ESRC Project R000222754: An investigation of aphasic syntax-for-conversation

Full report of research activities and results

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1. Background

This project investigated the syntax used in conversation by individuals with aphasia, a linguistic impairment acquired as a result of brain injury. It made use of recent findings from conversation analysis (CA) in order to examine the nature of aphasic syntax in conversation, and to use these findings to develop a new approach to aphasic syntax based on real-life real-time language use. Such an approach is in contrast to the current emphasis in aphasiology on decontextualised language elicited in non-conversational contexts such as picture description. While this focus on non-conversational language has advantages (such as the ease with which the same stimuli can be used to compare different speakers or the same speaker over time), there are concerns about its validity as a reflection of the language used in everyday life outside the clinic (Lesser and Milroy 1993). As such, intervention programmes built on this type of assessment which have aimed to improve aphasic syntax have had little success in displaying change in real life language use (Byng and Lesser 1993). Byng & Lesser (1993) directly attribute this commonly reported lack of improvement to the application of an approach based on elicited, descriptive language, which is, they point out, ‘not necessarily a part of everyday communication.’ (p. 358). They emphasise the need for a ‘different way of approaching the remediation of these problems ... to meet the needs of the patients.’ (p. 359). Evidence suggests that the analysis of aphasic syntax in conversation may provide the basis for this different approach which will allow intervention to target the linguistic needs of people with aphasia in everyday life contexts.

A common feature of the current theoretical and clinical approaches to aphasic syntax (e.g. Goodglass and Kaplan 1983; Kolk and Heeschen 1990; Edwards, Garman and Knott 1992; Byng, Nickels and Black 1994) is that they analyse syntax by adopting categories which have been adopted from theoretical linguistics. As such, these categories have not been developed from empirical study and thus may not match real life spoken language use. Indeed such categories can be even more difficult to map onto aphasic syntax which often bears little resemblance to sentence structure as normally conceived. Also most approaches to aphasic syntax use data which is elicited through clinical tasks such as picture description or monologues. Language collected in this way has been found to be very different to that occurring in conversation (Heritage 1984). Current approaches to aphasic syntax thus do not reflect the primary use of language as a means of interaction between peers in real-life situations, and do not take into account evidence which suggests that task-based syntax such as that elicited by aphasia tests does not necessarily mirror syntax-for-conversation (Wilkinson, 1995). As a result, little is known about the syntax used in everyday talk by people with aphasia and their main conversational partners.

This project made use of the methodology and findings of conversation analysis as the basis for investigating aphasic syntax-for-conversation. While CA is originally a sociological approach, it has started to be used as a means of analysing language as it occurs in conversation (Selting and Couper-Kuhlen, in press), and also as a means of analysing aphasic language in conversation (Wilkinson, Beeke and Maxim, in press). This approach does, however, entail differences to a traditional linguistics approach. Within CA the primary unit of analysis, for example, is not the word or the sentence but rather the turn within its sequential context of prior turns (Heritage and Atkinson 1984). For many years CA investigations have examined the organisation of turns at talk and the use of particular aspects of language as resources for turn management (Sacks, Schegloff & Jefferson, 1974; Schegloff, 1979; Local, Wells & Sebba, 1985; Lerner, 1991). Sacks et al. (1974) note that turns are made up of one or more “turn-constructional units” (TCUs), a word, phrase, clause or sentence which has the potential by itself to constitute a complete turn within its sequential context. The point where the TCU could be complete and thus where speakership could transfer to another speaker is the “transition relevance place” (TRP). Within a CA approach, syntactic structures are viewed not as a product of an abstract grammatical system but as "communicatively ... real events in time" (Auer, 1996: p. 59). Turns are normally constructed to
display “progressivity” (Schegloff 1979) towards a TRP, and listeners can thus use this feature to track the progress of the turn towards the point where s/he or another speaker may take over the conversational floor. As such, Schegloff (1996) notes that "one of the main jobs grammar or syntax does is to provide potential ... guides for the realisation of the possible completion points ... of turns" (p. 46). The CA evidence thus suggests that the syntactic structure of the sentence may be understandable, at least in part, as an adaptation to the environment, i.e. to the turn within a sequence of turns in which it naturally occurs (Schegloff 1989, 1991, 1996).

