
192	S	(0.9) can you show me whère(2.6) ri`ght (5.6)˙ that's it 'that's all ri̦ght (.) 'that's
193		the 'last òne˙
194	M	(0.9) there's a 'house (0.6) there with er (2.5) with a wi‾ndow missing
195	S	(0.7) hhṁhhm (.) oka̦y (.) show me whère
196	M	(1.3)a- (.) a- (.) at the other si̦::de
197	S	ri̦::ght (.) that's lo̦vely (0.9) bri`lliant (.) 'thank you Màry (.) that was 'absoloutely
198		èxcellent (4.1) that wasn't ha̦::rd wa̦s it

199	M	(.) can I tell you about my 'holiday nò::w
200	S	'tell me about your holiday
201	M	I went (.) 'last wee:k (1.1) er (1.0) e:r (0.7) tuesday (.) we 'went to er (1.8).hhh we
202		went to Mi`stycrag an a- (.) an- (.) an- we ad- an we ad a cup of cò::ke (0.9).hh (.)
203		an - (.) an I 'bou:ght (.) some 'postcards an I 'wrote them to (0.6) 'mum and da:d (.)
204		Finewood A venue:: (1.1) 'Andrea Jo:nes (1.0) Grandma Holly (1.0) and Tina- an-
205		(.) an- Mi chael and I posted them (.) but I 'run out - (.) I 'run short of e::r (.) stamps
206		(.) so Darleen had to give me some stamps (.) an I po-.hh (.) gi - (.) 'gimme a
207		stamp and I pòsted it
208	S	that's brilliant =
209	M	= and then e::r (1.7) we went - (0.8) we sa- we sat outside the pùb at
210		'Mistycrag (0.7) an I- an I had a glass a lemonade (.) [but e::r] (1.8) .hh
211		'Jane says
212	S	[that's brilliant]
213	M	to: to 'Max Lowther (.) .hhh you've had your 'tablets haven't you Ma:x (.) an I
214		said I- (.) I've ad my 'tablets and she just igno::red me and Darleen said to me .hhh
215		'yes you ave ad your 'tablets 'Mary (0.7) so I:: (1.6) she said to me: (.) Mary (.) shùt
216		up (.) so 'I:: er (1.7) .hhhh (.) so I 'said to er (.) no I won't shùt up so she 'took me
217		'straight back to the coa:ch .hhh and then e::r (5.0) a-(.) an I 'pushed er (1.1) an I
218		'pushed 'Jane into - onto the roa::d (.) an I 'pushed two other 'ladies onto the 'road as
219		'well (.) .hhh an I go er- (.) Jane said to me (2.6) Màry (.) shùt up (.) nòw (.) 'just
220		shùt up (.) .hhh so e::r (6.6) on a we-(.) on a wèdnesday (.) we e:r (1.8) .hh we
221		'went down to the bea:ch
222	S	oh thàt w[as nice]
223	M	[and Dar] 'leen an 'Jane took a photograph of 'us 'a:ll .hhh 'paddling in the
224		se:a
225	S	ave you 'seen the phòtograph
226	M	no it's 'not come out - (.) 'not been (.) 'not come òut 'yet
227	S	thàt's 'good though
228	M	an- o-(.) on thù::rsday (.) we e:r (2.1).hhh we we- (.) we 'went (.) to Rosy 'Top on
229		the 'coa:ch (.) .hh and e::r (2.0) .hh and I 'ad another 'do: (.) and I e::r (.) and I
230		'thumped 'Annie 'We:st so I told .hhh 'Jane and Dar'leen I just 'thumped 'Annie
231		'We:st .hhh so e:r Dar'leen sat 'next to 'me and er (2.1) 'Annie (.) sat next to 'Ja:ne
232		(.) and tha- those two chinese gi ::rls [(0.6)]
233	S	[mmhm]
234	M	were up- (0.7) were 'sat behind us laughing at us (.) and they were trying
235		t- t -(0.7) to en'joy the holiday and sa- an- 'Annie just 'did as well (.) an they 'sat
236		behind us laughing at 'us because o what I was doing .hhh and so (.) Dar'leen and
237		'Jane just grabbed hold o me [(1.4)]
238	S	[˙mmh˙]
239		

240 M   I started 'screaming 'shouting and 'swearing sh- 'showing everybody 'else up on the

241   bus.hhh and I e:r (.) grabbed 'hold of Max 'Lowther's coat (.) but they just 'stopped

242   me from doing it .hhh and then e::r (5.8) and then e::r (1.2) I showed everybod-

243   body up on the bu:s (.) and 'Jane said to me: (.) don't you re:alise 'Mary that you

244   have 'come from a satellite house .hhh (0.9) that you are 'more capable (.) than the

245   others (.) and you have 'come from a satellite house and you are 'showing yourself

246   up .hhh out of Forest ou- House autistic community (.) 'us and everybody 'else up

247   as well (.hhh) now I 'think when you get off this bus (.) 'I think you ought to

248   apologise to everybody who was on this 'bus .hhh so I said to them (.) that- (.) I

249   said to er- (.)I- I'm 'sorry for my beha- (.) a'pologize to them said I'm sorry for my

250   be'haviour (0.9) and she said to me (.) thas- (.) thas said to me that's all 'ri ::ght (.)

251   and then on e:r (3.5) on fri_day (1.1) we:- (.) o-o-o- on thu- on thu::rsday (1.5) I

252   wore my tèe: shirt an not- (0.7) I wore my shò:rts and e::r (0.8) and it was raining (.)

253   we- we had one (.) one 'rainy day .hhh and then er (.) we went to the cafe (2.3) I

254   told Jane .hhh that my 'tee: shirt was 'wet and she said to me (.) 'shut up

255 S   (3.4) shall we 'do some more of thi `s (.) and then (.) after we've done this when

256   you can tell me a bit more about your 'h[oliday |

257 M   [an then] (.) an then a- an th- (.) then on

258   fri::day .hhh I e::r (1.1) w-w-we went (.) b- back home again o- on the bus (.) but I

259   'showed myself up again .hhh I 'thumped er (.) Annie We:st (.) an when we got to

260   Kingsford (.) when- (.) we had a 'look round 'Marks and 'Spencers in Kingsford

261   .hhh (.) an 'Jane (.) just said to me (.) 'look Mary (.) just (.) 'shut 'your 'big mouth

262   will you (.) so I sta- .hhh the 'lady asked me 'questions in the shop (1.2) .hh an I

263   'said to me er (.) an I started swearing (.) 'screaming   'shouting and swearing in th-

264   in the 'ladies' toilets .hhh (0.6) an 'Jane said (.) to me Mary it's a 'good jòb (.) that

265   that 'lady hasn't fet - 'fetched that manager (.) manager after 'you: (.).hhh e so- so-

266   when- (.) when we got- (1.3) so- (.) we-(.) we caught a 'bus (.) .hhh there- f- .(.) the

267   'coach 'back from 'Kingsford to er Shèldon .hhh when it got to 'Sheldon I was sti`ll

268   'playing up .hhh (.) and e:r (1.4) went into the cafe .hhh and Jane said to me (.) 'look

269   Màry (.) 'just   (.) 'shut up will you: (.) and then on e:r (0.7) then we 'went to the pub

270   (1.2) and then she 'asked the- the lady i- (.) if e:rm (2.5) if she could 'phone e::r

271   (1.9) Ji`ll up an she said er (.) says I 'phoned Jill 'and she's going to send an escort

272   to s-(.) from Forest House to come and pick- 'pick us up .hhh so e:r .hhh (1.3) an

273   then (.) I was playing up on the 'steps outside an - (.) 'Jane and Dar'leen (.)

274   re'strained me on to the floor (.) down onto the floor .hhh an I said 'how are we

275   going to get back to Fo:rest I says (.) anybody coming to 'pick us up says 'no: .hhh

276   we're going to have to 'wa:lk- (0.8) walk 'back to: er (.) to 'Fo:rest with our

277   'suitcases (.) in our hands .hhh (.) in our 'hands she says- says 'you should have

278   thought about that when e::r (.) .hhh when you was playing up on the- on the 'coach

279   (.) that we just been on .hhh I says to me: e:r (0.7) I asked - (.) Darleen and Jane

280   how- 'how I'm going to get 'my tablets then sh says not- .hhh you're going to t- (.)

281   t-(.) to do to have to do withòut your 'tablets (.) so e:r (.) I played 'up 'screaming and
282   shǫuting o- on the on the stęps .hhh and e:r (1.9) an-(.) and Jęrry had (.) to 'dri:ve
283   'all that way up on (.) on the M sixtee::n (.) from 'Fo:rest .hhh (.) way down to
284   'Sheldon on the 'M51 węst (1.0) he had to drive 'a::ll that wąy had to drive 'all the
285   way back from Shęldon (.) down to Fǫ:rest as węll .hhh asked Jęrry can I tell you
286   bo- bout my hǫliday 'please an he said to mę .hhh no you 'ca:n't .hhh 'sit in the
287   'back (0.8) he says 'sit in the 'back of the 'bus nǫw (.) I am 'not interèsted .hhh so-
288   so e:r (.) an th 'Sea G- Gull Hǫtel (.) was ni::ce (.) it got .hhh (.) some 'prime 'time
289   tęlevision 'o:n i-in ou- in our będrooms (.) and it got (.) 'Hotel 'radio two s- an 'two
290   'satellite chǫnnels as 'well .hhh and e:r (2.1)and it got e'lectric- (0.9) er - (.) kęttles
291   (.) an e'lectric kęttle (.) in our będrooms (.) w - (.) that - (.) będroo:ms (.) .hhh
292   where we could e::r 'make c- cups of tęas or cups of còffees
293

APPENDIX SIX
Appendix 6.1.
Tom
Transcription One: 24.6.96

1	S	so 'what did you dò with your 'dad this 'weekend did you (.) gò anywhere
2	T	(1.0) I 'don't think we djd (.) part from the pub for a meal
3	S	(.) riˉːght (.) what did you have to eat
4	T	(.)ˈcan't remember˙
5	S	↑ 'can't you remèmber↑
6	T	sirloin steak˙ I thi`nk˙
7	S	oːh rjːght (.) that sounds 'nice
8	T	˙spose it is˙
9	S	(0.6) 'what's your dad like 'Tom
10	T	(1.1)ˈhe has the 'same thjng ((1 syllable)) something else
11	S	(1.9) is he njce (.) your dad
12	T	(0.6)ˈspose he is˙
13	S	(.) yèah (1.0) do you see him èvery 'weekend
14	T	(0.9) 'every 'weekend
15	S	(2.5) have you ↑ 'got any 'brothers and si`sters 'Tom ↑
16	T	(1.1) one 'called Njːːgel (1.0) and one 'called Hànnah (.) but they 'live 'far away now
17	S	(0.8) oh rjːght (0.8) how 'old are they then
18	T	(0.9) think Nigel's about thirty 'fouːr (1.3) and I'm (1.8) thirty three
19	S	(3.1) and 'what about Haˉnnah
20	T	(1.9) 'older than that˙ (*2 syllables*)˙ *whisper*
21	S	(.) is 'she the 'oldest (.) then =
22	T	= 'born in 'nineteen 'fifty seven Hànnah
23	S	oh rjːght (1.0) so - (.) she must beːː (1.2) thirty niˊne
24	T	(0.8)ˈprobably˙
25	S	(1.0)yèah (.) thirty ni`ne
26	T	in that yeˉar (.) 'sputnik 'went up *comparatively louder*
27	S	(1.2) did iˊt =
28	T	=ˈyeah˙
29	S	(1.6) wh- (.) 'whoːse (.) 'who did the sputnik be'long to
30	T	(.) sòviets
31	S	(0.9) oh rjːght (0.6) [what ha-]
32	T	[˙it's a] sàtellite˙
33	S	what happened to it
34	T	(.) it's 'launched into spa ce (.)˙it was a sàtellite˙
35	S	is it stjll up 'there
36	T	(0.8)˙doubt it *now*˙ *whisper*

37	S	(1.4) what ↑happens↑ to sput- (.) to 'satellites (.) do th[ey-]	
38	T	[' I] *don't really know*	
39		*really*'	*whisper*
40	S	(1.0) they 'drop(.) to ea:rth	
41	T	{ *pɹɒbli*}	*fast*
42	S	ye⁻::ah (2.7) 'so (.) have you been 'reading any books 'lately 'Tom	
43	T	'*no(.) I don't think so*	*fast; whisper*
44	S	(2.7) could you 'tell me about your (.) No:rway trip again 'd'you think	
45	T	(1.0)'.hhh *if you want*'	*fast*
46	S	(1.1) ↑can you tell me about No:rway again↑	
47	T	(1.1) they have a lot of glaciers (.) 'the:re	*comparatively loud*
48	S	(1.9) did you ↑see any 'glaciers↑ =	
49	T	= yes (.)' *glaciers*'	*fast*
50	S	↑ 'what do they look like↑	
51	T	.hhh 'big 'fro:zen river (.) 'like things	
52	S	(.) ↑wo::w ↑(1.5) are they (.) transparent or are they white	
53			
54		....	
55			
56	S	yeah (.) so go on about the 'glaciers (.) 'what are the glaciers like	
57	T	(0.6) very fro:zen (1.5) 'solid 'lumps of ice	
58	S	(2.3) can you walk on them	
59	T	(.)' *think so*'	*whisper*
60	S	(2.0) do they look ama:zing	
61	T	.hhh '*bet they did*'	*fast*
62	S	(.) yea:h (1.8) 'tell me some more (.) what else did you do in 'Norway	
63	T	(1.0) 'walked around r - (.) on the boa:t there were some 'people who were a bit	
64		'young for cigarettes they managed to persuade 'Donald Hampton to get some	
65		cigarettes for them	*fast*
66	S	di⁻d the(hhh)y (hh)	
67	T	yeah	
68	S	(0.7) and did he 'go and get some [for them]	
69	T	[yeah] (.) don't know ho:w though (1.2) they	
70		wouldn't stop hassling him but in other respects they were quite 'nice	*fast*
71	S	(2.4) is- 'who:'s Donald Hampton (.) is he here	
72	T	(0.9) member of staff	
73	S	(1.2) and 'he 'went and got them some cigarettes	
74	T	' I 'think so 'yeah (.) yeah'	
75	S	(2.1) and 'then did they smoke them	
76	T	(1.3)' 'prob a sumably yeah'	
77	S	(4.5) and what else (.) tell me (.) about (.) where you stayed	

78	T	(2.0) aa::h we 'stayed in a (1.5) chalet thing near the 'sea: (1.1) had a motor boat
79		which we didn't 'u::se (0.8) which was hired if we'd have been 'able to use it I
80		wouldn't have minded 'using it (1.2) and I 'saw a seal in the 'water
81	S	(.) wô::w
82	T	(.) *typical* nobody be'lieved me but I saw it *fast*
83	S	(0.6) were you the 'only one who saw it 'then =
84	T	= yèah
85	S	(2.3) na and 'nobody be'lieved that you'd sèen it
86	T	(0.6)' no˙
87	S	'what was it doing
88	T	(1.8) ⌈(inaudible))˙
89	S	(.) so⁻rry
90	T	pre'sumably it lives in the 'sea
91	S	yea::h(.) was it just (.) bobbing its ⌈'head up⌉
92	T	⌊ could h ⌋ave done ye⁻ah
93	S	(.) ye⁻ah (4.2) they're really nice sèals (5.1) and have you been on holiday
94		'anywhere èlse (3.5) haven't you bèen on 'holiday anywhere 'else 'Tom
95	T	(0.8) êh
96	S	(.) have you 'been on 'holiday 'anywhere èlse
97	T	(1.4)' no˙ ˙
98	S	(2.1) ↑nòwhe:re↑ (2.7) that's (.) a 'bit sàd
99		(3.2) e - (.) {ʤ-} I want you to 'tell me about 'who 'lives hère (.) 'Tom (.) cos I
100		don't knòw'anybody who 'lives 'here =
101	T	= 'Alan Blake˙ 'lives with me˙
102	S	(1.4) and 'what's he like
103	T	(1.0) 'all right˙ mainly˙ (.) he does weaving (.) 'I'm not 'interested in weaving
104	S	(.) are you nòt (0.9) I've seen some of the stuff they've done it's really good (.) are
105		you not i ˙nterested in that
106	T	(0.6)˙ *no thank you*˙ *whisper, fast*
107	S	(.) 'why not (1.4) just (.) doesn't appeal to you =
108	T	=˙*no*˙ *whisper*
109		(.) [di]d you see the fòotball yesterday I think 'Portugal wòn dịdn't
110		they *fast*
111	S	[oh]
112	S	(0.6) e⁻:::rm (0.6) no- (.) o:h (.) I didn't sèe 'Portugal (.) did they wi˙n in the end
113	T	˙*I 'think they did (.) 'yeah*˙ *fast*
114	S	(0.6) I saw- (.) did you see È ngland 'playing (0.9) on (.) Sàturday =
115	T	= *yeah (.) I think*
116		*I did* *fast*
117	S	(.) ye⁻:ah (1.1) cos thèy 'won dịdn't they (1.9) did you 'see them at the pènalties (.)
118		they had to do 'penalty shòot outs at the 'end (3.6) what èlse did you dò this

119		week'end then 'Tom
120	T	(5.5)˙ can't remember˙
121	S	(1.7) forgótten
122	T	(0.9)ʲ próbably˙
123	S	(.) it were 'quite a 'nice weekend ạctually (1.1) quite 'nice and sụnny (5.3)who èlse
124		'lives 'here then 'Tom (.) 'tell me 'aːll about 'all these 'other pẹople and what they're
125		'like (4.8) what's Ạnnie like
126	T	(1.7) aːll right at tịmes
127	S	(4.4) how 'long have you bẹen 'here
128	T	(2.6)ʲ many 'yeaːrs *nọw*˙ *very quiet*
129	S	(0.8) how mány
130	T	(1.3)ʲ don't knòw ex'actly 'how *'many* ˙ *very quiet*
131	S	(2.4) 'where did you 'live befọre Tọm
132	T	(1.3) place called Turn'pike 'Lane (0.9) 'Leeds '19˙ area˙
133	S	ri˙ ght
134	T	(0.6) off 'Morley Ròːad (.) *'heard of the ařea* *fast*
135	S	(0.8) I don't knòw that 'area I'm 'not 'from Lẹeːds (1.4) 'what's it lịːke (.)
136		'up there 'then (2.0) is it còuntryside (0.7) is 'Leeds '19 it'll be a way ọut 'won't it
137	T	(0.9) they're getting rịd of what 'countryside *there ònce was there* *fast*
138		by bụilding on˙ it 'now˙
139	S	(.) ↑oh dẽar↑ (1.7) was it 'countryside when yọu 'lived 'there
140	T	(.)ʲ mmm˙
141	S	(3.7) aːnd is 'that where you went to schọoːl (3.3) do you remèmber (.) 'much about
142		(.) going to 'school
143	T	(0.6)ʲ yes *Î do* ˙ *very quiet*
144	S	(0.7) 'what was it like (.) did you lịke it
145	T	I couldn't wrịte very well so didn't (0.7) d- (.) d- (.)ʲ achiève much˙
146	S	(1.1) that's a shạːme
147	T	(0.9) I could 'reaːd bẹtter
148	S	(1.8) did you 'find it 'difficult to- (.) to 'make the pèn 'do
149		˙'what you wănted it to['do˙]
150	T	[yeaːh ˙]
151	S	˙yẽah˙
152	T	(3.9) they 'did about the hǐ story of the 'eighteenth 'century but 'I don't 'see any
153		pọint in 'learning about that do you
154	S	(0.7) why nọt
155	T	(0.6) well it's gone pạst 'now ˙hạsn't it˙
156	S	(1.4) w -(.) weren't you ì nterested in it
157	T	*I was i ňterested in it but it* doesn't (.) have any˙ *purpose* ˙ *the 'whole idẹa* (.)
158		*you's to have* an ịnterest the i'dea must be 'surely to (1.3) ex'plain how the 'past fits
159		the prẹsent (.) that's the *whole idẹa* (.) it's not just to (.) do a 'solid 'thing about

160		dates and (1.1) people (.) it's about how to ex'plain how the past (0.7)˙makes the
161		present (.) 'surely that's the [i'dea]˙ *fast*
162	S	[mm̃m]
163	T	ei -(.) either 'that (.) unless it does 'that (.) de'feats the object doesn't it *fast*
164	S	(.) I guess ye⁻::ah (1.5) bu- (.) I 'mean (.) 'people (.) 'might (.) just be 'interested
165		about the˙ pa:st˙ (.) just to see 'how it all 'fits in (.) e:rm (.) today
166		(.) how 'things [(.)]
167	T	['how] does it 'thou:gh
168	S	(2.6)I don't kno:w cos I haven't stu [died these things]
169	T	[thats the idea] (.) unless you explain 'that
170		(.)ʃ defeats the object (.) doesn't it˙ =
171	S	= ye::ah (1.1) I 'mean it's quite 'nice to 'know (.)
172		I me⁻a:n (1.0) say if you 'knew- =
173	T	= JUST 'KNOWING 'KNOWLEDGE as an 'end
174		in itself isn't a 'purpose in it˙self is it˙
175	S	(1.2) it can be for 'some people 'though (.) some 'people just like to know 'things
176		don't they
177	T	(2.5) it's like 'reading for 'reading's sake isn't - (.) an unless you 'take an 'interest in
178		books
179	S	mm̃hm
180	T	(.) mean you'll not 'tend to read just a bit in 'learning to read is there
181	S	(0.7) no (0.6) no I 'guess not (0.9) except it's very useful (0.8) ne- (.) 'being (.) 'able
182		to 'read in- 'in our society (.) isn't it (1.3) be a bit difficult cos you wouldn't be able
183		to 'read signs o:r (1.3) o:r (0.9) bills or anything would you (7.2) ↑were you any
184		good at maths ↑ (1.8) no:: (.) what was your favourite 'subject 'then
185	T	(1.8)ʃ *don't really 'kno:w* ˙ *whisper*
186	S	(2.5) 'not weaving
187	T	(.)˙didn't 'have weaving at school˙
188	S	(0.7) eh
189	T	(0.9)ʃ I didn't weave˙
190	S	(0.7) di̲dn't you
191	T	(0.9)˙no˙ (0.9) nobody 'did (2.5) but 'say (.) is just (.) 'LEARNING something for
192		the 'sheer hell of learning like (.) one 'sense would be all right d- even 'though it's
193		i˙nteresting but (1.2) *in geography have to tell about 'which 'countries have*
194		*rainforests I mean the* 'whole (.) menàgerie of 'countries that had˙them˙ (0.8) .hh
195		though the trouble is (0.9) at the 'same 'time *as I'm doing it* the 'very 'second the
196		˙*very 'in*stant it's happening it's all going *fast*
197	S	(.) mm̃hm
198	T	(0.9) where we 'once 'had within a (.) 'generation you had quite a (.) 'sizeable
199		amount
200	S	(.) mm̃hm =

201	T	= within a gèneration (0.8) it's in 'difficulty of not having
202		any at à:ll =
203	S	= mm̂hm
204	T	and 'soon it'll've 'gone into 'history bǫoks as an 'extinct thi`ng where 'once (1.2) I
205		mean if they 'don't 'watch oụt they 'reckon sci`entists (0.8) mànkind'll've e- (0.9)
206		presi`ded over the (.) 'biggest (0.7) disappẹarance of 'living thi`ngs since the
207		disa'ppearance of the di`nosaurs (.) about 'fifty 'million yêars ago or something
208		(0.7) if they don't (.) 'slow things dǫwn and 'stop thi ̧ngs (.) the 'way they're
209		'going ǫn (2.0) but with conservation there's 'no 'point 'one 'country trying to
210		conseːrve (0.9) un'less (.) a'nother 'country con'serves as [well] (0.8)
211	S	[ye ̄ah] (.)
212	S	abso [lǫutely]
213	T	[has to] be a 'con'certed (0.9) has to be a con'certed world èffort
214		(.) [un]less it's
215	S	[yes]
216	T	pôintless =
217	S	= yẹaːh (1.3) y[es -]
218	T	[no] point 'one trying to be gǫod
219	S	(1.5) when the 'others ạːren't
220	T	(0.8) it's like the u'nited nàtions is 'finding it can only 'do as much as 'whatever the
221	(.)	members want it to dǫ =
222	S	= mm̂hm
223	T	(1.0) un'less 'everybody hẹlps it do its 'thing it wǫn't suc'ceed *anyway* it could be
224		Bǫsniaː the Cǫngoː oːr
225		[(.)] ạnyway (.) it 'has (.) all these or in *the 'middle eạst* (.) *fast*
226	S	[mm̂hm]
227	T	what 'makes itsuc'ceed is the- (.) the wi`llingness to people to 'back it to hẹlp it to
228		'do what it 'wants them to 'do=
229	S	= yêaːh =
230	T	= cos 'anything they try to do is just 'vetoed
231		by the US'A and the USSR̂
232	S	(1.6)̂ mm̂hm ̇ =
233	T	= un'less it (3.1) it's like 'laːːw (.) obẹdience (.) there's no point
234		passing new 'laws to disobẹy if 'people can't o'bey the 'laws
235		they got ạlready =
236	S	= mm̂hm (1.6) what about if they have a bạd 'law 'though (.) th- (.)
237		that's sịlly =
238	T	= well that's a sịlly (.) tǫ̧ government to make itself deliberately
239		unpǫpular=
240	S	= m̂mhm
241	T	(.) but (3.4) it's like in 'history in (.) th-(.) 'solve prôblems like a 'crime without

242   clues you don't know where to beg in

243   S   (.) mmhm

244   T   (3.8) and the 'best dis'guise isn't to be the same (.) *something* (.) to be 'different

245   *something to be the same (.) something to be to*   *fast*

246   recognise [(.) that 'pe]rson (.) for being different

247   S   [mmhm]

248   T   (.) .hh you'd 'recognise them for being (.) di `fferent 'sometimes =

249   S   = mmhm =

250   T   = .hh

251   you'd 'stand out a 'sore thumb an (.) 'same (8.5) and it doesn't a::lways *repeat*

252   *itself 'history (.) cos some things have 'happened in 'history what have never*

253   *happened befo.re =*   *fast*

254   S   = mm¯hm˙

255   T   *(.) it does (.) re 'peat itself in 'some things (.) but 'some things* were (.) com'pletely

256   unique to that mo*ment in 'time* what had 'never 'ever happened in the 'whole 'history

257   of the 'world and would ['nev] er .hhh gonna happen before (.) like 'men in the *fast*

258   S   [mmh]

259   T   moon (.) it'd never 'happenedbefo:re (.) be['fore | since .hhh and it didn't re'peat

260   S   [yeah]

261   T   itself then cos that was a u'nique thing what 'never happened befo::re .hhh an 'never

262   'happened in the past and wasn't even gonna be (.) 'foreseen to be 'able to be

263   happen cos 'everybody 'thought it was the very .hh (1.1) epitome of 'science 'fiction

264   S   (.) yea::h =

265   T   = and wasn't going to be 'science fact

266   S   (3.0) but it happened

267   T   (.)˙ but it 'happened˙ (1.2) but just cos we (.) 'do a 'good thing *in that respect*

268   doesn't mean t'say we 'solved all those 'problems with (0.6) we may (.) be (.) 'good

269   at one 'aspect of things but in 'other re'spects (1.9) cos there's TYPE (3.4) 'man

270   solves the 'problem and 'makes another 'problem for himself at the

271   same tim[e (1.3)] like (.) 'industry gives us all these (.)   *fast*

272   S   [mmhm ˙]

273   T   'things like robots an every˙thing˙ we have the 'problem of pollution

274   of 'indus[try to]

275   S   [ye¯a::h]

276   T   a::lways 'had

277   S   (1.4)ye¯a::h (0.9) so we 'move on but in other 'ways we ['move   ba]ck

278   T   [they've 'got] (.) 'nuclear

279   (1.1) power (.) but we don't know 'where to 'put the 'nuclear

280   wa::ste[(.) no]body wants it on

281   S   [m¯mm]

282   T   their back (.) garden (.)˙ don't 'think˙ (2.8) 'a:nd em (2.4) and the 'world popu'lation

283		keeps gröwing [(0.7)] so as we're making the advance (.) it's 'swallowed
284	S	[mmhm]
285	T	up by more peҳople
286	S	(2.8) yҳeah (0.9) it's 'really dҳifficult isn't it (1.3) what would 'you 'do if you were in
287	S	chҳarge of it 'a:ll
288	T	(1.2) well I 'think um (6.1)˙I˙
289	S	(0.9)↑ haven't you got any idҳeas↑ (.) I 'bet you got some bri ˋlliant i'deas (8.0)
290		what's the 'most im'portant thing for peҳople d'you think
291	T	(0.6)˙I don't knҳow˙
292	S	(4.9)˙I don't know ҳeither˙ (9.8) what are 'some 'ways that 'history's repҳeated itself
293		'then
294	T	(2.3)˙I don't know˙
295	S	(3.8) what about the wҳa::rs
296	T	(1.0)˙whät wars˙
297	S	(.) the (.) 'world war (.) twҳo (.) d'you 'think thҳat was a (.) a re'peat (0.9)
298		˙of 'anything˙
299	T	(10.5) nҳo because of the: erm (.) innovҳations (.) and *that de 'terrent 'bomb* (.)
300		*which'd never been used in the s-* (.) ˙*first world war* (.) made it* 'completely ˙
301		*different in that respect* ˙(.) we were 'better prepäred ˙*than the 'first world 'war in*
302		*that respect*˙ *fast*
303	S	(.)˙mmhm˙
304	T	(1.6) we 'a:ll 'knew it was gonna cҳome (1.9) and the dҳifference between the 'attitude
305		of Amҳerica (.) A'merica was:: (.) bit 'mo::re (1.1) invҳolved than be'fore
306	S	(0.7) ↑ how come they didn't get in'volved in the fi:rst time 'then ↑(.) d'you knҳow
307	T	(.) *they 'did get in 'volved in 1917.* *fast*
308	S	'oh dҳid they
309	T	(.) yҳes
310	S	(0.9) wha- (.) in what wҳay (.) did they
311	T	(1.5)˙well˙ (.) they were brҳought into it 'rather than 'getting in'volved of their own
312		a'ccord
313	S	(.) ri ̄ght
314	T	(.) 'German 'submarines had been a'ttacking A'merican shҳips trying to stop us being
315		fҳed (.) they were doing 'very wҳell they nearly 'starved us to dҳeath in
316		the 'first world ['war]
317	S	↑[ҳoh]right↑
318	T	(1.2) and em
319	S	(5.1) and what did the: (.) the Ame ̄ricans 'came (.) and 'they got rid of
320		the su ̄bmarines
321	T	(.) *'nineteen seventeen* (.) they 'fought on the (.) *just as 'well* (.) cos after the
322		'Russian Revolҳution we'd 'lost (.) 'Russia on our 'si:d[e] *fast*
323	S	[mmҳm]hm

324	T	(0.6) and we 'just that moment (.) thank 'goodness we had the (.) A'mericans (.)
325		made up for it (1.5) that Pershing missile which is 'name now (0.7) is 'named *after a*
326		*first world war general* (.) 'he was the co'mmanding chief in the *first world war*
327		(.)[they make now] *fast*
328	S	[↑o:h ri::ght ↑]
329	T	(0.8) Pershing (.)˙they're called˙
330	S	(0.6) ↑ oh [did they]↑
331	T	['one te] rrible 'thing we did after the 'first world 'war which weren't
332		'anything to 'do with the 'Germans or our allies *or anything like tha*- or the 'Turks or
333		*anything like that* (0.6) was the Amrisa Massacre *after the first world war* (.) that
334		was in I`ndia (0.9) 'lots of I`ndians who 'actually 'fought with the British (.) during
335		the first world war (0.8) 'General Daimond 'shot a lot of I`ndians 'dead = *fast*
336	S	= ↑why .::↑
337	T	(0.8) cos there's (0.7) civil unrest in Amrisa:: (1.4) it was an un'lucky day *for them*
338		cos it was the 'thirteenth of April *fast*S
339		↑ o::h nightma::re↑ =
340	T	= and they were 'a::ll (1.0) 'gathered in this squa:re
341		(0.8) and he'd 'told em 'not to be gathered 'the:re
342		[(0.8) and] he 'took some 'armoured ca::rs (0.8) and some
343	S	[mmhm m]
344	T	'troops who were 'actually Indians (0.8) and 'Nepal Ghurkas
345	S	(.)yeah =
346	T	= and lined em up (.) and he didn't give em any 'warning to disperse cos it
347		were (.) the r- (.) un - (.) 'lawfully (.) as'sembled anyhow (.) so he just 'ordered them
348		to fire with ma'chine guns (1.1) and if he'd been able to take his 'armoured car in he
349		would've taken the armoured 'cars in (.) but it was too narrow for them to 'get in so
350		he 'didn't 'take them in
351	S	(.) what would've happened if he'd got tho:se in =
352	T	≐ 'lots 'more'd've been dead˙
353		(0.8) he 'killed 37'9 'people outri`ght
354	S	(0.7) ↑that's outra:geous↑
355	T	(.) and 'killed 'one thousand and 'wounded '1208 others
356	S	(0.6) ↑that's out- (.) outra:igeous↑ (0.6)h[ow many-]
357	T	[he was] 'asked to re'sign from the
358		a::rmy (1.0) and 'all he said after that (1.2) his re'ply (.) to the Jalamwalaba: (.)
359		massacre was it did a 'jolly lot of 'good (2.2) and (.) to f:: hu'miliate them he got
360		them on their 'hands and knees they were 'crawling on this 'pavement where this
361		'woman (.) had been beaten up (.) and didn't (.) this Europe¯an (0.7) they had to get
362		on 'hands and 'knees and 'cra::wl˙along˙ (.) 'all 'fou::rs this (.) 'crowd of ˙'Indians˙
363		(.) and they 'whipped those who refused˙tied to a 'whipping po¯st˙ they was meant
364		to re'sign from the a::rmy (1.2) and he 'died in re'tirement in 'ninetwenty seven

365	S	(2.0) was there an úprising after he 'did that =
366	T	=ʼno˙
367	S	(0.9) cos everyone was 'too::
368	T	(0.6) and another 'terrible˙*thing*˙ that 'happened (.) the 'man who in'vented gas
369		during the '*first war* 'got the 'Nobel Prize for chemistry (.) which is 'frightened he
370		might get hu⁻ng (.) or *something like that* (1.4) or executed (0.7) but instead he got
371		the Nobel Prize he got honoured (.) for his work in scien'tific circles *fast* S
372		(0.8) 'what d- (.) 'what did he invént
373	T	(0.7) he disco⁻vered the 'poisonous 'gas =
374	S	= o::h ri:::ght
375	T	(0.7) and he 'got (.) the 'Nobel Prize for che⁻mistry
376	S	(0.9) go:d (2.0) oh that's horrible (0.7) [who was] it (.)
377	T	[the 'reason-]
378	S	d'you know 'who: =
379	T	= Fritz Herber
380	S	(.) ri:ght
381	T	(1.4) i- (.) i'ronically enough he was one of the 'first 'targets of the 'Nazi reg¸ime
382	S	(0.7) re:::ally
383	T	(.) ye⁻ah
384	S	(.)what (.) [they ki`lled him]
385	T	[he was a Jew] of 'all things (.) he *didn't* (.) he 'died in Switzerland in
386		'nineteen fif thirty fou:r =
387	S	= yeah
388	T	(1.0) but erm
389	S	(1.4) peacefully you mean (.)˙y[eah]˙
390	T	˙ [peac] efully (.) yeah˙ =
391	S	=ʼyeah˙
392		(1.8) but (0.8) the - (.) ger- (.) the 'Nazis didn't want him there (.) was 'that because
393		he was a scí entist
394	T	(0.6) a Jew
395	S	(.) a Jew- (.) oh (.) ye⁻ah (.)˙ cos he was a Jew˙
396	T	(1.0)ʼ and e:m˙
397	S	(.) god (.) that's biza:::rre isn't it (8.5) do you know much about (.) what 'happened
398		to the Je⁻ws
399	T	(2.3) yea:h but (1.1) in some respects (.) em (0.8) 'chuck my coffee out (.) 'odd
400		'taste in mi:ne
401	S	(0.7) 'what's wrong with 'yours
402	T	˙I don't know ((*3 sylls*))˙
403		((goes to throw away coffee)) (39.9)
404		....
405		

406	T	and e:m (1.7)
407	S	˚ just pu‾sh the door to ˚
408		(1.6) did you get ri ˋd of that coffee (.) were it horrible =
409	T	= yeah
410	S	(2.2) gò on
411	T	(.)˚what else˚
412	S	(.) you were 'telling me about (.) you were going to tell me about the Je::ws 'then
413		(17.2) 'more about the wár
414	T	(1.1)˚ *Costa Rica* ˚ *whisper*
415		(1.0) a 'country which had nèver taken 'part in the second world 'wa:r .hhh (.) which
416		i'ronically a'bolished its army 'three years afterwards 'Costa Rî ca
417	S	(.) mm̄hm =
418	T	= that had 'never got invo‾:lved
419	S	(1.6) 'why was that
420	T	(.)˚I don't really kno‾w˚
421	S	(1.2) they're 'not a 'very big country are they[(.)˚C]osta Rica˚
422	T	|n‾o]
423	T	(.) they're in 'Central America (1.6) their 'name (.) 'means 'rich còa:st in 'Spanish
424	S	oh does it =
425	T	= 'costa is còast (.) 'rica is ri‾:ch
426	S	(0.8) wo::w (0.7) is it a (.) is it very (0.7) e::rm (1.6) 'fru -(.) e:r (.) have (.) have
427		the:y got a 'lot of e::rm (.) 'crops (.) and thi ˋngs 'the[re]
428	T	[the]y grow ba'nanas
429		and coffee there was (0.8) bananas were intro'duced in the ei ghteenth century˚to
430		that country ((2 sylls))˚ *whisper*
431	S	(0.6) to ou::r 'country
432	T	(.) no to 'Costa Rî‾ca
433	S	(.) oh to 'Costa Rî˚ca =
434	T	= it's not tropical in 'Britain it wouldn't˚grow here˚
435	S	˚o:h˚ (0.7) 'would the - (.) 'where did they 'come from (.) originally˚ 'then (.)
436		[bananas]˚
437	T	˚ [don't really kno‾w]˚ (0.6) I think I got an *en 'cyclopaedia at ho ‾me* (.) they're (.)
438		'south east asian *fast* S
439		(.) ri::ght
440	T	(1.2) ˚(2 sylls bananas?))˚
441	S	(1.2) there's loads of problems with ba'nanas at the mòment you know (.) ba'nanas
442		are really 'cheap in the 'shops now
443	T	(.)˚yeah˚
444	S	(.) it's because they u- (.) they're 'using erm (.) 'slave labour to
445		produce the[m (.)] and
446	T	˚ [right]˚

447	S	(.) 'covering them with chemicals (.) so you - (.)you're su'pposed to be very 'careful
448		where you 'buy your bananas from 'now (1.0) and only get them from 'countries
449		where they're not (.) hu⁻rting 'people (8.8) do you know 'anything about the
450		Vietnam 'war
451	T	(1.2) it's finished 'thank 'goodness (.) it 'took a 'long time to (0.8) come to an 'end
452		(.) it did 'only 'continue what doing 'what the French had 'finished off (.) with the
453		A'mericans and they made a (.) 'worse 'job than the 'French did =
454	S	≐ mmhm˙ (0.8)↑
455		did the French 'start it 'a:ll↑
456	T	(1.0)ʲ yes˙
457	S	(0.6) 'how come
458	T	(1.2)well they wanted independence (.) 'these 'country (.) from 'France
459	S	(.)ʲ mmh˙ (19.9) lo⁻ads of 'wars a⁻ren't there (.) d'you know about
460		the Bosnian one (.) war ['now]
461	T	˙[not re]ally (.) no ˙ =
462	S	= have you 'not taken much of
463		an i⁻nt[erest] in 'that (.) 'that's 'pretty
464	T	˙[no]˙
465	S	'much o⁻ver 'now as well i̯sn't it =
466	T	≐ a:h˙
467	S	(4.3) I was 'reading about (.) Ga⁻ndhi (.) before 'you 'came in (.) in that 'book over
468		there (.) have you read 'that 'book
469	T	(1.0)ʲ what (.) where did they get this one from˙
470	S	(0.6) have you not seen 'that one
471	T	(.) 'seen the (18.2)
472	S	have you 'not (.) have you seen 'that one be'fo:re
473	T	(.) we've got the video of it that
474	S	(.) have you (.) o::h what (.) the film
475	T	(.)ʲ yeah˙
476	S	(0.9) is it 'true to the st - (.) the 'real stor[y]
477	T	˙ [sp]ose it is˙
478	S	(0.7)yeah (3.6) it's 'quite a 'lot pictures (.) did you 'know the 'guy who killed him
479		(0.7) did you 'know about the 'guy who ki⁻lled him
480	T	(0.9) *not really* ˙ *whisper*
481	S	(15.29) amazing man
482	T	(1.1)ʲ yeah˙
483	S	(24.3) what 'other 'people do you know about (1.4) in 'history
484	T	(.)ʲ don't really know˙
485	S	(3.1) what about 'Margaret Tha⁻tcher
486	T	(2.0) .hhhh (.) she didn't do any (.) 'good for women 'did she when she was prime
487		'minister (.) she did 'actually 'worse than a lot of man prime minister wo[uld do]