CA thus provides a very rich and novel source of concepts and methodological tools for the analysis and potential remediation of aphasic syntax in conversation. It has long been suggested that the particular linguistic patterns or “symptoms” seen in aphasic output may not be a direct reflection of the underlying neurological impairment but rather may be the end product of a process of adaptation by the speaker to his/her environment (Goldstein 1948; Kolk and Heeschen 1990). While such an approach has long appeared interesting and fruitful, the concept of adaptation to the environment has been hindered by a lack of specification of what this environment might be and therefore what form the process of adaptation might take. In research funded by an earlier ESRC grant (R000 221841), Wilkinson et al. (in press) argue that the CA notion of language being adapted to the environment of turns within a sequence can account for particular patterns of aphasic language in conversation. In particular in the analysis in that paper they use this model to account for the common grammatical and lexical pattern adopted by fluent aphasic speakers of constructing turns using mainly or wholly proforms (ie turns such as “I do it”). Recently CA has also been used to analyse grammatical patterns in German aphasic data (Heeschen and Schegloff 1999; Roenfeldt 1999). As Wilkinson et al (in press) suggest, these findings have implications for current theories and models of aphasia rehabilitation. Currently the rehabilitation of aphasic language, including syntax, is based within a predominantly normative model. The syntax of the aphasic speaker, for example, is assessed against what is assumed to be normal syntactic patterns (e.g. the ability to produce sentences consisting of a subject, verb and direct object). Deficits in this ability as highlighted on, for example, assessments of picture description or monologue production (e.g. retelling of well known stories) then become the targets for remediation. If, however, aspects of aphasic language, such as lexical production and syntax, are seen to be adaptations which, while not ‘normal’, have clear interactional advantages for the speaker and his/her conversational partners, a new potential model for therapy then emerges which consists of the therapist assisting the aphasic speaker and conversational partners towards what Wilkinson et al. (in press) term “optimum adaptation”. Current work using this approach to aphasia rehabilitation has shown that change to everyday aphasic conversation can be brought about in particular patterns such as the overuse of repair and of closed questions (Wilkinson, Bryan, Lock, Bayley, Maxim, Bruce, Edmundson and Moir 1998; Lock, Wilkinson and Bryan., in press). It is hypothesised that the ability to create rehabilitation programmes to change specific linguistic patterns in aphasic conversation, such as syntax, will follow from findings about the nature of the phenomenon such as those which have been uncovered in this project.

2. Objectives

The project had four main, linked, objectives:

1. To develop a new approach to aphasic syntax which is based around conversational rather than decontextualised language
2. To apply the methodology and current findings of conversation analysis to syntax in aphasia, in order to investigate the nature of aphasic syntax in conversation, how it arises, and its use by speakers
3. To contribute to knowledge of syntax in aphasiology
4. To contribute to clinical understanding of aphasic syntax, and consider the implications of this knowledge for aphasia management

Each of these four objectives has been addressed and met as will be described in the results section below.
3. Methods

The study aimed to recruit fifteen aphasic subjects, and ethical approval was sought to allow this to occur via three organisations: University College London Hospital NHS Trust; East London & the City Health Authority and Guy’s & St Thomas’ Hospitals NHS Trust. However, the central London hospitals that were targeted were found to have a high proportion of bi- and multi-lingual aphasic patients on their caseload, and this severely hampered attempts to identify suitable subjects who fitted the inclusion criteria for this project. Only three suitable subjects were identified through NHS trusts, and so the decision was taken to approach the London branch of the Stroke Association, a national charity that oversees the running of support groups for people living with the long-term effects of aphasia, exploiting a link set up within the Department of Human Communication Science as a result of student training. This link proved considerably more fruitful than the hospital contacts, and six further subjects were recruited in this way. Thus, the total number of sets of data collected was nine, rather than fifteen. While the number of subjects was therefore reduced from the target, it was possible to fulfil the main aim of the project methodology which was to gain data from aphasic speakers with different types of syntactic patterns. Thus the data included two speakers with agrammatism (Code 1989), a noticeable and specific type of non-fluent aphasic syntactic pattern, as well as a number of speakers with different types of fluent aphasia including telegrammatism (errors of syntax and/or morphology) (Code 1989).

An outcome of this unexpected difficulty with subject recruitment was the expansion of the methodology in two ways beyond what was set out in the project proposal. Firstly, it was possible to collect additional assessment data as a result of the reduction in number of datasets. Thus, eight commonly used speech and language therapy (SLT) aphasia assessments were carried out with all nine subjects, rather than the three detailed in the original methodology. These were:

1. Procedural narrative “tell me what happened when you had your stroke”
2. PALPA picture naming (40 items)
3. Verb and Sentence Test (VAST) - action naming: verbs as single words (40 items)
4. Verb and Sentence Test (VAST) - action naming: verbs within a sentence (40 items)
5. ‘Cookie Theft’ picture description
6. ‘Dinner Party’ cartoon description
7. Cinderella story telling/retelling/telling from pictures
8. Thematic Roles in Production (TRIP)

This has allowed us to gain a highly detailed picture of the differences between language (particularly syntax) elicited in assessments and occurring in conversation.

For future projects, including R000239306, the research team will be recruiting subjects from NHS trusts in the south of England, where another of Dr Wilkinson’s research projects funded by the Stroke Association has recently established new links which have revealed that the aphasic population there is far less ethnically diverse, and thus more likely to be monolingual.

Secondly, it was possible to have input into the setting up of technology in the department to allow transcription and analysis of video conversation data to be completed solely via the computer for the first time. As a result, it was possible to capture video data on the computer and write it onto compact disk, producing an unexpected new product for archiving, and to use software that greatly facilitates the process of transcription and analysis.
See Section 9: other issues and unexpected outcomes, for more details of this software system and the new data set.