488	S	[she wa] s a
489		ˈbloke in a frock (.) wasn't she
490	T	(.)ˈaːh˙
491	S	(4.3) or she ˈmay as ˈwell have beeːn (2.0) don't think she really cared about ˈwomen
492		did she (2.8) ˈknow she ˈinvented that (.) you know that whiˋppy ˈice-cream (.) that
493		(.) that (.) ˈthat iˋce cream that you ˈget that's (.) like(.) ˈcurly =
494	T	= yeah
495	S	(0.6) she ˈinvented that (.) when she was at (.) university
496	T	(.)ˈshe didn't did she˙
497	S	yeaːh (.) becau- (.) and she invènted it (.) because (.) eːrm (1.1) you can get ˈmoːːre
498		(1.1) money's ˈworth of (.) of iˋce cream (.) because it's full of ˈaiːːr (0.6) so (.) it's
499		a ˈreally ˈcheap ˈway to (.) ˈeat iˋce cream (.) so that's ˈwhy she invented it
500	T	(.)(*she didn't ˈlook at em*˙) *whisper*
501	S	(1.0) (hhh) (1.5) ˈthat's a little known ˈfact about ˈMargaret Thaˉtcher
502	T	(.) she lived in Grantham (.) with a grocery
503	S	(0.6) hmmm (2.5) who's your favourite prime minister
504	T	(.).HHHH (.) say I ˈthink eːr (4.1) I think if (.) a- (.) a ˈleader was inˈspired (.) ff (.)
505		ˈpeople ˈsince i - (.) i - (.) is (.) a-(.) ˈactually ˈdifficult (.) to (.) to pòint (.) ˈone (0.7)
506		think ˈJames Callaghan was quite a (.)ˈ reˈspectable˙
507	S	(.) ↑yeah ↑(.) people liˋked him (.) didn't they
508	T	(0.8)ˈthink er˙(.) it's a ˈgreat shaːme (4.8)˙{saʊ}˙
509	S	(1.0) everybody liked him didn't they
510	T	(0.9)ˈyeah˙
511	S	(1.1) ˈnobody could ever find any scandal for him could the[y]
512	T	˙ [spˈose they couldn't˙
513	S	(1.9) what about (.) ˈHarold Wi ˋlson (.) d'you reˈmember ˈHarold Wilson
514	T	(0.9)ˈ I suppose so˙ (1.2) think ˈEdward Heath was a bit ˈtooː erm (2.5)
515		confrontàtional wasn't he
516	S	(.) mmhm (1.0) yeaːːh =
517	T	=s'he'd eːrm
518	S	(.)yeah ˈpeople (5.4) d'you remèmber when he was in ˈpower
519	T	(1.0) he was so (.) he kept ˈthinking he was the unˈcrowned king
520		all the[ˈtime didn't]he
521	S	[(hhhhhhhhh]
522	T	(0.7) the ˈway he was behàving
523	S	(2.5) specially with that ˈbig beˉlly
524	T	(1.9) it was a ˈgreat shoˉck (0.8) when I ˈheard the ˈnews that he'd ˈlost his yacht
525	S	(0.9)he ˈlost his yacht
526	T	(.) yeah (.) yeah (.) he ˈlikes yàchting his ˈthing sùnk
527	S	(1.4) it sùnk
528	T	(.)yès =

529   S   =wô::w

530   T   (0.8) I d[on't know-]

531   S   [was he òn] it (.) when it [sʊnk]

532   T   [I::] hǫ::pe not but (0.8) he:: erm (1.0) ts 'quite

533   a shǫck for him that he'd 'lost his yǎcht

534   S   (1.1) Gǫ::d (0.9) yea::h cos he used to 'love yǎchting (.)[dịdn't he]

535   T   [yeah he] di `d

536   S   (4.1) have yǫu ever been on a 'yacht

537   T   (0.9) ((inaudible 3 syllables -yawning))

538   S   (3.5) bet it'd be quite nị::ce (2.9)↑ didn't you go on any↑ (.) ↓o:h spose not↓ (.) in

539   No::rway (1.9) did you see any fjǫ::rds in 'Norway

540   T   (.) ye⁻s

541   S   (.) 'what did they 'look lịke

542   T   (1.0) 'frozen hị:lls I thịnk

543   S   (.) ạre they (1.5) are they 'a::ll (1.4) cȏmplicated (1.3) and fri `lly

544   (14.7) do you got your 'own rȏom at 'Ambrose 'House (1.0) yéa:h (1.2) you don't

545   have to shà:ré with 'anyoné dǫ you (1.7) is it 'a:ll rịght (3.7) d'you li`ke it (12.1)

546   so you 'ended up wàtching the 'football after 'a:ll

547   T   (.) éh

548   S   (.)you (.) 'did you 'end up 'watching the fǫotball |aft |er a:ll =

549   T   ˙ [yeah] ˙   = 'Portuga::l (.) wǫn I

550   think

551   S   (0.9) that (.) what did they wịn by::

552   T   (0.7)˙ don't know˙ (1.5) they 'wear 'red and grẹen

553   S   (.) oh ↑dǫ they↑

554   T   (3.5) 'Portugal throughout hịstory was 'Britain's 'friend (.) like 'France was its

555   tr [a'ditional]

556   S   ˙ [mmhm]˙

557   T   ẹnemy =

558   S   ⁼ m̂mhm˙

559   T   (1.7) they were- (.) they were ri -(.) o'riginally lȏoking for (2.1) in hịstory they were

560   (.) quite a (.) c- co'lonialistic (0.6) émpire 'builder (.) they'd 'searched (.) for a

561   'passage 'round (2.0) the 'world to 'try and 'find the 'known 'world in the 'fifteenth

562   'centu [ry]

563   S   ˙[mm] hm˙

564   T   (.) they having quite a (0.6) an émpire (.) and it was by trèaty (.) by (.) coincid- that

565   they 'managed to get Brazi `l given to them

566   S   (0.6) rị::ght

567   T   (.) Spạnish and Spạin and Pȏrtugal 'quarreling over South Amèrica

568   S   (.) mm̂hm =

569   T   = so they 'tried (.) and 'send the 'people to seek advẹnture

570		by coi `ncidence (0.6) Bra'zil (0.8) was given to Pòrtugal
571	S	(.) ↑ọh right↑
572	T	(2.0) 'Britain did very bạdly in South A'merica
573	S	(.) mːmhm =
574	T	= cos the 'Spanish had just like ni -(.) 'nicked the 'whole
575		'area for [thems]ẹlves
576	S	[ye⁻aːh]
577	S	(1.1)ye⁻aːh =
578	T	= 'really (0.7) ↑just↑ like 'walk àll over the blumming place =
579	S	= ye⁻aːh (.)
580		it's all 'Spanish =
581	T	= you w- (.) 'wonder why 'any of the Euro'pean 'powers didn't
582		stọp them (1.0) just let them 'waːlk in (.) as if it was 'theiːr (.) prọperty (.) *you'd*
583		*think* they didn't do the 'same in A`frica that (.) *fast*
584		be able to [do th]at in Africa
585	S	↑ [why ːː]↑.
586	S	(.) maybe they couldn't get o⁻ver theːre (.)` it's more m[iles `]
587	T	↑[they c]ould ↑ un'less you
588		would have thought they'd discovered A`frica *before South America* (.) a lot the
589		over to 'Eu`*rope and that (.) South America (.) [wouldn't] it`* *fast*
590	S	[mmhm]
591	S	(1.2) m̂mhm (.) it's wẹird innịt (1.3) [no-]
592	T	[you] wouldn't think the Europẹans would get
593		'coffee from South Amèrica {xa}- (.) {xa}(.)*frica's neàrer* (0.6) you could
594		understand South (.) the U ' nited Stàtes getting *'coffee from South A 'merica* (.).
595		it's nearer to[(.)`*South] A 'merica ịsn't it`* *fast*
596	S	[yèaːh]
597	S	(.) you'd 'think we'd get it from (.) whère (0.6) Àfricaːː (.) or 'places like thạt (0.7)
598		yẹaːh (1.1) maybe it's chẹaper 'there (.) it's probably chẹaper cos they don't pay
599		their 'people much mọney
600	T	(.) they actually have a 'coffee pro'ducer on their bòrder the United 'States 'do
601	S	(0.7) they whàt
602	T	(.) they have a 'coffee pro'ducer on their bo⁻rder
603	S	(.)↑ dó they (.) wh⁻o's that↑
604	T	(.) Mẹxi[co]
605	S	[Me⁻] xico (.)↑ do they (.) 'make cọffee↑
606	T	(.) gro⁻w it (.)↑ yeah↑
607	S	(.) ↑oh ri⁻ːght ↑(0.8) what's 'Mexican 'coffee ḷike (.) have [yòu ever had it]
608	T	[*I don't know*] (.) but
609		'know that they 'grow còffee (.) they're one of the 'world's leading prodùcers of it
610	S	(.) ↑o⁻ːh rịːght ↑(.) I didn't know thạt (2.7) 'thought they just made chịllis

611 T (1.5) huh (4.8)

612 S   have you bee:n to A'merica

613 T (1.0) hêh (.) no (0.9) me brother has 'though

614 S (1.4) wherea'bouts did he g⁻o =

615 T   = *I don't know*   *fast*

616 S (1.5) do Amèrica pro'duce anything

617 T (1.7)⌐ 'probably do˙

618 S (1.2) cotton (.) I 'think =

619 T   =˙ probab[ly   ]˙

620 S   [pro] 'duce 'cotton' or something˙ (1.2) and 'co::rn

621   (1.9) ye⁻a::h (2.8) when the: (.) A'merican Indians were there (.) they used to grow

622   pe⁻a:ches (0.9) 'peach gro⁻:ves (0.8) e⁻verywhe:re (4.7) 'what does this 'country

623   pro'duce

624 T (.)⌐ 'hm˙

625 S (.) 'what does 'this 'country produce

626 T (.)⌐ I don't know˙

627 S (13.5)⌐ 'what will you be doing today˙

628 T (0.8)⌐ I don't know˙

629 S (0.6) don't you kno:w (0.6) is it up to A `lan (.) does A`lan de'cide what you 'do

630 T (.)⌐ yeah˙

631 S (2.6) does A `lan de'cide what you gonna 'do

632 T (.) I ho⁻pe not

633 S (1.0) you hôpe not (hhhhh) (3.0) d'you àlways 'work with 'Alan on a 'Monday

634 T (.) êh =

635 S   = d'you àlways 'work with 'Alan on a 'Monday

636 T (.)⌐ *'every day* ˙   *whisper*

637 S (.) yêah (3.1) is it all ri `ght (.) d'you enjòy it all 'right

638 T (0.7) I 'hope˙not˙

639 S (.)yéah (2.1) ↑are you ti `red↑ (5.9) you 'spent too 'long in the 'pub (9.2) have you

640   got any fri `ends 'here (0.7) who do you (.) [se⁻e]

641 T   ˙[I   ] don't kno⁻w˙

642 S (1.0) you don't knòw

643 T (0.6) Kèvin˙ 'sometimes˙ (0.6) I've been to his house˙ once or twice˙

644 S (.) oh yea⁻:h

645 T (.) do you know where A⁻bley is

646 S (0.9) n⁻o:

647 T (0.7) I `pley 'area (.)˙ know where it is˙

648 S (.) o:h 'right (.) 'North Tâmshire

649 T (.) been to (0.6) Ca::rol's at˙ 'Ipley˙

650 S (2.8) is it 'up in the mo⁻o:r (.) innit

651 T (.)⌐ I 'think so˙

652 S (0.6)yea:h (1.5) what kind of house do they 'have

653 T (.) huh

654 S (.) what kind of ho¯use do they 'have

655 T (.) I don't kno:w (.) cos I haven't 'seen it for so lo:ng

656 (1.4) *I couldn't describe (0.8) I couldn't descri `be it*   *while yawning*

657 S (0.7) couldn't you (0.6) making m¯e: yawn 'now (1.8) it's infectious (1.8) what's

658 your 'house like (.) where you used to 'live (0.7) could you des'cribe that

659 T (.) it's a semi de'tached and it's whi¯te (1.4) out'side (0.7) it's not a 'very 'big

660 garden (.) very 'small 'front one (.) ne- (.) en - (.) 'just a 'bit bigger (1.1)˚ than 'back

661 (.) 'garden 'one (0.8) and erm¯ (1.3) and upsta¯i:rs (0.7) downstairs (0.9) and a

662 'television and a vi¯deo: (1.3) a di `ning room (.) we 'a:lways used to 'eat in the

663 kitchen at (.) 'never used to 'bother about 'eating in the di `ning room

664 ['sometime] (.) un'less guests were 'there

665 S ↑[o:h ri::ght]↑

666 S (.) ri::ght

667 T (.)˚ we 'just˙

668 S (0.8) was 'that like the best 'roo:m 'then

669 T (0.6) no:: (1.2) we have 'gas 'one 'time we used to have an electric 'oven (1.2) *what*

670 *d'you prefer 'gas or electric*   *fast*

671 S (0.7) erm (.) 'gas (.) for cooking

672 T (0.9)˚ yea:h (.) I do˳˙

673 S (0.8) 'what about you

674 T (0.6) 'gas

675 S (0.9) yea¯::h (0.8) so is it a gas 'cooker 'there 'now

676 T (1.3) used to have a 'dog (.)˙ what 'died of old a¯:ge˙ (0.9) I didn't go to 'visit it (.)

677 wh bury it (.) wouldn't have 'minded 'going out (.) I wouldn't have 'minded 'going

678 out with my brother to 'find out 'where it went to

679 S (0.7) ri¯::ght (0.8) 'where did it get buried 'then

680 T (.) eh (0.7)˙ I don't know˙

681 S (1.9) 'what was it called

682 T (0.7) 'Timba (1.0) 'black

683 S (.) was he:

684 T (.) *black* 'very 'hairy indee:d   *fast*

685 S (.) was h(hhhhhhh)e::::

686 T (.) used to 'brush his 'coat 'off in summer and there was loads

687 of 'hairs [on the 'brush]

688 S   [(hhhhhhhhh)]

689 (hhhhhhh) (0.8) did you like him

690 T (.) yeah (.) he used to 'chase ca¯ts

691 S (0.6) did he

692 T (.) 'bark at cats a 'lot

693	S	(.)hhhhhhhhh).hhh[hhh]
694	T	['nea]rly goes up a tr̞e̞e after the 'cats (.)
695		at 'one 'time =
696	S	= hôn[estly]
697	T	[they] ar-(.)
698		they 'arch their b̞acks (.) l- like th̞at (0.6) n- and spi̞t (.) they 'do 'spit
699		at d̞o̞gs d̞o̞n't they =
700	S	=ye⁻a:̞h
701	T	(.) goes ((spit)) (0.9) it's r̞eally disgu̞sting (.) you [never seen them]
702	S	[(hhhhhhhhh)]
703		(HHHhhhhhh)
704	T	but they 'arched their b̞acks (.) if they 'do that to 'make themselves give the
705		im'pression they're 'bigger than [they] a̞:re
706	S	[m̞mhm]
707	T	(0.9) it's got 'everything to do with si̞:ze (.) if they 'look 'bigger than they a̞:re
708	S	(.) m⁻mhm (1.3) and 'show all your t̞eeth (0.9) like th̞at=
709	T	=ʲye⁻:ah˙
710	S	(.) and [really 'sca:re]
711	T	[and da we(.) d] og (.)went wowo[wooooooo::::::::::::]
712	S	[(hhhhhhhhhhhh)]
713	T	(1.1) and ch̞ased them
714	S	(1.9) was it on a 'main r̞o̞ad 'that 'house
715	T	(.) hêh
716	S	(.) was that 'house on a 'main r̀oad (.)˙'is that 'house on a 'ma[in r̀oad]˙
717	T	˙[no idea] ((2
718		syllables))ʲ (.) in's (.) a 'cul de s̞ac
719	S	(.) ôh 'that's˙àll right then˙ (1.1) so he wouldn't get squàshed (.) if
720		he 'ran [out (.) 'chas]ing the ca⁻t
721	T	˙['hope not]˙
722	T	(0.7)ʲn̞o̞˙
723	S	(1.6) you didn't h̀ave 'any 'cats (.) 'then
724	T	(.) n̞o̞

Appendix 6.2.

Tom

Transcription Two: 1.7.96

Tom doing a peg puzzle

1	S	did you 'see anything on the tèlly this 'weekend 'Tom	
2	T	(0.6) éh	
3	S	(.) did you 'see 'anything on the tèlly this 'weekend	
4	T	˙ *I can't remember*˙	*whisper*
5	S	(4.4) can't you remèmber	
6	T	(0.9) h˙m	
7	S	(.) 'can't you remèmber	
8	T	(.) nò (.)˙ *I don't think so*˙	*fast*
9	S	(1.5) do you wàtch 'telly 'much	
10	T	(.) yęs (.)˙ sometimes˙ (0.7) .hh we 'watched 'Passport to Pi ˋmlico: with (0.8) .hh	
11		'Stanley Họlloway:	
12	S	(2.6) 'what was 'that abōut	
13	T	(.).hhh a 'part of 'London 'nreally like to become 'part of Bùrgundy	
14	S	(1.2) that would 'like to become 'part of Bùrgundy	
15	T	(0.6) yęah	
16	S	(.) whỳ:	
17	T	(.) {an ɛ ɪs ɪs} this còmedy wi - (.) 'nineteen 'fifties còmedy with (.) 'Stanley	
18		Hòlloway in (.) I can't re'member anything *else about* (.).hhh I 'went for a 'walk	
19		with me 'dad round this pà:rk (.) 'place (2.1)˙ wèekend time˙	*fast*
20	S	(1.5) 'where was thạt (7.4) was it near 'Amber Hòuse	
21	T	(.)˙ *could have been*˙	*fast*
22	S	(7.6) 'what was in the pa¯rk	
23	T	(1.5)˙ *'Princess Nina* Pa¯rk it 'was˙	*fast*
24	S	(0.7) it was whạt	
25	T	'Princess 'Nina Pa¯rk	
26	S	(.) Princess Ni ˋna 'Park	
27	S	(8.4) were 'a:ll the 'flowers ọut	
28	T	(1.5) mm mm̀	
29	S	(2.9) 'any dụcks	
30	T	(0.9) *'no du čks*	*fast*
31		(5 seconds)	
32	S	(5.7) what had your 'dad been do¯ing (.) did he 'tell you	
33		'anything [hè'd been] 'doing	
34	T	˙ [I don't know]˙	
35	T	(1.1)˙ whát˙	

36	S	(5.0) does he work your 'dad
37	T	(0.6) no:: (.) ˙re'tired˙
38	S	(3.3) did he ùse to 'work
39	T	(0.6) yes
40	S	(0.8) 'what did he dǫ
41	T	(.) 'lecturer at 'Grape Làne
42	S	(.) o˙:h rị:ght
43	T	(.) 'heard of that plạ:ce
44	S	(.)hhumym
45	T	(.) 'heard of 'Grape Lạne
46	S	(.)yeah (1.4) 'what did he lęcture in
47	T	(.) I can't rem⁻ember
48	S	(6.1) is he nị:ce (.) your 'dad
49	T	(1.5) h′m
50	S	(.) is he nî˙ce (.) [your 'dad]
51	T	[*yeah (.)*] *I 'spose so*

fast

52	S	(3.4) 'what does your 'brother dǫ
53	T	(0.6).hh I don't 'know
54	S	(0.8)′don't you kno⁻w˙
55		(1.4) ↑do you 'know what your 'sister dóes↑
56	T	(0.7) ěh
57	S	(.) do you 'know what your si ˋster 'does
58	T	(.) nǫ
59	S	(13.9) have you 'read any stùff since I saw [you] 'last have you 'read
60	T	[ěh]
61	S	any bòoks (.) since I'saw you 'last
62	T	(0.7) n' I don't remęmber
63	S	(0.7) nó: (32.6) it's been hǫrrible 'weather hàsn't it (5.4)was it 'raining when you
64		'went to the pàrk (.) 'Tom
65	T	(1.5)′*no I don't think*˙

whisper

66	S	(37.5) 'did you 'watch the fǫotball
67	T	(0.6)˙yęs we 'did˙
68	S	(1.2) 'who did you 'want to wịn
69	T	(.)˙ I don't remęmber˙
70	S	(3.8) do you re'member who was plàying
71	T	(0.9) *Germany and Częchoslavakia*

fast

72	S	(.)′ye⁻a:h˙ (6.1) did you 'watch it with your dàd
73	T	(0.6)′yes˙
74	S	(1.4) does he lìˋke 'foot [ball] your 'dad
75	T	˙ [yes]˙
76	S	(6.6) does he come up èvery 'weekend to see y[ou]

77	T	[ĕh]	
78	S	(.) d'you 'see him èvery 'weekend	
79	T	(.) 'every òther 'weekend	
80	S	(66.3) what èlse have you 'done to'day 'Tom	
81	T	(.)' *don't know*'	*fast*
82	S	(24.1) have you 'done anything èlse (.) to'day	
83	T	(0.8)' can't re'member'	
84	S	(0.8) nó	
85	T	(0.7)' *don't remember*'	*whisper*
86	S	(30.7) you can make ǫther 'things with 'tho::se (.) d'you ever 'make (.) 'something	
87		just (.) out of your hèad (.) on 'there	
88	T	(1.4)' *don't think so*'	*whisper*
89	S	(.) nŏ::	
90	T	(.)' *no*'	*whisper*
91	S	(1.1) do you li`ke 'drawing	
92	T	(1.2)' *not always no*'	*whisper*
93	S	(.) nó (1.3) 'this is gòod (.) have you dǫne 'this	
94	T	(1.0) .hhhhhh hhhhhhhh	
95	S	(0.8) yèah	
96	T	' *yęah*'	*whisper*
97		....	
98	S	'what did you do 'last węek Tom (.) [you c -]	
99	T	' [I can't] remęmber'	
100	S	(.) ↑ can't you re'member ạnything↑	
101	T	' ((4 syllables))'	
102	S	(.) ↑didn't you go òut anywhere↑	
103	T	(.)' *might have done*'	*fast*
104	S	(1.3) d'you go to còllege	
105	T	(0.6) 'yes	
106	S	(.) 'what did you 'do at co‾llege	
107	T	(1.9) this and thạt (.) 'watched an 'Elton 'John ِCD	
108	S	(1.6) 'watched an 'Elton Jòhn CD	
109	T	(.)' yea:h'	
110	S	(.) ǫh ri ِːght (.) 'what was that abo‾ut	
111	T	(.) I don't 'know no‾w	
112	S	(.) 'what was it a sò::ng (.) 'thing	
113	T	(.) *'could have been*	*fast, while yawning*
114	S	(1.4) how 'come you wạtched that (0.7) at e::m	
115	T	(.) (yawn) it was just CD wạsn't it	
116	S	(.) oh rịght (.) what do you d‾o at 'college	
117	T	(1.4) 'this and 'that'	

118	S	(2.2) what are you su'pposed to d[ǫ]
119	T	[it's] the 'first of 'July today isn't it
120	S	(.) it jːs(.) yeˉah
121	T	(.) my 'watch says the 'thirty 'first
122	S	(1.3) so does miːne (1.4) we 'ought to change them (.) shǫuldn't we (3.6) d'you
123		'know how to change yours
124	T	(.)˙noːː ˙
125	S	(1.4) spect you just have to wiˉːnd it on
126	T	(1.0)ʲyeah˙
127	S	(3.8) it's a 'bit annǫying isn't it =
128	T	= yeaːh˙
129	S	(13.7) 'when's your birthday 'Tom =
130	T	= 'March the 'twenty 'thiːrd
131	S	(1.2) 'what did you dǫ on it last yeaˉr (.) d'you remęmber (.) ['this] yeˉar
132	T	˙ [no] ˙
133	S	(3.0) how 'old will you be on your 'next oˉne
134	T	.HHHHH ˙ *I don't know* ˙ *whisper*
135	S	(23.5) d'you see 'anything on tèlly this węekend
136	T	(1.0)ʲ I can't remęmber I said˙
137	S	(2.7) can't you remeˉmber *yawning*
138	T	(1.3)ʲno˙ (2.9) oh the 'Bridge at Rimaˉrgen
139	S	(1.1) 'what's thąt
140	T	(0.8) when the 'allies we - 'landed in Gęrmany in the *second world* 'war *fast*
141		(.) there was this 'bridge between them and the Rhine
142	S	(0.7) rjght
143	T	(.) which was trying to be hèld (1.1) and they trying to blow ųp so the 'allies
144		couldn't 'use it but they {'dɹɤgdεm} explòsives wouldn't 'work
145	S	(.) riˆːght (2.2) and 'what hąppened
146	T	(0.9) they got 'oːver all rjght en (0.9) [' cros]sed the Rhine
147	S	[ǫːh]
148	S	(.) oːh rjːːght (2.7) is 'that in a fi ˋlm
149	T	(0.8) ((audible yawn))
150	S	(.) is that -(.) 'did that 'really hąppen
151	T	'yeah
152	S	(.) oːh rjːght (1.1) 'who was in the- (.) the àrmy (.) d'you 'know who was on e- (.)
153		'each si ˋde
154	T	(0.9)ʲ *no* ˙ *whisper*
155	S	(.)nó (4.4) d[o you 'know-]
156	T	[I'm 'doing] this one 'aren't I *banging on picture he's copying*
157	S	(0.6) yeˉah (.) you aˉre (.) yeˉah
158		....

159

160

161   *After coffee break: Tom no longer doing peg puzzle.*

162

163   S   ˚ right˚ (.) 'tell us what you been dọing 'then

164   T   (0.9) e:rm (3.6)˚well˚ (.) 'saw me 'dad ye¯sterday (1.8) and e:rm (2.8) he 'came for

165   quite a 'bit in the ạfternoon (1.1) and I 'saw the fo¯otba:ll (.) it was 'West Germany

166   'versus (.) e:rm (0.8) Czẹchoslovakia

167   S   (.)oh [ri ˋght]

168   T   [Gẽrm] any *versus 'Czechoslovakia* (.) it's not 'cut   *fast*

169   in twọ 'anymore it's 'one 'whole 'country agạin

170   S   (.) ↑ o:h is it jus- (.) just Gẽrmany ↑(.) I didn't 'notice thầt (0.7) so did they have

171   'East Gẽrman 'players as 'well

172   T   (.)˚ *no :: I don't [know]*˚   *whisper*

173   S   [nồ   ] (.)˚don't know˚

174   T   (1.5) the 'person who 'built the original Ger- (.) 'Berlin Wạll's been put in 'prison

175   for trẹason

176   S   (.)↑ họnestly↑

177   T   (.) 'Erik Họnecker

178   S   (1.7) 'what did he:: (0.6) 'when did he get put in prịson

179   T   (1.1) {aɪm}not some yẹars back

180   S   (.) rị::ght (1.1) who d- 'who 'put him in prịson 'then

181   T   (0.8) the 'authorities who 'took over the 'government in (1 syllable)

182   S   (.) rị::ght (.) and they (.) 'put him in for trẽason (1.5) cos he 'built [th-]

183   T   [it's]

184   'strange to 'think all the ẹfforts the A'mericans (.) put mi ˋlitarily into 'trying to get

185   rid of Cõmmunism .hhhh when they 'find it's just co'llapsed 'naturally of its own

186   a'ccord ânyhow =

187   S   = ye(hhhhhh)ah

188   T   .hhh [so it doesn't make any 'sense]

189   S   [.hhhhhhhhhhhhhhhhhhhhhhhhhhhh] hhhhhhh must have been 'kicking thẹmselves

190   T   (.) you knọw (.) cos y'all this (.) 'wasted lịves 'trying to 'fight agạinst it and

191   'naturally of its own a'ccord 'everybody just doesn't want it 'naturally 'anyway it's

192   just sort of a (.).hhhh (.) a 'matter of 'voting it out

193   of (0.6) [ôffice] (.) I 'guess 'nobody wầnts it

194   S   [(hhhh)]

195   S   (.) yea::h (.) [they must-]

196   T   [see didn'-](.) 'make sẹnse (.) the only 'countries what's 'actually (.)

197   Cọmmunist in the .hhhh (.) 'literal (.) 'marxist (0.9) {dạ::m} (0.9) tradition is 'North

198   Korẹa in the nats- (.) [{nd 'ats}]

199   S   [rị:ght   ]

200	T	.hhhh (.) {ðeɪvən} 'they're having their (0.9) 'doubt s (.)
201		'having [their (.) uni]
202	S	['having their dòubts]
203	T	fication 'talks
204	T	[an eve]rything that
205	S	[rj̈::ght]
206	T	(1.0) you know (.) it {s} doesn't make sẹnse (.) all the 'blood (.) 'spilt over 'trying
207		to 'strength (1.0) 'left wi `ngis[m (.)] which is
208	S	[mmhm]
209	T	'naturally (.) co'llapsed of its own accọrd *'things like that* *fast*
210	S	it's f-=
211	T	= 'last 'fifty yèa::rs or so even mọ:re than 'that (.) was the (0.7) the 'biggest
212		'waste of (.) 'blood and ['life (0.7)] then (.) been in the whọle of 'history ịn't there
213	S	[(hhhhhhh)]
214	S	(.) it's crạ::zy ịsn't it (0.9) what about (.) in't Chi`na 'Communist anymore
215	T	(.) they sày they are but (2.2) 'theory they've been (2.2) having us (0.8) {gəʊən
216		fɪd} themthey've 'never 'liked Rùssia (.) so I don't 'think
217		the[y're (0.9) Cọm]munist (.) they could have (.) declared wạr on 'Russia
218	S	[ri̅::g ht (.) ye̅:ah]
219	T	(.) er su'pposedly
220	S	(0.9) they wẹ:re gonna or they cọuld've
221	T	(.) I 'said er (.) al'most at wạ:r with 'Russia [at times]
222	S	[o::h ri]ˌ::ght (1.1) rị::ght (1.0) wh- (.)
223		what about these (.) elẹctions in Rụssia 'though (.) because
224		they (.) [they've 'got a] (.) Cọmmunist
225	T	*[I don't know]*
226	S	'candidate hạven't they
227	T	(1.2) 'Yeltsin'd 'pass out any mọment knowing his (.)
228		'health (.) [you know] *probably* *fast*
229	S	[mmhm]
230	S	(1.6) do you 'think they'll (.) 'get (.) that (.) 'Com- (.) Cõmmun[ist 'guy]
231	T	[I don't] know
232	T	(0.6) it's a 'miracle (0.6) 'Yeltsin hasn't been bùried yet (.)
233		you'd [think] (.) the (.) 'health (.)
234	S	[ye̅::ah]
235	T	they'd have an'nounced his funeral by now
236		*'somethi[ng li] ke that wouldn't you* *fast*
237	S	[ye̅a::h]
238	S	(.) well they 'reckon he's a (.) dri`nker dòn't they
239	T	(.) hèh
240	S	(.) they 'reckon he dri`nks a lot (.) àlcohol (0.8) so he (.) they 'reckon he- he gets

241		drunk (.) 'sometimes (.) so he's 'probably not (.) 'that (0.7) 'good (.) a 'person to be
242		in cha:rge 'really
243	T	(1.2) won't be 'long before there's a fu::neral 'the:re (.)
244		I bet (.)˙ s*[omething like that]*˙ *fast*S
245		[ye ˉ:::::] ah
246	S	(0.7) he'll be in the ground (2.1) what about (.) the 'Czech Republic (.) 'then (.)
247		d'you 'know 'anything about them
248	T	they 'grow a lot of ry‿:e (.) [R Y] E *spells it out*
249	S	[dó they]
250	T	(0.8) ye- (.) ry ‿vita sort of 'rye: =
251	S	= yéah
252	T	they grow a lot of ry‿:e
253	S	↑do they↑
254	T	(.) yes
255	S	(1.0) ↑what else do they have↑ (1.1)˙ anything 'else˙
256	T	(8.3)˙ *don't know*˙ *whisper*
257	S	(.) nó (1.1) wh - (.) how many goa:ls (.) were 'scored (.)
258		did you 'see it (.) on th[e]
259	T	[heh]
260	S	(.) did you see it on the 'football (.) 'Germany and the 'Czech Re'public
261	T	(.) yeah
262	S	(.) did you 'see how many goals were 'sc[ored]
263	T	[*do* /n't think so *fast*
264	S	(.) how mány (6.6) I think there was 'only: (0.7) 'one or 'two or 'something (.) I
265		can't re'member (2.6) what else you been doing this 'weekend then 'Tom
266	T	(.)˙ *I don't know*˙ *fast*
267	S	(5.6) did you go out walking
268	T	(1.3) haven't been 'walking for ages
269	S	(2.8) haven't you (2.2)↑ o:h ri:ˉ:ght ↑(1.5) did you (.) 'do 'anything with your dad
270	T	(1.5)˙ *no*˙ *whisper*
271	S	(.) ↑ no ‿↑
272	T	(1.5) went to the paˉ::rk (.) but the 'park isn't as scenis- (.) 'scenic as 'people give
273		credit for it .hhhh it's got some 'nice 'red flo:wers (.) 'somewhere (.) there's 'trees
274		and 'cherry 'blossom 'things but (0.6) 'basically it's a bit (1.8) bit dull in 'parts (.)
275		but it's a:ll right {s} 'rea:lly (.) I 'spose
276	S	(.) mmhm (1.0) is it a bit boring 'though
277	T	(.) {sn-} 'not a:lways but (0.8) e:rm
278	S	(6.2) has it got any- 'any (.) water in it (.) has it got any ponds (.) nŏ: (0.6) thàt's
279		'boring 'innit (2.8) is it (1.1) is it just graˉ::ss then (.) [it hasn't -]
280	T	[I think] it is
281		(.)˙ yeah˙ =

282	S	= yea::h (.) it hasn't got a 'kids' plày 'area or 'anything (2.0)' o:h dêar'
283		(0.8) 'tis a bit dùll isn't it (0.9) 'where's your 'favourite plaçe that you 'like going
284		'best
285	T	(0.9)' I don't know hònestly'
286	S	(0.6) nó
287	T	(1.3)' I just don't 'know'
288	S	(2.1) what about did you 'go to còllege last 'week
289	T	(.)' yҿa:h'
290	S	(.) yéah (1.4) 'what do you do at còllege
291	T	(3.1)' *this and that*' (.) what'ever they 'give us *fast*
-292	S	(1.0) o::h rị::ght (.) you don't have something (.) 'set that you 'go and 'do 'every
293		wҿek=
294	T	=*no* '
295	*whisper*S	(.) nó (1.9) what they like 'down 'there (.) they all ri⁻ght
296	T	(.) *all right*' *whisper; fast*
297	S	(6.4) you seen 'anything 'good on tèlly
298	T	(1.0)' I can't re'member'
299	S	(0.6) nó y'haven't you 'had any vi `deos out or 'anything (23.4) what about
300		Gҿ:rmany (.) do you 'know anything more about Gҿrmany 'Tom
301	T	(1.2) got a 'climate similar to Brịtain(.)'s:: (.)
302		I 'think [(.)](1.4) it's one of the bị ggest
303	S	' [mm]'
304	T	'countries in 'Europe 'think it is Eҿrope's 'biggest 'country
305	S	(.)↑ ịs it ↑ =
306	T	= ex'cluding Rùssia
307	S	(.) ri`ght
308	T	(0.8) as 'far as Eùrope 'goes (.)' it's quite big (.) plạ:[cé]
309	*S*	' [yҿ:a]h'
310	T	(.) got a river Rhi `::ne (.) in 'it
311	S	(0.6) yҿa::h =
312	T	= we've been to 'war with them twi `ce in 'nineteen 'fourteen to ҿighteen
313		'nineteen *'thirty nine to fọrty five* *fast*
314	S	(.) rị::ght
315	T	(1.0) 'everything was the revè::rse of one a'nother (1.0) in the Napole'onic 'Wars (.)
316		Prụssia as it was 'fought on our side against the Frènch
317	S	(.) yҿa::h
318	T	(0.7) then 'later on they 'quarrelled with Rùssia (1.8) and 'France helped them
319		{ə'gεnt} Rùssia
320	S	(.) yҿa::h
321	T	(1.9) and 'later (.) we 'fought against e:rm (6.1) 'Austrian and 'Germany had formed
322		'helpless against Frànce

323	S	(.) ri::ght (.) th[at's weird]
324	T	[and every]thing became the re've̱rse *of one another* (.) and we
325		'fought against Tu̱rkey which we'd 'helped in the 'Crimean Wa̱r *fast*
326	S	(.) ↑ o:h ri::ght ↑
327	T	(0.8) and so 'Russia 'France and Bri̱tain had 'fought against 'Germany and Tu̱rkey
328		(0.6) 'suddenly became the reve̱:rse of one another (.) the only 'difference is that
329		Ame̱rica was on our 'side in the 'first world 'war for a bit
330	S	(.) ri::ght
331	T	(0.8) didn'- we'd 'never 'been a 'European 'war with Ame̱rica on
332		our 'side be[fo:re]
333	S	[ri˜:: g]ht
334	T	(1.2) and erm (.) that 'Pershing missi`le what's to 'talk about no̱w =
335	S	=mmh[m]
336	T	[is]
337		named after the 'first world 'war Comma̱nder
338	S	(.)↑ o:h ri::ght ↑
339	T	(.) he was the Com'mander in 'Chief of the US 'army from 'nineteen 'seventeen
340	S	(0.6) ri::ght
341	T	(0.7) and erm
342	S	(0.7) ti`ll 'nineteen 'seventeen (.) did you 'say =
343	T	= he̱h
344	S	(.) did you say 'he was the Com'mander in 'Chief ti`ll 'nineteen 'seventeen
345	T	(.) i̱n 'nineteen˙seven[teen]˙
346	S	[i`n] 'nineteen 'seven[teen˙]
347	T	[that's] when they got invo̱lved in
348		the 'first *world* 'war *fast*
349	S	(.) ri::ght (1.5) and what ha̱ppened to hi̱m
350	T	(1.3) I don't know wh˙a̱t *'happened to him*˙ *whisper*
351	S	(.) no̱
352	T	(.) e:rm (1.9) cos of the 'Russian Revolu̱tion we we̱re 'glad that A'merica 'entered cos
353		we'd 'lost an 'ally:: (.) cos
354	S	(0.6) ri˜::ght =
355	T	= they'd (0.6) 'signed (.) a 'treaty with(.) Ge̱rmany an sur'rendered (.)
356		(Bre̱klitovek?) (.) so we got a bit of 'Po::land and Fi`nland out of the 'Rushkies
357	S	(.) ri˜::ght
358	T	(.) and erm
359	S	(2.8) 'who did we 'sign the tre̱aty with
360	T	(2.3) e'ventually we 'signed a treaty with Ver'sailles in 'nineteen ni̱neteen
361	S	(.) ri˜::ght (1.1)˙ri̱:ght ˙
362	T	(.)˙a̱:nd erm˙ (3.5) 'earlier in 'history before the 'Russian r- (.) Re̱volution
363	S	(.) mmhm

364	T	(.) Ja'pan had defeated 'Tsarist 'Russia
365	S	(0.7) ↑ wo:;w ↑ (.) I di⁻dn't 'know tha:t
366	T	(1.0) in 'nineteen fi:ve
367	S	(1.3) what were 'they fi-(.) 'what were they fi ghting 'over (.) 'those two
368	T	(1.0) Manchu::ria
369	S	(0.8) rj::ght (0.8) is th[at -]
370	T	[be] cause they wouldn't 'lea::ve (.) a piece of 'Asia called
371		Manchu:ria they'd declared 'war on (.) Russia
372	S	(.) rj:ght (1.9) be[cause] 'Russians were in it and Ja'pan wanted it back
373	T	[and-]
374	T	(1.1) no they were penetrating in the 'area in the ['hope] they'd 'lea:ve the 'area
375	S	[rj:ght]
376	S	(.) ri⁻:ght
377	T	(0.9) and erm (.) they'd 'helped 'China 'earlier on in the 'earlier this century .hh (0.8)
378		a'gainst Japan [(.) and] 'helped got a bit of (0.7) 'territory back to Japa- (.) Chi `na
379	S	' [mmhm] '
380	S	(.) mmhm
381	T	(.) and 'so they didn't 'like them cos of 'that
382	S	(1.0) oh ri⁻:ght =
383	T	= and e:rm (1.4) so they de'clared 'war (0.8) ' Britain had (.) had
384		'formed an a'lliance with Ja'pan in 'nineteen two (.) ['h o]ping they'd 'make them
385	S	[mmhm]
386	T	a less ag'gressive power in 'fact it was a mi -'major con'tribution to the Russia
387		'Japanese 'war apparently
388	S	(.) oh de:ar
389	T	(0.6) a:nd erm (5.3) 'after the (1.0) 'Japanese (.) de'feated Japan (.) .HHH Rùssia
390	S	mmhm
391	T	(0.7) 'Germany had 'less to fear from 'Russia so a'dopted a more (.) a'ggressive
392		'policy in ['North] Africa (.) trying to (.) 'hopefully a'cquire a bit of 'North Africa
393	S	[ri⁻:ght]
394	T	f' themselves (.) 'hoped to 'get Morocco:
395	S	(.) ri⁻:ght
396	T	ori `ginally (0.7) but 'France (.) 'got that s:' 'thwarted by a 'conference in 'nineteen
397		oh six
398	S	(.) rj:ght
399	T	(.) e:rm (1.2) and erm (1.5) 'France got Mo'rocco:
400	S	ri :g[ht]
401	T	[it] was 'sold to the 'Spanish
402	S	(.) ri⁻:ght =
403	T	= it was 'Franco's 'Spanish (0.9) Mo'rocco e'ventually
404	S	(1.0)' rj::ght '

405	T	(1.1) 'Germany was 'hoping to a'cquire it at 'Rant (.)' [Rant]˚
406	S	[why] (.) 'why did thẹy 'want
407		it
408	T	(0.7) I 'think they 'wanted it to: erm (0.8)' I don't know˚ (1.1) they just 'hoping for a
409		bit of ẹmpire 'building *somewhere* (.) some[where tha]t = *fast*
410	S	= yea⁻:::h
411	T	(.) didn't have many 'colonies (.) they didn't hạve 'many 'colonies they 'wanted to
412		expạnd 'some[where]
413	S	[mmh]mm (.) what col[oni-]
414	T	[in an] 'area they'd (1.0) 'hoped to: erm (5.4)
415		there's no 'actual 'reason 'why they wanted that par'ticular cọuntry but (1.3) 'think it
416		cos they 'wanted to (4.1) sort of ex'tend 'influence in 'Turkish họ:ld
417	S	(.) ri⁻::ght =
418	T	= 'Ottoman 'empire˚ from that area˚ (.) 'who they were friẹndly with
419		'Turkey you 'see =
420	S	= ri⁻:ght (8.4) it's amạzing how it all 'works out ịsn't it (2.9) what
421		about Ja'pan and Chịna have they had f- (.) have they (0.8) do they: (.) fi ˋght 'each
422		other quite ȯften
423	T	(.)' *no I don't think they have* ˚ *fast*
424	S	(.) n⁻o:: (4.7) and what about 'Germany and Tụrkey (.) I˛ didn't 'realise that 'they
425		had a (.) a re'lationship like that (1.3)' I didn't 'realise they were on the
426		'wrong s[i ˋde] ˚
427	T	[but] during the *second world war* 'Turkey was neùtral *fast*
428	S	(.) o:h ri⁻::ght (.) rị:ght (.) so they just 'kept out of it comple⁻te[ly]
429	T	[so] was Pȯrtugal
430		'neutral they'd 'fought on 'our si ˋde
431	S	(.) ri⁻::ght (0.7) why we- (.) 'why did they keep o⁻ut of it d'you 'think
432	T	(.)˙ I don't know˚
433		(.) ss: (.) 'no resȯurces˚ I don't think˚
434	S	(.) ri⁻::ght (.) jus- (.) they're 'quite a 'poor cọuntries ạren't they (.) 'both of them
435	T	(.) think 'Turkey's about the 'poorest 'country in we- E ˋurope I think
436	S	(.) js it
437	T	(.) I 'think the ri ˋchest 'country in 'Europe's Swèden
438	S	(0.8) ri-::ght (6.6) what about Ẹngland (.) are wè 'rich (.) or ['poor]
439	T	[we::']re (1.8)
440		'probably [in between 'rich and 'poor ạren't we]
441	S	[(hhhhhhhhhh hhhhhhhhhh] hhhhhhhh.hhhhhh hhh)
442	T	(.) 'pends who you à::re though
443	S	(hhhhhhhhhh hhhhhhhhhhh) (.) is everyone ri ˋch in 'Sweden d'you 'think (.) is
444		everyone all ri⁻ght do they have 'lots of (1.9) pòverty
445	T	(.)' I don't know˚ (3.3) .hhh (.) 'somebody had 'gone to see this 'William Mòrris

446   'expedition (.) have you heard of 'that

447 S (.) yea‾h (.) yea‾h

448 T (.) s'called the (.) 'nineteenth 'century s:òcialist and I was wondering what the 'heck

449   (0.7) a 'socialist is *an I thou:rght* (.) didn't have communism in the 'nineteenth

450   'century did they   *mumbled*

451 S (.) 'nineteen when

452 T (.) cèntury didn't have còm *munism in the nineteenth* ˙ *mumbled*

453 S (2.2) nǫ:: (.) when was 'Ma::rx (.) ali`ve

454 T (0.9) in 'nineteeth century =

455 S   = yea:h (1.4) so I- (0.6) I 'spose (.) d'you 'date

456   'communism from then

457 T (1.7) *I don't know* ˙   *whisper*

458 S (3.3) what about the 'William Mòrris 'exhibition (.) 'what was that

459 T (0.8) *I don't know* s-(.) something à::rtist [(.) at] the 'time I think˙ *fast*

460 S   [mm]

461 S (0.8) mmhm (1.3) he designed wa:llpaper and 'things I 'think and (.) ma'terial

462 T (2.1) .hh a 'strange un'fortunate *thi ng* what 'happened to Van Gògh was .hhh he

463   'painted millions of (.) *paintings* (.) 'sold only one in his life (.) 'now that he's 'dead

464   they're 'bloody masterpieces [those things]   *fast*

465 S   [I knǫ::w] (0.8) I knǫ:w (.) i[t's cra::zy]

466 T   ['people] (.) w- (.)

467   you 'know (.) look upon them a:s e:rm (1.0) at the 'time they only 'saw one 'now

468   (1.4) 'now that e- (.) he's dèad (1.0) and he's been 'dead for *'several centuries*

469   *they 'think they're con 'sidered very very valuable indeed* (.) if you 'slash a Van

470   Gǫgh you had to pay *billions of pounds* and [they're]   *fast*

471 S   ] yeah ˙]

472 T very valuable (.) you [know (.)] pro'tect like mad

473 S   [mmhm]

474 T (1.6)they become accepted 'later on (.) it's 'no 'good for being

475   accep[ted later] on˙ though˙

476 S   [yea‾::h]

477 S (.) they a:lways 'say that 'appens to 'artists don't they =

478 T   =˙ yeah˙

479 S (0.9) and d'you 'know what his brother 'did (.)˙ Van 'Gogh's bro‾ther˙ (1.3) he was

480   an a::rt 'dealer (1.1) so you 'thought he could have 'sold some paintings for him

481   couldn't you 'really (1.8) I 'think Van 'Gogh 'had a lot of problems 'though (0.8) he

482   could 'never 'fit in with thi:ngs (0.8) d'you know what happened to him

483 T (.) *what*   *fast*

484 S (.) 'Van Gǫgh (.) do you 'know [how-]

485 T   [ki`] lled

486	T	himsel [f˚((2)syllables))˚ (0.8) shǫt himself
487	S	˚[ye⁻ah]˚
488	S	(.)ˊyęah˚(1.7)˚ but he dịed ˚didn't he˚ d'you liˋke ˈartists
489	T	(.) he⁻h
490	S	(.) d'you ˈknow about ȯther ˈartists
491	T	(.) .HHHHH˚not parˈticularly˚
492	S	(.) nó:
493	T	(2.2) ˈCharles the ˈfirst in his ˈgreed to get pǫintings made himself (.) the ˈcountry
494		bȧnkrupt ˈbuying Van ˈGogh p̀aintings =
495	S	= ↑ hȯnestly↑ =
496	T	=Van Dỳk ˈpaintings =
497	S	=Van
498	S	Dy⁻k (.) ye⁻ah
499	T	(1.2) a:nd so he ˈended up having to ˈget p̀arliament to ˈtry and ˈgive him some
500		mǫney (.) ˈended out being a (.) ˈmajor ˈcause of the civil wǫ:r thi- in the
501		ˈsev [enteenth ˈcentury (.) his] extràvagance
502	S	[↑oh hȯnestly ↑]
503	T	(1.9) and ˈa:ll this bu⁻siness
504	S	(0.7) ↑ that's bizȧ:rre↑
505	T	a:nd erm (2.0) cos he almost ˈbankrupted the ˈcountry ˈspending it on (0.7) ˈthings
506		for his (0.8) for his ˈhouse (.) ˈnice ˈthings
507	T	(0.6) ˈHenry the ęighths's ˈfamous ˈpainting was Hǫlbein
508	S	(0.9)ri⁻::ght
509	T	(.) and they ˈpainted hiˋm
510	S	(1.2) th- whǫ ˈpainted Hęnry the ˈeighth =
511	T	=ˊmmhm˚
512	S	ri⁻:ght
513	T	(1.5) .hh ˈstrange to thịnk (.) in some reˈspects they're very ȧrtistic in these ˈcenturies
514		↓yet ˈotherwise they lived in ˈblumming p̀ig sties in [other reˈspects] ↓
515	S	[(hhhhhhhhh)]
516		(hhhhhhhhhhhhhhhhhhhhhh)
517	T	[that's all the trụth innit]
518	S	[(hhhhhhhhhhhhhhhhh)] ˈwhat do you ˈmean by pịg ˈsties =
519	T	= ↑ węll ↑(0.7)
520		unhyˈgienic condiˋtionsˊen˚=
521	S	= yę::ah (0.7) but with these ˈbeautiful
522		ˈpain[tings on the wạll]
523	T	[it didn't make ˈsen]se to have a ˈlovely ˈpainting in a (.)
524		ˈblummin:g [(2.1)] ˈfootball pịtch (.) dịd it [(hhhhhh)]
525	S	[(hhhhhhhh)] [hhhhhhh)]

526 S   (hhhhhhhh) ˈtotal tip (.) ye⁻aːh =

527 T   = yẹaːh˙

528 S   (3.2)ye⁻aːːːh (.)↑ it's cra⁻zy ↑(6.3) straːːnge (2.6) d'you ˈknow anything about the

529   ènglish ˈcivil ˈwaːr

530 T   (1.1) little bit (.) ˈOliver ˈCromwell came out ˈbest on˙his (.)[si]de˙

531 S   [yẹ]aːh

532 T   (0.7) it's the only ˈtime in ˈhistory we've ever had a repùblic

533 S   (.) mmhm (1.1) but what hàppened ˈthough (.) cos we haven't eːːːr =

534 T   = ˈcut off

535   ˈCharles the first's hèad˙eventually˙

536 S   (.) yéah (0.7) but what ˈhappened to ˈOliver Crọmwell cos he didn't laːst that ˈlong

537   did it as a reˈpublic[r -]

538 T   [h]e ˈdieːːd e˙ventually

539 S   (0.7) and then- (0.7) how ˈcome it ˈended up going back to being (0.6)

540   ˙we had [a king]˙

541 T   [well] they deˈcided that it was a ˈbit (1.7) tọoːː ˈstrict

542 S   (0.8) ri⁻ːːght

543 T   (0.6) so they di- (.) ˈhad ˈCharles the sècond again

544 S   (.) ri⁻ght (0.9) bet he was relièved (2.0) was he really strịct then ˈOliver ˈCromwell

545 T   ˙ *stern and ˈstrict* ˙   *fast*

546   (1.6) ˈsːtern to some ˈpeople

547 S   (1.9) were they relị gious

548 T   (0.8) yeah =

549 S   = ˈOliver Cròmwell

550 T   (.)˙yeah˙

551 S   (.) ˈwhat did they (.) belịẹːve in (.) ˈwhat ˈkind of reli⁻gion˙ did they[have]˙

552 T   ˙ [don't] know˙

553 S   (2.3) I know they hànged ˈlots of ˈpeople

554 T   (.) hèh

555 S   (.) they hạnged a ˈlots of ˈpeople dịdn't [they]

556 T   [ˈso] did the ọther ˈpeople (.) you can't ˈput

557   ˈhim ˈdown˙to that parˈticular˙

558 S   (.) ye⁻aːh (12.4) you ti˙red ˈTom

559 T   (0.6) thịnk so̩.yeah

560 S   (0.8)↑ ˈwhy you ti⁻red ↑=

561 T   = *I don't know*   *fast*

562 S   (.) d'you have a lạte ˈnight

563 T   (1.0)ˈ I don't know˙

564 S   (3.3) ˈwhat d'you dọ in the ˈevenings (.) d'you ˈgo ọut (0.9) are you-

565 T   (.) when I have ˈpocket moˈney˙ˈyeah˙ (.) ˈor if they ta⁻ke us ˈout somewhere

566 S   (.) ri⁻ːght (.) can you just ˈgo out when you- (.) when you fèel like it

567	T	(.) I don't know
568	S	(6.1) but if you- (.) if you 'wanted to just 'go (.) 'go for a wɑːlk (.) or 'go to the 'pub
569	or	something (.) could you just gǫ
570	T	(2.9)ʼ I don't know˙
571	S	(0.7)ʼ oh riːghtˑ (4.6) 'what do you 'like do⁻ing (.)
572		if [you- (.)] if you got 'tiːme (.) to
573	T	˙ [I don't know]˙
574	S	yourself
575	T	(.)ʼ I don't knowˑ
576	S	(.) nǒ (10.8)
577	T	((sniff))
578	S	(1.0) what about that fo⁻otball 'then (.) it's all ǫver now ̣innit
579	T	(0.6)ʼ spose soˑ *fast*
580	S	(1.3) do you 'watch the tǫnnis
581	T	(1.0) don't find that as i⁻nteresting as 'football
582	S	(.) ↑do you nǫt ↑ (1.9) ho[nes-]
583	T	[did] you 'see that 'not the 'nine o clock nèws 'sketch
584		with 'MacEnroe (.) that jòkey 'one
585	S	(0.6)what hạppened in it (.) I mi ̣ght have 'seen it =
586	T	= where he's 'come in (.) and his
587		pàrents 'there
588	S	(.) yęaːh (.) when he (.) has an 'egg (.) for brèakfast
589	T	(.) *yeah and 'hit it 'off*= *fast*
590	S	= yeah (hhhhhhhhhhhhhhhhhh)
591	T	(.) ['that 'egg is not bǫiled (.) 'sit 'down and en'joy your] *same voice for both 'parts'*
592	S	[(hhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhh)]
593		(hhhhhhhhhhh hhhhhhhhh) =
594	T	= that 'egg is 'not (1.8) did you get 'fined agạin
595		(.)↓ˑ I 'did get fịned again˙ ↓
596	S	(hhhhhhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhh) .hhhhhhhhhh
597	T	(2.6)ˑ eh that was 'greaːt that wasˑ
598	S	(.) it was 'really fụnny wạsn't it
599	T	(0.9) they had a (.) aː (.) a 'Parkhurst versus 'Wormwood Scrùbs 'quiz like
600		'University Chạllenge
601	S	(0.7) oh (.) ↑onː (0.6) 'not the 'nine o [clock] nęws↑
602	T	[yęah]
603	T	(.) and for a 'ten 'year remi⁻ssion (.) 'who were the ['Lambeth Gàrage (.) boys]
604	S	[(hhhhhhhhhh hhhhhhhhhh)]
605		(hhhhhhhh)(hhhhhhhhhhhhhh [hhhhhhhh hhhhhhhhhhhhhhhh)] (hhhhhhhhhhhhhh)
606	T	[there's this policeman taking]
607	S	(hhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhhh)

608   T   and then it has (0.7) 'Mad 'Axe Mo[llòy (.) 'studying (0.8)] 'Acid

609   Bath [Pète is 'studying]

610   S   [(hhhhhhhhhhhhhhhh)]   [(hhhhhhhhhhhhhhhhhhhhhh)]

611   T   ['Chemistry at (.) 'Open (2.8)] ˙ mad axe˙

612   (.) I can give you a hèlp 'here (.) p-Parkhurst

613   S   (hhhhhhhhhhhhhhhhhhhhhh)

614   S   (hhhhhh)

615   T   (0.7) Riǫ::: (0.8) 'bank a'ccount in Ri- (.) oh [yès (.)that was it]

616   S   [(hhhhhhhhhhh)]

617   (hhhhhhhhhhhhhhhh).hhhhhhh (1.9)↑ that was 'really fùnny 'that↑

618   T   ˙((4 syllables))˙ =

619   S   = I'd for'gotten what it was li⁻:ke

620   T   (2.5) on the (.) rècord I got of them (.)I had this (.) àlbum ((dysfluent mutter)) (0.6)

621   'Margaret Thàtcher gonna i'mmediate enqui˙ry into the 'number of 'jobless blàcks (.)

622   she 'thinks there aren't enòugh

623   S   (hhhhhhhhhhh) there should be mo⁻:re .HHHH dèfinitely

624   .hhhhhh. (1.6) go::d she was tèrrible wàsn't she

625   T   (0.7) and 'Prince Chǫrrles (0.9) has (.) re'acted very stròngly to the 'wo:rd (.) 'his (.)

626   'use of the word knǫckered (.) to de'scribe his con'dition after getting

627   back [from the 'polo (.)] which na- (.) 'next 'time

628   S   [(hhhhhhhhhhhh)]

629   he's [shǫgged out he'll give the ((1 syllable))]

630   S   [(hhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhh)]

631   (hhhhhhhhhhhhhhhhhhhh)

632   T   (hhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhhh)

633   S   (0.9) god 'that was such a 'funny prǫgramme (1.0) I can't rememb- (.) there's

634   nǫthing like that ǫn anymore i ˙s there

635   T   (.)˙no m- no˙ (.) my 'next door 'neighbour used to wri˙te that (0.6) he's [called   ]

636   S   ↑[di˙d he] ↑

637   T   Mr Ri˙ley (.) L- 'Lenny Ri˙ley˙ he was called˙

638   S   (0.9) ↑ and did he used to wrjte 'not the ['nine o c]lock nęws ↑

639   T   [yęah   ]

640   S   (.) he 'must have been a 'really 'funny (.) blòke [(.) w -]

641   T   [yeah] (.) he mùst have been (.)

642   yeah

643   S   (1.0) did you tǫ::lk to him (.) did you ever s::pèak to him =

644   T   = yes˙yes˙ sòmetimes

645   S   (1.3) 'what was he li⁻:ke (.) was he [all r-]

646   T   [*oh* / *vęry nice*   *fast*

647   S   (.) yèah (2.4) what ęlse did he 'do (.) did he do any 'other (.) stùff

648   T   (.)˙ I don't re'member˙

649	S	(.) did he make (.) 'loads of money from it
650	T	(.) *he 'might have 'done*
651	S	(.) mm-hm (2.5) d'you 'watch anything 'on at the moment that's 'funny
652	T	(0.8)' don't think there i`s anything 'funny on at the 'moment˙
653	S	(0.9) no[o::]
654	T	['east] enders isn't funny˙in my opinion so:˙
655	S	(.) d'you 'watch e(hhhhh)àstenders(hhh) =
656	T	= 'not if I can help˙it no˙
657	S	(hhhhhhhhhhhhhh) .hhhhhhh don't you like soàps
658	T	(0.9)'not really no˙
659	S	(2.1) d'you 'watch e::rm (2.1) I 'watch Friènds˙ 'sometimes (.)
660		'some[times] that's funny˙
661	T	[WHAT]
662	S	I 'watch Friè::nds (0.8)' on telly sometimes (.) 'that's funny 'sometimes˙
663		(4.0) but there was (.) there was 'Lee and Hèrring (.) on 'back along (.)
664		'they were funny =
665	T	=HEH =
666	S	= did you 'see 'Lee and Hèrring
667	T	(0.9) I don't˙remember˙
668	S	(0.6) they were 'funny (3.4) have you got loads of 'videos
669	T	(1.1) *at ho`me you mean*
670	S	(.) mmhm
671	T	(.) have you seen the 'film Sèa 'Wolf (.) be'fore
672	S	(0.8) nǒ:
673	T	(1.4) during the *second world 'war* in the 'Indian 'Ocean 'port
674		of Gòa[(.) which] had
675	S	[mmhm]
676	T	be'longed to Pòrtugal (.) the 'Germans had this trans- (.) shi`p .hhhh where they
677		sh:-(.)
678	S	th[ey 'had]this whàt sorry
679	T	[this big-]
680	T	(.) shi`p (.) 'spy shi`p where it's been t- (.) 'telling (.) *them* where our sùbmarines
681		were (.) to si`nk them
682	S	(.) ri `::ght
683	T	(.) 'a:ll our 'ships and been getting infor'mation and (.) 'blowing up (1.0) 'things so
684		they 'found out 'where it wàs (.) by 'radio (.) mònitoring
685	S	(.) yea::h
686	T	(.) and they couldn't 'send it 'there cos they it's (.) a 'portugese tèrritory (.) so
687		they'd sent in their (.) 'ex 'army ùnit which hadn't seen 'action since be'fore
688		'nineteen 'hundred so they were going to 'blow their (1.4) 'blow the place up
689	S	(.) rj::ght (1.9) and did they 'blow it ʉp

690   T   (.) m

691   S   (0.9) rị::ght

692   T   (.) 'that was in 'nineteen 'forty 'three

693   S   (.) right (.) did that 'really happen 'then

694   T   (.) it di`d

695   S   (.) yea:h (1.0) and the fi ˆ:lm about it

696   T   (.)yeah

697   S   (0.7) is it 'good fi`:lm 'then

698   T   (.) yeah

699   S   (0.8) you got that on video

700   T   (0.8)'mm·

701   S   (2.0) 'who's in the fī:lm (.) do you 'know- =

702   T   = 'Roger 'Moore

703   S   (.) oh rea:lly

704   T   (.) 'David 'Niven (0.9) ['Trevor] Howard

705   S   [rị::ght]

706   S   (1.0)wô::w [so's] quite an ọ::ld 'film

707   S   [err   ]

708   T   (.) Pa- (.) Magẹẹ: (.) 'Patrick MacNẹẹ: (.) 'Patrick (0.6) Magẹẹ: (1.8) e::rm (6.3)·

709   and 'various 'others·

710   S   (.) mṃhm (0.8) is that one of your (.) 'favourite [fịlms]

711   T   [that   ] Bròckley 'man (.) the 'man

712   who made 'James Bọnd's 'died ịnnhe

713   S   (0.9) Bròckley

714   T   (1.0) prodùcer

715   S   (.) oh rị::ght (0.8) right I don't knọw

716   T   (1.0) he was a 'coffin 'salesman *originally* from 'Long 'Island 'New Yọ:rk   *fast*

717   S   (.) wô:w =

718   T   = till he (0.6) 'turn- (.) 'teamed up with e::rm (0.8) Sòulsman {əzs'mɛın}

719   (0.6) and 'started to make 'James Bọnd in 'nineteen fịfties

720   S   (0.7) wọ:::w

721   T   (0.7) 'started off being a còffin 'salesman in N[ew 'Yor- (.) 'Lò] ng Island

722   S   ↑[that's bizạ:rre] ↑

723   S   (.)yẹah

724   T   (.) and 'then (0.7) 'ended out (.) pro'ducing James Bònd 'movies

725   S   (0.8) how 'very strạ::nge

726   T   (.)' vẹry 'strange·

727   S   (0.9)(hhhhhhh hhhhhhhhh) you'd never 'think that if you were

728   gonna be a 'coffin mạker th[at y-   ]

729   T   [you'd] 'think (.) 'Sean Cònnery would have 'died by

730   'now but he's keeping going 'hell of a 'long 'time[wonder what he 'does]

731	S		[(hhhhhhhhhhhhhhhh)]
732		(hhhhhhhhhhhhhhhhhhhhhhhhhhhhhh) you 'don't 'want him to die
733	T	(.) no no but I just 'wondered why he was 'keeping 'going so long
734	S	(1.0) maybe::: (.) he: e:r (.) 'takes a 'lot of vitamins (1.6) maybe he keeps 'fit and
735		healthy (1.9) who was your favourite 'James Bond
736	T	(.) I think 'Sean 'Connery's the 'only 'one who could act (.)' in the 'whole of the
737		'thing˚
738	S	(.)yeˉa::h (0.8) yeˉa:h
739	T	(.) everyone else is hopeless (.) 'Roger 'Moore's too 'damn 'smooth to (.)
740	S	(hhhhhhhhhhhhhh) (hhhhhhhhhhhhhhhhh)

Appendix 6.3.

Tom

Transcription Three (WAIS-R): 8.7.96

1	S	how many 'weeks are there in a yẹar
2	T	(1.5) wẹe::ks
3	S	(.) wẹe:ks (.) yẹah =
4	T	= 'fifty twò
5	S	(.) ↓very gọod↓ (1.9) kạ:y (1.1) e::r (.) can you 'name the prime mì`nister of 'Great
6		Bri`tain 'during the 'second 'world wà:r
7	T	(0.8) 'Neville Chàmberlain
8	S	(0.6) ↓very 'good↓ (6.2) .hhh (.) e::::rm (1.1) who 'wrote (0.6) Hàmlet
9	T	(1.1) Shạkespeare
10	S	(0.7)̈ very gọod˙ (4.0) .hh (.) e:::r (.) what's the 'capital of Itàly
11	T	(.) Ròme
12	S	(1.9) ḥm (2.6) e:::::::r (.) who was (.) 'Louis A`:rmstrong
13	T	(0.9) 'first 'man on the mọon (0.7) àstronaut
14	S	(0.7) okạy (.) Lòuis 'Armstrong (.) Lòuis =
15	T	= L - (.) Lòuis 'Arm[strong]
16	S	[ye¯ah]
17	T	(0.7 not - {nə [(.) stò?}]
18	S	[not -] (.) 'not Nèil 'Armstrong
19	T	(.) 'brass bànd 'man
20	S	(.) thàt's it (.) 'well done (2.6)̈ kà:y˙ (1.3) okà:y (0.7) d'you 'know who 'Amy
21		Jòhnson was (.) 'Amy Jòhnson
22	T	(.) 'woman àviator
23	S	(2.5) I knèw you'd be able to do this 'really 'easily (1.3) okạy (1.0) 'where does the
24		sùn 'rise (.) 'Tom
25	T	(0.9) in the ẹa:st (0.7)˙ in the sky̱ (.) in the ẹast˙
26	S	(0.9) hm̈hm (0.7)˙dŏne˙
27	T	(.) 'sets in the wẹst 'side
28	S	(0.6) very gọod (2.4) e::::r (.) can you 'name fòur prime 'ministers of
29		'Great Bri`tain (.) si̱ nce nineteen fi`fty
30	T	(0.6) si`nce nineteen 'fifty
31	S	(.) uhŭh
32	T	.HHHHHH e:::::r (0.7) 'Anthony Ẹden
33	S	(1.4) yẹp
34	T	(5.0) 'Harold MacMịllan
35	S	(0.9)˙hm̈hm˙
36	T	(2.1) ↓e::::rm↓ (0.7) 'Alec {'dųglıs} Hų:me
37	S	(1.2)yẹ:;s

38	T	(1.4)ʳand˙ eːːrm (4.7) ˈHarold MacMillan
39	S	(0.8) we've haˉd that one (.) Edeˉn MacMiˉllan Douglas Huːme
40	T	(2.1) Wilson {ˈheɹəld}
41	S	(.)ʳyeˉaːh˙=
42	T	= *oh I need to go to ˈtoilet like maˌd that ˈcoffee's get me goˌing* *fast*
43	S	o(hh)[kaˌ(hhhhhhh)y (HH| HHH) (hhhhhhhhhhhhhh)
44	T	[hòrrible stuffˌinnit]
45		....
46		
47	S	in what dirèction (.) would you tràvel (0.8) if you went from Southàmpton (0.6) to
48		Gibràltar
49	T	(1.5) eːːːːːːrm (.) eàst
50	S	(1.2)˙ hm˙
51	T	(0.8) ↑is that the right ˈway↑
52	S	(.) eːːːːːr (1.3) sòuth east I ˈthink (1.3)˙soːːː ˙(1.0)˙ know ˈquite (.) yeaːh˙ (.) yèah
53		(.) okày (1.5) eːːːrm (.) why are dàrk ˈclothes ˈwarmer than liˋght ˈcoloured ˈclothes
54	T	(0.7) whàt
55	S	(0.8)ʳsòrry˙ (1.7)˙riːːght˙
56	T	(0.7) ˈsay it agàin
57	S	(0.8) ˈwhy are dàrk ˈclothes ˈwarmer than liˋght ˈcoloured ˈclothes =
58	T	= cos they abˈsorb
59		the hèat
60	S	(.) yeaːh (7.2) kaːːy (1.7) who was ˈMartin ˈLuther Kiˋng
61	T	(1.0) ˈmerican ˈcivil riˋghts ˈleader who was aˈssassinated nineteen sixty eìght
62		ˈmemphis (1.7) by ˈJames ˈEarl Raːy
63	S	(1.2) okaːːy (1.9) gòsh (.) is that whǫ ˈdid it (.) I didn't ˈknow whǫ ˈdid it (1.8)
64		eːːːrm (.) on what ˈcontinent's the Sahàra ˈDesert
65	T	(0.7) Aˋfrica
66	S	(2.7)ʳkaːːy˙ (1.1) what's the ˈmain (.) thèːːːme (.) of the ˈBook of Gènesis
67	T	(1.3) the beˈginning of the wǫrld
68	S	(7.2) eːːːːːr (.) ˈwhose nàme (.) is ˈusually assòciated (.) with the ˈTheory of
69		Rҽlativity
70	T	(0.8) ˈAlbert Eiˋnstein
71	S	(5.5) ˈwhat's (.) the Korạn
72	T	(2.3) Isˈlamic ˈholy bǫok
73	S	(1.3)ʳvery gǫod˙ (5.2) eːːːrm (.) at what tҽmperature does wàter ˈboil
74	T	(0.9)˙ ˈhundred deˈgrees cèntigrade˙
75	S	(.)ʳhm̀hm˙ (2.2) aːːnd (.) how does yèast (.) ˈcause dòugh to ˈrise
76	T	(1.2) eːːːrm (2.3) reạcts with the ˈflour
77	S	(1.2) hm̀hm (3.8) kaːːy (6.1) name ˈthree ˈkinds of blòod ˈvessels in the ˈhuman
78		ˈbody

79	T	(1.1) capillaries
80	S	(0.6) yèah (.) gǫod
81	T	(0.8) arteries
82	S	(.) yęp (.) 'very go⁻od
83	T	(.) vęins
84	S	(.)↑ bri˛lliant ↑ (2.6) 'what's the population of the U'nited Kingdom
85	T	(9.9) fifty 'six million
86	S	(0.8) okạ::y
87	T	(0.7) nęarly there
88	S	(0.7) 'think it's (.) it 'says between 'fifty and 'sixty twò 'million (0.8) so you're bit -
89		(.) bit - (.) a bit hị::gh (0.9) .hhhh so what was 'Marie Cùrie 'famous for
90	T	(.) dis'covering rạ::dium
91	S	(1.1)˙ well dǫne˙ (5.8) e::rm (.) 'how fạr is it from New 'York (.) to 'London
92	T	(7.7) ten 'thous*and* miles *fast*
93	S	(1.4) kạ::y (2.5) a bit hi⁻:gh again
94	T	(0.9) hûh =
95	S	= it says between 'three 'thousand and fôur 'thousand so you're just a bit
96		'high again (1.1) how many 'members of Pạ::rliament are there in the 'House of
97		'Commons
98	T	(.) hundred and fifty twò
99	S	(0.8) sórry
100	T	(0.8) fi˛fty two
101	S	(2.4) a:::nd (.) who 'wrote Fàust
102	T	(2.6) *what* *fast*
103	S	(.) Fàust
104	T	(3.6) Ma⁻:rlowe
105	S	(2.2) say agáin
106	T	(0.6) I don't˙knǫw˙
107	S	(.) ↓ ri⁻::ght ↓(2.1) kay that's go⁻od (.) so that's that ǫne (.) ↑ brịlliant ↑ (.) gosh (.)
108		did well thèːre (1.3) got more than I˙ did when 'I 'did it
109	T	(.) 'how many did you 'get
110	S	(2.3) you got (0.8) 'twenty::: s::ịx (.) out of twenty 'nine (1.7) that's really gǫod
111		(hhhhhhhh) 'that's 'more than I gǫt (1.8) okáy (.) right (2.9) ↓right↓ nęxt 'thing I'm
112		gonna do with you 'Tom (1.2) I was gonna- shǫw you some 'pictures (1.3) in which
113		there's some im'portant pạrt 'missing (.) kạy (.) an I want 'you to tęll me (.) 'which
114		'part's mịssing (.) in the 'pictures
115		....
116		
117	S	o'kay now - (.) back to some wo⁻::rds 'now Tom okay I want you to tell me the (.)
118		mèaːnings of some 'wo::rds now (.) okáy (.) so (.) we'll s- (1.4) got them wrịtten

119		down (.) 'here to make it 'ea::sier (0.9) oka:y (3.1) e:r (1.8)' here we go:: ' (.) right
120		(0.7) 'first of a:ll 'Tom (.) can you tell me what the 'meaning (.) of Wi`nter (0.7) is
121	T	(0.9) 'cold season
122	S	(0.8) hmhm
123	T	(.) after 'Autumn
124	S	(1.7)' 'brilliant '
125	T	(1.1) before Spring (2.0) the 'sun's (.) be'low us in the sky (0.8) after a 'less hour-
126		(.) the 'least 'hours of sun
127	S	(0.8)' bri lliant' (.) that's 'lovely (1.1) nnna next one (.) can you 'tell me what
128		breakfast (.) 'means
129	T	(0.7) a 'first 'meal of the (1.5) da::y (.) 'prior to (1.0) waking (.) from a:ll the 'time
130		when we haven't had it when we've been asleep for the only ac- (.) 'actions is not
131		'eating you're sleeping
132	S	(0.8) bri`lliant (0.9) oka:y (.) how about (.) repai::r (.) can you 'tell me what repair
133		(.) 'means
134	T	(0.8) to: erm (2.6) re::'make from being erm (1.1) damaged [(.) from](.) being (0.8)
135	S	' [ye::s] '
136	T	com'pleted by some accident (.) or (1.3) and 'how to 'put (0.7) some ((2 sylls))
137		'state without getting a new 'one (.) 'possible from the o::ld one
138	S	(1.4) wonderful (1.1) ↓ now ↓(.) can you 'tell me what (.) fabric (0.7) 'means
139	T	(0.8) a sort of (1.0) substance (.) ma'terial (3.6) 'object (1.5) which is the:: (.) sort of
140		'building blocks of the::
141	S	(8.8) that'll 'do actually I 'think 'Tom (0.6) you said (.) m- (.) material (.) di dn't
142		you
143	T	(.)' mm'
144	S	(.) yeah (0.9) oka:y (.) how about (.) assemble (.) 'Tom (.) what does as[semble]
145	T	[what a]
146		(0.6) a gathering of (1.9) people for a (0.8) a purpose like an assembly at 'school or
147		an assembly in a (0.7) pa:rliament (.) or an a'ssembly in a meeting
148		(0.8) ['ga]thering to'gether (.) football crowd 'say
149	S	[oka:y]
150	T	(.) you can 'gather
151	S	(.) wonderful (0.9) 'excellent (.) how about e:no::rmous (0.6) what does e:no::rmous
152		(.) 'mean
153	T	(0.9) 'bigger than life like (.) big an (.) en (0.6) 'pe:rfect (0.8) con'sumed with si:ze
154		(1.4) erm
155	S	(5.3) oka:y (.) ↑ great ↑ (1.5) how about (.) conceal (.) what does con['ceal]
156	T	[hi-:de]
157		from 'sight (1.1) 'cleverly sort of (.) 'craftily (0.6) concea:l
158	S	(1.7) oka:y (.) gre¯at (1.4) sentence (.) 'what does sent[ence 'mean]
159	T	[either] a 'sense of

160		pri`son like a 'lifelong (1.3) many 'yea:rs of (0.7) depri'vation of 'freedom (.) for
161		'punishment's sa:ke =
162	S	= yeah
163	T	(.) or a wŏ:rd (1.5) which (1.6) con'veys a 'meaning
164	S	(0.9) oka:y
165	T	(.) in a 'written form
166	S	(1.2) okay (2.4) say that 'last bit again cos I 'missed it
167	T	(1.1) 'word what (.) cons- (.) 'veys 'meaning in a 'written 'form
168	S	(5.4) okay yeah (5.8) cŏol (1.8) ↑o'kay↑ a::nd (.) how about (.) regulate (0.8) what
169		does 'regulate 'mean (17.0)↑ know that ↑
170	T	(2.3) a mathematica::l e:::rm (9.3) occùrrence
171	S	(1.5) oka:y (4.2) hmm (2.8) yeah (0.7) oka⁻y (.) I 'missed one out (.) 'actually
172		(hhhhhhhhhh) can you tell me what consù:::me (.) 'means (.) 'Tom (.) as well
173		['plea:se]
174	T	[.hhh (.)] to 'u:::se (.) like
175		{kɒn'sju::mpʃn} of oi`l or (1.3) or eating o:r
176	S	(.) yeah
177	T	(0.7) ùsage of
178	S	(1.0)˙excell [ent˙]
179	T	['vast] 'quantities of e:r (0.8) gènerally in all 'things
180	S	(1.5) oka:y (1.0) ho:w abòu:t (.) te::rminate 9.) what does te:rminate 'mean
181	T	(.) to 'finish from (2.0) in it's complè:te(.)liness (1.4) to terminate (.) to 'finish (.)
182		ex'actly com'pletely (.) like a
183		['bùs] 'terminus (.) at a 'terminus it doesn't (.) go anymo::re [(1.0)]
184	S	˙[yes]˙ ˙ [no]˙
185	T	from the (0.6) from the 'moving 'sta:te or the ùsage 'sta::te (.) and 'terminate the (3.2)
186		'life as re'turn to 'life
187	S	(.) ↑ yep↑ (1.3) ↑ great ↑ (0.7) ho::w abòut (.) com'mence (.) what does com'mence
188		'mean
189	T	(2.3) com'mence 'means (.) 'start˙dunnit˙
190	S	(.)˙yeah˙ (0.8) well done (1.6) a:::::nd how abou::::t (.) domestic (.) what does
191		domestic 'mean =
192	T	= you 'seeking ci'vilian 'life as (.) f an 'ordinary household o::r
193	S	(0.8)˙yep˙
194	T	(0.8) made 'persons or 'person (0.9) of their
195	S	(3.8) okay (2.1) yeah (.)↑ that's fĭ⁻ne↑(1.3) a:::::nd (.) trànquil (.) 'Tom (.) what does
196		tranquil 'mea:n
197	T	(4.0) I don't know
198	S	(0.6) don't 'know what that me⁻a:ns (0.8) o:kay (.) .hhhhhh ho:::w about (.) ponder
199		(.) what does pònder =

200	T	= the 'thinking {əmaʊndɪn ə} (.) a pröblem (1.3) 'ponder a
201		pröblem at articles like 'ponder the 'problem of the (.) 'next wörld (.) from the (.)
202		'sinking 'state of mind as to
203	S	(5.9) ↑ yeah (.) that's 'fine (0.8) we don't need any'more ↑(.) how about (.)
204		dèsignate (.) what does dẹsignate 'mean
205	T	(1.2) to en'trust on somebody a dụty
206	S	(2.4) s'okạ::y (.) that's loˉvely (3.8) e::::r (1.6) yèah (.) ↑bri‿lliant↑ (0.7) .hhh e::rm
207		(.) what about relùctant (.) what does re'luctant 'mean
208	T	(1.5) un'willing to:: (.) 'participate˙(1 syll)˙ =
209	S	= ↓ yeˉa::h (.) 'well done↓ (4.1) .hhhh
210		ẹxcellent (7.8) okạy (.) put some 'more on this sị:de (1.5) okạy (.) these are a bit
211		'harder stịll (.) so what about obstrùct (.) 'Tom (.) what does (.) obstrụct 'mean
212	T	(11.0) to: (.) 'block 'passage ọf (.)˙o:r˙
213	S	(.)˙yẹah˙ (.) very good
214	T	(3.1) be in 'way of
215	S	(0.9) èxcellent (.) 'well done (.) .hhh how about sànctuary (.)
216		what does sànctuary ['mean]
217	T	['place] of rèfu::ge for either 'animals or pẹople
218	S	(.) ↓yeˉa::h↓ (2.0)˙place of refụ::::ge˙ (7.1) okạ:y (.) and how abou::t (0.6)
219		compàssion (.) what does compàssion 'mean
220	T	(2.3)˙ I don't know ˙
221	S	(1.8) kạ::y (.) .hhhh and evạsive (.) d'you know what e[va-]
222	T	[not] being preci‿se
223	S	(0.8)˙ ↓evàsive (.) 'not being pre[c-↓ ˙]
224	T	[not] 'giving a 'sort of (1.1) very 'clear 'definitive
225		(1.1) respònse
226	S	(0.7) okạ:y (2.7) yèp (6.7) ↑okạy↑(.) and ho::::w about remò::rse (.) what does
227		re'mo:rse 'mean
228	T	(1.0)˙I don't know˙
229	S	(1.4) okạ::y (1.5) e::::rm (.) peri‿meter (.) what does pe'rimeter meaˉ:n
230	T	(1.0) out'side a- (0.9) e::rm (4.1) a 'rounded (3.0) 'shaped (0.8) 'out house 'building
231		fr- from the 'outside (1.3)˙ outside rim ˙
232	S	(.) okạ:y (2.6) yep (1.1) ẹxcellent (.) .hhh a::::nd ho::w abou::::t gènerate
233	T	(1.8) a pro'duction (.) of er (1.2) in'ert thịng like elẹctricity from a (0.9) 'solid mạtter
234		like cọal or =
235	S	= hmˉhm
236	T	(.) *wood for er (1.7) 'nuclear pọwer* *while yawning*
237	S	(1.3) yèah (2.6) okạ::y (2.1) ↑grẹat↑ (1.0) what now (.) màtchless (.) what does
238		'matchless 'mea:n
239	T	(3.0) something what doesn't fịt in per'ha:ps
240	S	(0.6) hmˉhm

241   T   (0.9) in a specific fo:rm (1.2) mm

242   S   (2.2) oka:y (0.9) .hh a::nd fortitu:de

243   T   (.)ʲjust don't know˚

244   S   (.) nó (1.0)˚oka:y˚ (2.3) e::rm (.) tángible

245   T   (0.8) ˚*don't know that one*˚   *fast*

246   S   (1.2) oka:y (1.7) plágiari::se

247   T   (1.3) no: =

248   S   = ˚no (.) these are quite (.) unusual ˈones˚ (.) how about òminous

249   T   (1.3) *I don't know*   *fast*

250   S   (.) nó (0.8) encúmber

251   T   (.) don't know (1.8) ˈdifficulty in (0.8) cóunting some˚ thing˚

252   S   (1.1) oka::y (0.6)˚ right ˚ (5.8) ka::y (1.3) ↑bri⁻ll↑ (.) èxcellent 'Tom

APPENDIX SEVEN
Appendix 7.1.
Penelope
Transcription One: 15.7.96

1	S	well do you 'want to ↑tell↑ me 'something about yoursĕlf
2	P	(1.0) yɛa:h
3	S	(.) yɛah (.) 'anything you li:ke
4	P	(1.2) been 'working at the 'Crown 'Court rɛstaurant (.) on the (.) w-'wednesdays and
5		frɪdays (1.6) I 'usually- (.) 'buy- (.) 'c.d.s (.) 'every frɪday (0.6) then- (.) an 'now I'm
6		'saving- (.) my: - (.) f- (.) to 'buy 'new clɒ:thes (.) 'next wɛe:k
7	S	(0.6) right
8	P	(.) an the bɛdding (.) as wɛ:ll (0.6) an the 'new cừrtain (1.1) an the ma: t an the
9		wɑ::tch (.) as wɛ:ll
10	S	(.) wô::w
11	P	(0.6) yê:s =
12	S	= lóads of 'stuff
13	P	(0.7)yéah
14	S	(1.5) n- (.) how 'long have you been wɒrking at the (0.6) 'Crown 'Court Rɛstaurant
15	P	.hhh I've been 'working 'sin{ss:} (2.1) e:::rrm (.) 'four 'years a'go 'since (.) 'nineteen
16		'ninety thrɛe::
17	S	(.) wô::w
18	P	(0.8) yé:s
19	S	(.) n 'what d'you dô 'there
20	P	.hhh I 'usually 'shell the ɛggs an (1.7) n' I 'usually- (.) {'meɪts-}(.) {'meɪʔ 'tsəm}
21		scɒ:nes an- (0.8) 'fruit an plɑi:n
22	S	(.) rɪght
23	P	(0.8) n'I usually- (.) e::rm (3.5) 'clear up the 'pots (.) an - 'empty the ashtrɑ:ys (0.6)
24		in those bɑgs n- (0.8) n the 'rubbish in those bɑgs.hhhh I 'usually did a lot of 'clear-
25		(0.6) lɒading the 'dishwasher
26	S	(.) rî ght =
27	P	= n I usually 'put the pɒts a'wa:y
28	S	(1.3) ↑rɪ::ght↑
29	P	(1.2) an- (.) n 'stack the crɪsps a:n: (1.7) cɑ::ns up (.) as wɛ::ll
30	S	(.) wô:::w (1.0) an- an whât d'you 'like 'doing 'best
31	P	(.) I 'like 'shelling the 'eggs I dô:
32	S	(.) do yóu: (.) d'you 'like 'doi[ng 'tha]t 'best of ɑ::ll
33	P	[yé::s]
34	P	(0.9) = yéah-
35	S	= 'why- (.) whŷ d'you 'like (.) 'doing 'that 'best
36	P	(1.9) cos it's (.) nɪ::ce

37	S	(.) i`s it
38	P	(.) yẹa::h
39	S	(0.7) an- an- d'you have 'your 'dinner 'there tọo
40	P	(.) 'usually 'have a sạndwich (0.7){ə?}(0.7) 'Crown 'Court (.) I- (0.6) cos I .hhhh
41		don't ne- (.) nẹe:d to 'pay my 'money dọ I nọ::
42	S	(.)nọ:: (.) so you don't have to 'pay your mọney for 'your 'dinner 'there
43	P	(.) no:::
44	S	(.) oh thảt's 'good (.) so you get 'free dịnner
45	P	(.) get 'free 'dinner ẹither
46	S	(0.6) an- an 'what- (.) d'you 'have in your sạndwich
47	P	(0.6) 'tunas
48	S	(1.0) d'you 'have 'tuna èveryday
49	P	(.) ye::s
50	S	(0.6)`o::h lo¯vely`
51	P	(0.9) {'1ei::} as 'well
52	S	(0.7) that's really gọod ịnnit
53	P	(.) really 'good ịnnit
54	S	(.) (hhhhhh) .hhh d'you li`ke 'working 'there
55	P	(.) I wo- (.) I lịke 'working 'there as wě::ll
56	S	(0.8) an- (.) ave you got some frịe:nds 'there too
57	P	.hh I've got Glảdys (0.8) 'Ẹdith 'A:nn (0.6) 'Marion as wẹ::ll (0.8) and Wẹndy and
58		'Donald Hạrris (.) the ọfficer
59	S	(0.7) rị:ght (.) wha- (.) the ọfficer 'what (.) sọrt of 'officer is he
60	P	(1.0) 'working on (.) in the {dịsk} as 'well
61	S	(.) o::h ri ˆ:ght
62	P	(.) with {bịạts:} (.) like that
63	S	(.) ↑o::h rị::ght↑
64	P	(0.9) yẻah
65	S	(.) (hhhhh) .hhhhhh (.) you got ảll 'sor[ts 'work]ing 'there then
66	P	[mmhm]
67	P	(0.7) yẻah
68	S	(.) an- (.) 'what are they all li ˆ ke (0.8) °can you 'tell me a 'bit about ea-°(.) 'what they
69		lỏok like an wha- (.) 'what 'sort of pèople they are
70	P	(1.5) {naịṣ::} *large font indicates loud volume*
71	S	(.) ni`ce =
72	P	= yẻah
73	S	(.)`yeah` (.) an d'you 'ave to 'wear a ụniform
74	P	(.) I us- (.) have to 'wear ụniform s'wẹ::ll
75	S	(0.6) mmm (.) 'what 'sort of u¯niform is [it-]
76	P	[WH]|TE one
77	S	(.) ↑oh lọvely:↑(.) wh- (.) an whaˉt is it (.) is it a pi ˆ nafore

78	P	(.) PLAIN (.) 'white 'one (.) a[s we]ll
79	S	[°ri¯:ght°]
80	S	(0.9) ye¯ah (.) is it- is it like an overall
81	P	overalls s'well [(.)]like an överall
82	S	[yea:h]
83	S	(.) ri:ght (1.6) and- I expect you have to be very clea:n (.) as [well]
84	P	[YE]AH (.) be very
85		'clean as we:ll
86	S	(.)'yea:::h' (1.1) an- (.) wh- what 'days d'you 'work thére
87	P	(.){'wedzdeız} and fri:days (.) 'nine till three::
88	S	(.) ri::ght (1.3) an- (.) an do they páy you all 'right
89	P	(.) yeah (.) I 'usually get 'paid every 'friday (.) as we::ll
90	S	(.)↑r ì::ght ↑(.) that's göod (.) is it 'every week you get 'paid .
91	P	(.) yes::
92	S	(0.9)mm (.)you 'said you were gonna save up (.)' for something=
93	P	= SAVE 'UP (.) to
94		buy my new clo::thes (0.6) .hh and a bedding (.) as we::ll
95	S	(0.7) right (.) ↑have you 'seen 'something you fancy↑
96	P	.hhh I chose that as 'we::ll (.) few 'weeks ago:: (.) with Hannah
97	S	(.)an- (.) an 'what have you cho¯sen
98	P	(.) .hh 'chosen a pattern 'one as we::ll
99	S	(.) a pàtterned 'what
100	P	(.) 'patterned curtains (.) and a- (0.6) 'bedding as we::ll
101	S	(0.7) are they gonna màtch =
102	P	=YEAH ma:tch
103	S	(0.6) an what 'colour i¯s it
104	P	(0.9) blue (.) or 'green or 'something like thàt(.) as we::ll =
105	S	=↑ ooh lóvely ↑
106	P	(.)yéa::h
107	S	(0.9) an- (.) 'where's your (.) is it (.) d'you li`ve at 'Poplar 'House
108	P	(0.9) .hhh I 'usually 'live at Pòplar House as we::ll
109	S	(0.6)'ri:::ght' (1.0) an:: (.) 'sometimes d'you (.) 'go somewhere èlse (.) °as well°
110		((1 syllable))
111	P	(1.6) e::rm (1.7) nò:: =
112	S	= nó (0.8) nó (.) you you just 'live at Pòplar 'House then
113	P	(.) I 'usually 'go on-(.) 'go home (.) {sss}- (1.0) in 'summer and 'Christmas as wè::ll
114	S	(.) oh right (.) and 'where d'you go then
115	P	(.) I usually (.) 'visit my parents [(.) as] we::ll
116	S	[aaa:h]
117	S	(0.8) and 'where do they li̦ve
118	P	.hhh 'Talma 'Road in Lòndon as we::ll

119	S	(.) ↑o::h ri:::ght↑ (.) ˈgosh ˈthat's a ˈlong way awȧy is[n't it]
120	P	[yė:s]
121	S	(1.0) ˈwhereabouts in ˈLondon i´s it (1.3) d'you know what the ȧrea's ˈcalled
122		[ˈin there˙]
123	P	[ˈEffra] Pąrk =
124	S	= ọo::h ri;:ght
125	P	(0.9) {ss}near Hạckney
126	S	(.) ri:;ght (.) is ˈthat ˈwhere you grėw up =
127	P	= YEA::H
128	S	(0.9)yeah with your ˈmum and dȧd
129	P	(.) yę::ss::
130	S	(1.0) and d'you just ˈsee them
131	P	(0.7)I usually ˈsee them in the ˈsummer and ˈChristmas as wę::[ll]
132	S	[ri;::]ght (0.6) d'you-
133		d'you stȯp with them in th-(.) ˈor d'you go for a họliday in the ˈsummer =
134	P	= go for a
135		họliday s'wę::ll
136	S	(.)mmhm
137	P	(0.7) yeą::h
138	S	(0.6) ˈlucky yȯːu
139	P	(.) ˈlucky mę: a[a:h]
140	S	[(hh]hhhhhh).hhhhhh (.) ˈwhere are you ˈgoing this yęar d'you knọw
141	P	(0.7) I'm ˈgoing (0.8) been to Lạnzarote (.) this yĕ:::ar
142	S	(.)↑ave yọu::↑(.) ↑you've already bęe::n on holiday↑ =
143	P	= yeaːh I've been alrėady been
144		on ˈoliday ęither
145	S	(0.8) aȧ:::h you ąre ˈlucky
146	P	(.) yėaːh
147	S	(.) an- (.) ˈwhat was it ḷike
148	P	(1.3) ˈvery węll ˈstayed in the(.) apąːrtment as wę::ll (1.2) ˈme an Me'lissa ˈshared the
149		ˈrest of my:: ˈroom
150	S	(1.0) ↑oh did you ˈgo with Meḷissa from hėre↑
151	P	(.)YEAH from ęre
152	S	(.) ↑oh thąt's ˈgood↑ (1.1) is Me'lissa your friė nd˙then˙
153	P	(.) ˈLissa my ˈfriend as wę:::ll
154	S	(.) ↑o::h ˈthat's brịlliant↑
155	P	(.) yėa::h
156	S	(1.3) an (.) ˈwhat did you dọ in Lạnzarote (.) can you ˈtell me what you dịd
157	P	(1.3) e:::rm I- (.) I've ȧːte ˈout (1.5) n' I had a sunˈbathe as wę:ll (0.9)n' I ˈwent for
158		a ˈride (.)ˈround the cọuntrysiːde (.) as wę::ll (1.4) an did some ˈshopping- (.) for
159		ˈfood as wę::ll

160	S	(.) ↑ri⁻:ght↑
161	P	(1.6) then I had a 'lazy 'day on the 'beach either
162	S	(2.0)↑ 'that's brilliant ↑
163	P	(.)yéah
164	S	(.) ↑yeah↑ (1.4) w- was it hot
165	P	(.)YEAH {ts} hot as we::ll =
166	S	= mmhm (1.0) and 'what does Lanzarote 'look like
167	P	(0.9) hhhhhhh (.) {m} (.) LOVELY[(.)] ye:s
168	S	[hm̃m]
169	S	(1.0) was it-(.) was it gree::n (.) or was it (1.0) got mountains on it =
170	P	= mount - (.)
171		GREEN (.) as we:ll
172	S	(.) yeah 'green and 'mountains
173	P	(.) 'green and mountains as we:ll
174	S	((2 syllables)) did you go swimming in the se:a
175	P	(.) no::: (.) I d⁻ (.) didn't (.) I 'paddled in the {ss}ea:: e-(.) ass- (.)w-(.) we:ll
176	S	(0.8) ri::ght
177	P	(.)yé:::ah
178	S	(.) ↑yeah↑ (0.9) 'sounds like you 'had a right laugh
179	P	(.) yé::ah
180	S	(hhhhhhhhhhh) .hhh =
181	P	= yèa::h
182	S	(1.5) and did e:::rm (1.1) 'who was it who wènt with you I've forgotten
183	P	(.) 'Karen and Kate
184	S	(.) oo::h ri:ght (.) they 'go as well
185	P	(.) yes::
186	S	(0.9) and (.) did you 'say: (.) e:::rm (0.9) who 'else wènt (1.2) was it jus- =
187	P	= jus- (.)
188		'two gi::rls Me'lissa me::: (.) a:::::::n (.) 'Karen an Ka::te =
189	S	= ri:ght (.) an who's 'Karen
190		an Ka::te
191	P	(1.1) 'Karen {ss} (.) my key worker an (.) 'Kate's (.) Lissa's key 'worker
192	S	(.) a⁻::::h ri⁻:ght (.) so 'all four of you
193	P	(.) yéah four of me as we:ll
194	S	(0.6)↑brilliant↑
195	P	(.) yéa:h
196	S	(1.5) an you gonna 'go anywhere a- (.) agàin
197	P	(.) I'm going to go to(.) 'Greece (.) 'next yèa:r
198	S	(0.7) o::⁻h that'll be lo⁻vely
199	P	(.)yé::s:
200	S	(.) ave you de'cided whereabouts 'yet

201 P   (0.9) get a 'pla::ne (.) an 'stay (.) an apartment as we:ll

202 S   ri¯:::ght (0.9) but you haven't de'cided what tò::wn you gonna go to or-=

203 P   =I haven't

204   deci`::ded (.) what 'ti::me as we:ll =

205 S   = rḭ::ght

206 P   (1.0)yèa:h

207 S   (0.7) ↑brilliant↑

208 P   (.)bri`lliant (.) as 'we:ll

209 S   (1.4) you 'looking fòrward to it =

210 P   = I'm 'looking fǫrward to it as 'we:ll

211 S   (.) 'that'll be 'really nḭ:ce(.)˙[wǫn't it]˙

212 P   [really   ] nḭ:ce as 'we:ll

213 S   (1.5) and what's Ka¯ren 'like is shę all 'right

214 P   (.) shę all 'right (.) she's ąll ri:ght

215 S   (0.8)ye¯a::h (1.2) what does she 'look lįke (.) because I don't (.) 'know her at ąll

216   (.) but- (.) but can you 'tell me (.) what she loòks 'like

217 P   (.){kʰɑːn} remęmber ((3 syllables))

218 S   (.) ↑can't re'member what she lǫoks 'like↑

219 P   (0.8) she's- (.) lòvely

220 S   (.) iˆs she

221 P   (.)˙ is she's (.) nḭ:ce˙

222 S   (.) n'aa¯::h (.) i- it's 'good to 'hear you've got a 'nice kęy 'worker [isn't it]

223 P   [yęa:::h] (.) 'nice

224   key wǫrker

225 S   (.) mm (.) has she been your 'key worker for a lòng 'time =

226 P   = yea:h (.) she's been my

227   key wǫrker for a 'long 'ti::me (.) since 'nineteen 'ninety ŏne

228 S   (.) rḭ::ght =

229 P   = when she 'first came in sèptember

230 S   (1.0) and sh- she was your 'key worker [straight awày |

231 P   [yea:h (.) she] had 'curly hair s'wę::ll

232 S   (.) ↑oh rḭ:::ght↑

233 P   (.) yèa::h

234 S   (.) and has she sti`ll got 'curly 'hair

235 P   (0.6)yèa::h (0.9) and she's hav- 'had a 'straight hąir (.) in 'nineteen 'ninety fǫu:r

236 S   (.) rḭ::ght

237 P   (.) Kąren did

238 S   (0.6) ri::¯ght (1.2) mm¯h (1.1)how did she make it go strąight (.) did she =

239 P   = the

240   hąirdressers

241 S   oò::h(.) they 'straightened it all ǫut [(.) f]or her.

242	P	[yẹaːh]
243	S	(1.3) ↑riːght ↑(.) ↑brilliant ↑ =
244	P	=mmhm

....

246	P	ooːːːh (.) do you (.) 'like eːːːrm (0.9) do you 'like eːrm (1.0) whassinạme (.) Kẹith
247	S	(0.9) 'who's Kẹith
248	P	(.) Chẹgwin
249	S	(.) ọːːː[h rjːːght]
250	P	[used to]be on the Bịg 'Breakfast
251	S	(.) oːːh yẹaːh (.) I dọ 'like him
252	P	(0.6)yẹaːh
253	S	(.) yẹạh (0.9) d'you 'like him
254	P	(.) I lịːke hjːːm (0.8) yẹạh
255	S	(.) is he your fạvourite
256	P	(.) is he my faːvourite (1.1) yẹːːsːː
257	S	(.) i`s he
258	P	(.) i`s he (1.2)° *he's a lovely ma.ːːn*° *creaky voice - low pitch*
259	S	(.) i`s he
260	P	(.) yẹːah °*he's a very nice man* ịsn't he° *slightly creaky -'nice' breathy*
261	S	(1.1) d'you- d'you sẹe him (0.8) have you 'seen him on anything ẹlse since the 'Big
262		'Breakfast
263	P	(.) I haven't seen him- ((drinks)) I haven't 'seen him (.) for h- aːll wẹẹːːk (.)
264		because 'Keith's has been ọff .hhhh but (.) he 'sometimes 'comes on (.)
265		{ŋ kẹɩʒəntliː}
266	S	(0.9) aạːːːːh rjːːght (.) so he's- he 'does 'still dọ the 'Big 'Breakfast
267	P	(.) YE`ːːːS
268	S	(1.0) ẹːːːhhh
269	P	(.) yẹaːh
270	S	(1.0) cos I haven't sẹen the 'Big Breakfast for ạːges
271	P	(.) mhmm naːːː
272	S	(.) n'I 'thought p'raps he didn't dọ it anymore cos I 'know he ụsed to 'do it
273	P	(.)yẹːːːːsːː
274	S	(0.7) 'what did he ụsed to 'do on 'theːːre
275	P	(0.6) he 'does the dọorstep as wẹːːll
276	S	(.) ↑ oh does he 'still 'do thạt ↑
277	P	(.) yẹːːsːː
278	S	(1.1) an wh- (.) 'what sort of 'things hạppen (.) when he 'does 'that
279	P	(.) 'knocking on the dọors (.) when-(.) to 'visit pẹople (1.3) in the 'houːːse as wẹːll
280	S	(.) yẹaːh
281	P	(0.6) .hhh (0.8) y[ẹaːh]
282	S	[an-] (.) an wh- 'what kind of thjːngs does he dọ after he's

283		'knocked on 'someone's 'door
284	P	.hhh just say ęllo:: (.) as well (.) Kèith did (1.8) *yea.::::h* *creaky voice - low pitch*
285	S	(0.9) ave you sęen im on anything ęlse
286	P	(1.0) I saw Gaby Rǫslyn (.) as wę::ll
287	S	(.) 'what did you 'see ęr 'on
288	P	(0.8) on the 'Big Bręakfast as well'n Chrįs 'Evans
289	S	(.) ǫ::::h yęa:h (.) cos they ą::ll did it [dįdn't they]
290	P	[yé:: s]
291	S	(0.7) 'Gaby doesn't dò it anymore though dǫes she
292	P	(0.8) nǫ:::
293	S	(1.3) 'what does 'Gaby 'do nǫ::w
294	P	(.) she lęft- (.) 'Big 'Breakfast in ninety fį::ve as wę::ll. ((0.6) {'zəu} Bą:ll (.) 'first
295		stąrted on the 'Big 'Breakfast in ni -ninety fi :ve
296	S	(0.6)↑ oh dįd she↑
297	P	(.) yē̄ ::s
298	S	(.) ↑that's quįte a 'long 'time ago įsn't it ↑=
299	P	= yę::s
300	S	(1.0) who ęlse 'does it thęn
301	P	(1.6) 'Richard A̧ llford and 'Mark Lįttle
302	S	(0.8) ò:::h (.) 'who's 'Richard A`llford I don't think I knòw him =
303	P	= can't (.)
304		remęmber
305	S	(1.2) he an't don-- 'has hę 'done any other 'things
306	P	(.) he 'does the 'first {dən}the dǫorstep as wę::ll
307	S	(.) oò:::h. (1.7) an 'what does (.) 'Mark Li-(.) 'Ma:rk Li `ttle
308		(.) I knòw 'Mar[k 'Little]
309	P	['Mark] from
310		Nęighbours=
311	S	= yęa:h(.) he used to be (.) 'what was he (.) 'what was he cálled ↑on
312		Nęighbours d'you remęmber ↑(1.5) ↑'Joe (.) 'Joe Mągle wąs it↑
313	P	(.) 'Joe Mągle =
314	S	=yęa:h (.) thįnk it was 'Joe
315	P	(.) YE `A::H
316	S	(0.9) an they had a dǫg called Bǫuncer
317	P	(.) yéa::h =
318	S	= d'you remęmber the dǫg
319	P	(.) 'dog called Bòuncer (1.0) yęah
320	S	(.) d'you remèmber it (.) yé[ah]
321	P	[yèa]h =
322	S	=yęah (2.5) d'you- d'you remèmber (.) how ǫ::ld
323		are you P- (.) Pèn =

324	P	= m̂m =
325	S	= how o::ld are you
326	P	(.) I'm twenty eight nŏ::w
327	S	(0.7) right (.) I don't think you'll remèmber then but 'years and 'years agǫ there
328		was a 'programme ca::lled (0.6) 'Swap Shǫp
329	P	Swap Sh(hhh)ǫp (hhhh) =
330	S	= d'you remęmber it
331	P	(.) KĘITH used to be on [Swǎp Shop (.) as we:ll]
332	S	[that's it (.) he djd] djdn't he
333	P	(0.6) yéa::h
334	S	(.) and he 'used to 'do:: e::rm(.) he used to do the- the- th- he used to go ǫut and do
335		the swąpping
336	P	(.) ye:::s: (1.0) °Kei:th (.) 'Chęgwin (.) does (.) does the 'big swąpping
337		as wę::ll° =
338	S	= °ye:::::ah° on the w- (.) was it 'called the Multicòloured
339		'Swap 'Shop =
340	P	= 'Multicoloured 'Swap Shǫp
341	S	(0.6) thǎt's it (0.7) d'you remęmber it 'then
342	P	(.) yę:::s[s (.) I remèmber] ed it
343	S	[(hhhhhhhhhhhh)]
344	S	(1.0) 'once they 'came to the 'town where Ⅰ 'lived and 'I went along and I 'swapped
345		sm- I 'swapped 'one of my 'games (.) for 'something ęlse
346	P	(.) ye⁻a::h
347	S	(3.9)˙but yea::::h it was a 'lo::ng 'time agǫ˙=
348	P	= yéa::h
349	S	(0.8) did yòu 'ever go to (.) the 'Swap 'Shop did they 'ever 'come to you:r 'town
350	P	(0.7) sòmeti:mes ę:h (.) yę::ah (1.5) hè::'s a 'lo::vely 'ma:n
351		(.) blèss him a[a::h ę:h] (.) éh
352	S	[(hhhhhh)]
353	S	(1.7) is he your fąvourite
354	P	(.)YE`AH is he- (.) is he- (0.6) he's my fà:vourite (.) 'man ę::h
355	S	(1.0) 'what d'you ļike about him
356	P	(0.8) he's- (.) he's- (.) he's prètty (.) he's bèautiful (.) he's a vèry 'gorgeous 'man
357		['Keith Chęgwin is] ę:h
358	S	[(hhhhhhhhhhhhhh).hhh]
359	P	(1.1) yęa::::h
360	S	(0.7) he al'ways 'looks very frièndly an 'hap[py dǫesn't he]
361	P	[ye⁻:::::ah] (.) {və}'friendly and
362		hąppy ę::::h
363	S	(.) mm̂m
364	P	(0.7) yę:::s: (1.4) he's got 'medium 'sized thųmbs as węll 'Keith Chęgwin has

365	S	(.) has he
366	P	(.) yeah
367	S	(0.9) how d'you 'know they're medium 'sized
368	P	'that 'one[(0.6) thi `]s 'one
369	S	[o:h ri:ght]
370	S	(1.1) is that 'medium 'sized
371	P	(0.6) ye::::s:
372	S	(1.2) have you got 'medium 'sized 'thumbs as well
373	P	(.) I've got 'medium 'sized 'thumbs like 'Kei::th
374	S	(0.6) have I:: (.) have I got (.) 'medium 'sized 'thumbs
375	P	(0.8) yea::h
376	S	(.) yea:h
377	P	(.) yea:h
378	S	(.) that's 'all right then
379	P	(0.8) yea:h
380	S	(.) that's good in't it (.) I 'like your watch
381	P	(.) 'like my watch as we::ll =
382	S	= beau::tiful that
383	P	(.)yea::h
384	S	(.) are you gonna 'get a new 'one [((2 sylls))]
385	P	['get] a new one as 'we::ll
386	S	(0.7) but 'this 'one's 'very beau::tiful
387	P	(.) 'very beau::tiful (1.4) ye[a::h]
388	S	[love]ly colours
389	P	(0.9) lovely colours (.) s''we::ll
390		....
391	S	do you 'like 'anyone else on 'telly
392	P	(.) I 'like e::::rm (.) 'John Craven
393	S	(0.6) do you =
394	P	= ye:::ah
395	S	(.) is he 'still on (.) 'what does he still on
396	P	'he:: (.) was on the s- (.) con- (.) {ss} (.) 'multicoloured swap 'shop 'John Cra::ven
397		is
398	S	(0.6) was he::
399	P	(.) yea:::h
400	S	(.) o:h ri:ght
401	P	(0 .7)yea:h (1.4) he 'does the Country 'File s''we::ll
402	S	(.) o:::h (.) is 'that on 'telly no::w =
403	P	= ye::ah
404	S	(0.9) °yea::h° (.) and d'you 'watch hi¯m 'every 'week
405	P	(0.6) sometimes (0.9) but not all the ti:::me

406	S	(0.6) °mm° (2.9) and 'what ȩlse d'you 'like wạtching
407	P	(0.7) .hh I 'like (.) 'Noel Edmọ::nds
408	S	(1.0) yȩ::ah and [w-]
409	P	[yea:]h
410	S	(2.0) I haven't 'seen hi⁻m on 'telly for a whî ::le
411	P	(.) no::::
412	P	(4.2) s'got medium 'sized {θm}(.) like (.) sị::ze (.) 'Keith Chȩgwin has (0.8)
413		[li:ke thạ::t] *shows thumb*
414	S	[has hé::]
415	S	(0.7) ↑yȩa::h↑
416	P	(.) yéa:h =
417	S	= about thạt 'si:ze *points*
418	P	(.) yȩ::ss
419	S	(.) who- (.) d'you 'know 'anybody who's got bịg ones- bị g 'thu::mbs
420	P	(hhhhhhhhh) .hhhhhh (0.6) bịg 'thu::mbs (2.0) 'Sam Brị gg has got 'big 'thu::mbs
421		(.) and Mạrcus has 'got 'big thụ::mbs
422	S	(0.7) ọ:h rj::ght (.) 'who are thȩy
423	P	(1.8) 'who thȩy (.) er Gạrstang 'Park
424	S	(0.6) ri ` :::ght
425	P	(.) yéa:h =
426	S	= ọ::h (.) 'Sam and 'Marcus hȩ::re
427	P	(.) yè:::s
428	S	(.) and they've got bi⁻ g 'thumbs ha⁻ve [they]
429	P	[yéa::]h [(1.3)] thȩy got 'big 'thu::mbs
430	S	[°yȩa:h°]
431	P	(1.4) and 'Alan's got (.) Thọmas has 'got 'big thụ:mbss
432	S	(.) rj:::ght
433	P	(.) yé::::s
434	S	(2.4) erm (.) has 'anybody got smạll 'thumbs
435	P	I 'got sm- (.) I 'got e::ɪrm (1.2) Dạwn's 'got 'small thụ:::mbs:
436	S	(.) hạs she
437	P	(.) yȩ ạ:h
438	S	(1.1) is the rȩst of her 'small as wȩ::ll (1.5) or is it 'just her thu::⁻mbs
439	P	(2.1) a::n (.) Shạron's 'got 'medium 'sized 'thumb like mj:::ne
440	S	(.) rig⁻ ::ht
441	P	(.) an - (.) an- (.) 's: ame as 'Keith Chȩgwin has gọ :::t
442	S	(1.0) rị::ght
443	P	(.) yȩ::s
444	S	(2.3) °right° 'when did you 'find ọut that 'Keith Chȩg[win] had
445	P	[.hh]
446	S	got 'medium 's[ized 't]hu::mbs

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447   P                              [(hhh)]
448   P        (hhhhhh) yȩ:(hhh)ah (.) on the tȩlly I mȩasured his (1.4) 'thumb
449            like 'mi:::ne =
450   S                       = ↑o::::h  dịd you: ↑ =
451   P                                        = yéa:::h =
452   S                                              = (hhhhhhHHHHH).hhhh (.) yǫu
453            'jammy 'dodger
454   P        (0.8) êh =
455   S                  = th- thạt was a 'good idȩa
456   P        (.) yeˉ::s:
457   S        (1.4) an- (.) an you 'found out that 'his were mȩdium 'sized
458   P        (.) yȩ:::s
459   S        (.) rị::ght (.) have we go- have you got 'small hạ::nds as wȩ:ll
460   P        (.) got 'small {hæ::}
461   S        (.) cos Ị've got 'small 'hands so if Ị've got 'small 'hands [yǫu've g]ot
462   P                                                        [ yeˉ:::::s ]
463   S        'small 'hands =
464   S                    = yǫu've got 'small 'hands hạven't you =
465   P                                                = yȩa::h
466   S        (0.9) you got 'nice nại:::ls
467   P        nại:::ls (.) as 'we::ll  =
468   S                       = m̂mm
469   P        (0.7) yȩ::s:
470   S        (1.0) m̂m̂mm
471   P        (.) yȩah (3.5) °yȩah°
472   S        (7.0) lŏvely
473   P        (.) lŏvely (5.2) °yȩa::h°
474   S        (2.6) I 'like how you 'got your hạ::ir as well Penȩlope
475   P        (.) yeˉ:::::s:
476   S        (.) did you go to the hạirdressers to ge- 'have it done
477   P        'I::- 'I usually have it done at Sǫphies (.) I mean (.) Snị͜pping
478            'Locks {ə}- in 'Kirk -(.) wȩ::ll  [as 'we::ll]
479   S                                     [ǫ::h     ] rị::ght (.) it's rȩally nị::ce
480   P        (.) ↑ 'really nị:ce as wȩ:ll↑
481   S        (.) are they nịce in 'there
482   P        (.) m̦mm (0.9) m yȩa::h(1.0) .hhhhhh thạnks: .hhh (.) I 'had my hại:r 'coloured  (.)
483            as wȩ::ll
484   S        (.) ↑oh is it cǫloured↑
485   P        (1.1) 'Karen {hȩnd}it (.) my hại r for me as 'we::ll
486   S        (.) oh (.) is it got 'henna in nŏ:::w
487   P        (.) yeah hȩnnaed
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488	S	(.) is it (.) brǫwn 'henna (1.2) or ręd 'henna
489	P	(0.6) 're:d
490	S	(0.8) ↑oh it's lǒvely ịsn't it↑
491	P	(.) lǫvely as wę::ll
492	S	(0.6) is your 'hair quite dạ::rk (.) 'then (.)['n]ormally
493	P	[y-]
494	P	(.) yę:::ss
495	S	(.) blạck
496	P	(.) blăck
497	S	(.) cos 'that's - 'that 'looks 'really nịce (.) I 'th[ought (1 syll)]
498	P	['looks 're Jally nị::ce as wę:ll
499	S	(.) I 'thought it was your 'natural cǫlour (.) I just 'thought you
500		had (.)'bea [utiful] hại:r
501	P	[mmm]
502	P	(0.9) mm
503	S	(.) but's - 'looks (.) 'really nịce in it
504	P	(0.9) yęa:h
505	S	(2.5) I'll have to 'try some of 'that on my hair as wę::[ll]
506	P	[mm]hm (2.3) ye::ah
507	S	(2.6) have you got any 'brothers and sịsters
508	P	(.) I got ǫne 'brother a:::::nd (.) ǫne 'sister

Appendix 7.2.
Penelope
Transcription Two: WAIS-R: 22.7.96

1	S	erm (0.6) d'you know what colours are in the 'British flàg (.) Pe'nelope =
2	P	= párdon
3	S	(.) d'you know what còlours are in the 'British flạg
4	P	(1.4) 'yellow (.) rẹd (.) a:::nd whi `::te (.) as wẹ::ll
5	S	(1.4)°okạ:y ° (2.7) °okáy°(.) nòw can you tell me 'what (.) the shạ::pe of a 'ba:ll is
6	P	(1.2) ci `::rcle
7	S	(.) yẹa:h (2.4) °uh° (2.0) e::rm - (.) nòw d'you 'think you could tẹll me (.) how
8		many mọnths: (.) there are in a yèa::r
9	P	(1.6) twẹ::lve
10	S	(.) 'very gọod
11	S	(2.0) now d'you know what (.) a thermọmeter's fo::r
12	P	(0.6) párdon
13	S	(.) d'you know what a thermọmeter's fo::r (.) 'what d'you use a thermòmeter (.)
14		[for]
15	P	[{hfiɑ:?}](.) don't 'kno:w
16	S	(.) don't knọ:w (.) °okạ:y°(2.4) d'you know how many wèe::ks (.) there are in a
17		yẹa:r
18	P	(.) in a yèa::r =
19	S	= yèah
20	P	(1.3) ẹ::::rm (2.0) 'no don't 'know =
21	S	= 'right (.) okạ::y (2.1) d'you 'know (.) the nà::me
22		(.) of any 'prime mịnister (.) of 'Great Brịtain (.) during the 'second 'world wạ:r
23	P	(.) Mrs Thạtcher
24	S	(2.0) lòvely (2.0) d'you knọ:w who 'wrote Hàmlet
25	P	(1.1) { ʰɑ:dn̩}
26	S	(.) d'you 'know who wrọ:te (.) 'Hamlet
27	P	(0.8) ((cough)) (1.0) ((sniff)) ẹ::::r (.) can't re'member
28	S	(1.0) kạ:y (3.7) a::::nd (.) d'you 'know 'what the 'capital (.) of I`taly is
29	P	(0.9) úu::h
30	S	(.) d'you know what the 'capital cịty of Ịtaly is
31	P	(0.8) don't re'member
32	S	(.) nò:: (.) o'kạ::y (0.8) that's grẹat
33	P	(0.7) yéa::h
34	S	(.) ↑yẹah↑
35	P	(1.5)˙thank you˙
36		....

37	S	ri::ght (2.1) ri:ght nó::w (1.8) my dẹa::r =
38	P	= yẹa::h
39	S	(3.1) going to ask you what some wọrds 'mean 'now okä:::y
40	P	(.)yẹa:h
41	S	(0.6) is 'that all ri:ght
42	P	(0.6) s' that all ri:::ght as 'we:ll
43	S	(.) yé:ah (1.7) ri:ght
44	P	(.) yéah
45	S	(1.0) fir::st 'word
46	P	(0.6) [yéah]
47	S	[lo-] (.) 'losing my things 'here
48	P	(5.2) hhhhhh[hhh]
49	S	[káy] (.) is (.) bèd
50	P	(.) 'BED
51	S	(.) can you 'tell me what bẹd 'means
52	P	(1.0) 'bed 'means (.) to 'sleep ọ::n
53	S	(0.8) ↓'very 'good↓ (3.4) kay nẹxt 'one is(.) sh[ịp]
54	P	[sh]i`p (.) me- (.) 'means to- (.)
55		gröw on (.) and 'travel s'wẹ::ll
56	S	(1.1) to trävel on yẹah (.) and to gọ on 'yeah
57	P	(0.8) yéah
58	S	(5.7) m̈m (7.7) okạ::y (.) that's lọvely (0.9) how bout pènn[y::]
59	P	[pè]nny
60	S	(.) d'you know what pẹnny 'mea::ns
61	P	(.) 'penny 'means (.) 'spends a pènny (.) go to the tòi::let
62	S	(0.8) okạ::y (3.0) 'anything èls::e (.) about pẹnny:: (.) n can you 'tell me a 'bit mọre
63		about what 'penny mẹa::ns
64	P	(.) 'penny 'means spènt (.) to 'buy 'sweets as wẹ::ll
65	S	(0.6) uhüh
66	P	(.) as wẹ:ll
67	S	(0.8) okạ::y
68	P	(0.8) y-yẹa::h
69	S	(1.7) okà:y (3.3) okà::y (.) 'no:w 'what about (0.6) wi`nter (.)
70		wh[at does] wi`nter 'mea::n
71	P	[wi`nter]
72	P	(0.8) 'winter 'me::ans: (0.9) the snọ:::w
73	S	(0.7) it dọes yẹah (2.3) ˙okạ::y˙ (0.8) ho:w about (.) breäkfast =
74	P	= 'breakfast (1.2)
75		'breakfast mẹa::ns (1.4) having cè:reals as wẹ::ll
76	S	(3.8) kạ:::y (4.8) okä::y
77	P	(0.7) ((cough))

78	S	(3.8) rj:ght (.) o(.)ka:y (.) what about repai::r (.) what [does-]
79	P	[re'pair] 'mea::ns (1.2) 'take
80		the 'shoe- (.) 'shoes to be mended
81	S	(1.5) ka::y (2.1) so 'what does re'pai::r mea::n (1.8) 'what does it mea:::n
82	P	'mea:ns to:: (0.7) re'pair the shoe::s =
83	S	= yep (.) okay (1.4) rj::ght (.) 'next 'o::ne (.) is
84		fabric what does [-]
85	P	[fa]bric =
86	S	= yeah what does fa:bric 'mea:n
87	P	(.) 'fabric 'means (.) 'use {sə::} (1.8) use {sm} stuff (.) to put th- washing in (.) by
88		rjnsing(.) as we::ll
89	S	(2.0) what does asse⁻mble 'mea:n
90	P	(0.6) e:::::rm (4.1) I can't re'member (.) wh[at a {sumb]}]
91	S	['can't you re]member 'that one 'means
92		(.) o'ka::y (3.1) e:::rm (.) 'how abŏu::t (1.3) enŏ:rmous (.) what does[-]
93	P	[e]'no:rmous
94		'means (.) 'eat an e'normous lu::nch
95	S	(.) an wha- 'what does (.) just eno:::rmous 'mean (.) what does it mea:n
96	P	(1.2) {hfiɑ:?} remember
97	S	(.) can't you remember (4.3) oka:y (0.6) how bout (.) concèa::l (.) what does that
98		[mea:n]
99	P	[conc]èa::l (.) 'means (.) can't re'member
100	S	(0.7) oka::y (1.4) a::::nd (.) what does sentence
101	P	(0.7) 'sentence 'mean 'put the 'words rj:ght 'either
102	S	(1.8)˙ka:::y˙ (5.9) ka::y (3.9) nŏ::w 'how abqut (.) con'su:::me (.) d'you know
103		what that 'means
104	P	(.) consu::me (.) 'means (1.3)((cough)) ca- ((cough)) re'member
105	S	(0.9)˙oka::y˙ (1.9) régulate (.) ↑˙d'you know wha[t that means]˙↑
106	P	[{ˈɹɛɡəlɛɪt}] (.) 'means 'go
107		'swimming 'once a wee:k
108	S	(0.9) °rj::ght ° (2.1)˙e::rm˙ (.) t é:rminate (.) what does terminate 'mean
109	P	(.) 'terminate 'mea:::ns (.) can't remember ((sniff)) =
110	S	=° kay°
111	P	(.) oo::h (.) my 'nose is blocked
112	S	(.) o:::h dear (.) can you 'give it a blow
113	P	(0.6) °yeah°
114		....
115	S	you all rjght sweet
116	P	(.) 'yea:h (.) 'thank you (1.2) 'keeps 'blocking u[p my 'no::se]
117	S	[I kno⁻:::w] (.) s'qrrible jnnit
118		[havin-]

119	P	[ǫrrible]
120	S	(1.3) what about (.) commènce (.) what does commènce['mean]
121	P	[co'mm]ence 'me::ans (.) t-
122		c-a-(.) can't remęmber =
123	S	=ʹ all rịght 'love˙ (2.0) domèstic (.) d'you know what
124		domęstic 'means
125	P	(0.6) do'mestic 'mean 'doing their 'washing and ironing as we::ll
126	S	(1.0)°okạ::y° (9.1) °mmmmm°=
127	P	=((3 syllables))
128	S	(1.3) okạy (.) how about (.) trànquil (.) what does trạnquil ['mean]
129	P	['tran]quil 'mea::ns (2.2)
130		an't remęmber
131	S	(0.6)°mm̃mhm°
132	P	(.) (hhhhhhhhhhhhhhhh)hh[hhh]
133	S	[s'all]'right these are ạ::rd (.) °['these	'ones°
134	P	[˙a::h˙]
135	S	(.) what bout (.) pònder d'you know what [thạt 'means]
136	P	[pònder](.) 'me::ans (.) can't
137		remèmber
138	S	(1.4) e:::::r (.) dèsignate
139	P	(.) {'dɛ:ʂɩneʊ:t} (0.8) can't remęmber
140	S	(0.6) relúctant
141	P	(.) relúctant (.) nọ::: (.) can't remęmber
142	S	(.)˙okạ::y˙ (.)˙think we'll have 'one 'more in this ọne˙ (0.7) obstrúct
143	P	(0.6) obstrụct
144	S	(1.4) 'know what that męans
145	P	(0.7) can't remèmber
146	S	(.) nó (.) 'all right 'love