Ten minutes of continuous conversation between each aphasic speaker and his/her everyday conversational partner were transcribed using the CA transcription system. In addition we have begun to move beyond the type of transcription originally proposed and have begun to include detailed intonational transcription of several of the conversations. Intonation has been found to be central interactional resource (Wells and MacFarlane, 1998) and appears to be particularly used by certain aphasic speakers in our data set to compensate for their linguistic deficits.

The elicited language data was also transcribed using CA conventions in order to aid comparison.

Analysis used CA methods and findings to look for patterns in the data as outlined in the next section.

4. Results

A. Aphasia creates difficulties for the progressivity of turns

A common finding across speakers was that language difficulties associated with aphasia meant that many speakers with different types of aphasia had trouble in constructing their turn-construction units such that they displayed progressivity towards a potential end point (or TRP) in the manner typical of non-aphasic conversation. Thus in viewing syntax from an interactional perspective, it is found that many aphasic speakers can be viewed as having trouble with the construction of sentences-in-progress (Lerner 1991), not just those with agrammatism and telegraphic language who have traditionally been seen as having ‘syntactic problems’.

Thus, in the case of FF, his word finding difficulties continually hinder his progressivity towards a potential end to his turn. In extract 1 (see Appendix 1 for extracts), for instance, in line 117 FF says “and” but then is unable to produce the next word. After producing “the” three times (line 117), he abandons this attempt and starts a new one with “I want to” (line 118). In line 123 he produces “and eh-“ and then has a 2.4 second pause before another unsuccessful attempt. LF’s guess at what FF means is rejected (lines 125-6) and other unsuccessful attempts to produce the word which will complete the turn are tried in lines 128, 129, 130 and 132.

It is noticeable in this extract that mime is used by FF as an interactional resource which cannot neatly be separated from other linguistic resources such as syntax here, since if the mime here had been more successful it would have assisted directly in the progress of the turn to its TRP and thus would have been playing an important role in the progressivity of the TCU. It is interactional resources such as these along with others (e.g. intonation) which can be important in the construction of conversational contributions in real-life, real-time contexts but which are not captured or analysed by aphasia assessments of elicited language.

That these problems of progressivity have real consequences in interaction can be seen in the conversations of a number of speakers in the data set. Firstly they can be seen to be treated as problematic by the reaction of the speakers themselves (e.g. “oh dear” in extract 1). Also, such problems have interactional consequences such as making the aphasic speaker vulnerable to not being allowed to finish the turn. One way this is manifest is by the phenomenon of collaborative completion (Lerner 1991) by which the non-aphasic speaker completes the turn of the aphasic speaker. An example of this from KD’s conversation with her daughter is seen in extract 2. Here when KD pauses, LD (perhaps thinking KD is having a word finding difficulty) completes the turn for her (lines 467 and 468).

Other ways in which aphasic speakers lose their turn are evident in the data set. One pattern is that the non-aphasic speaker interrupts (Levinson 1983) the non-aphasic speaker while the latter is talking. In many cases the aphasic speaker acquiesces with this by backing out of the turn. An example is extract 3 where RI both backs out and agrees with what his daughter has said in the interruption (lines 39 and 40).
B. Aphasic speakers’ methods of avoiding problems of progressivity

We have thus noted, as outlined above, that for aphasic speakers, the syntax of turns-in-progress may be problematic, leading to real interactional problems such as embarrassment or losing the turn. Given this fact, it becomes possible to see that a number of aphasic language patterns which have traditionally been either glossed over or viewed as simply a reflection of neuropsychological deficits may be in part reconceptualised as interactional methods adopted by speakers in order to construct contributions to conversations which avoid problems such as those outlined above. The main examples of such patterns uncovered in the project will now be presented.

1. Minimal turns
One pattern, for example, which occurs across different speakers in the data set is that of using predominantly minimal turns such as “mm hm” or “yeah” (Schegloff 1982; Perkins 1995). In JA’s talk, for instance, the vast majority of her turns are made up of words or phrases consisting of low semantic content as can be seen in extract 4 where her turns consist of e.g. “no”, “yeah”, “what”, “oh dear”. This pattern is noticeable and accountable to the speakers themselves as can be seen from the comments of JA’s husband in lines 392 and 408. Thus, while this strategy by JA is not unproblematic, and obviously limits the range of content in JA’s talk, a comparison with her performance in elicited language assessments displays a motivation for its use. In each of these assessments, JA does very poorly, scoring 1/40 on the PALPA naming test for instance, and the same score on the VAST test assessing the production of verbs within a sentence (see extracts 5 and 6 for examples of JA’s difficulties on these assessments). Her language in conversation appears very different to her language in the assessments, and it can be seen that the minimal turns in conversation are of use to her in that they allow her to construct a turn at talk where progressivity does not become a problem in the way in which it would if she attempted to construct a fuller turn. She is thus able to contribute to the conversation while keeping her linguistic non-competence off the conversational surface (Wilkinson et al., in press).

2. Constructing turn-constructional units using proforms
There is further evidence in the data set that aphasic speakers often prefer to achieve turns which have unproblematic progressivity at the expense of semantic and syntactic complexity or “normality”. Based on data from ESRC project R000221841, Wilkinson et al. (in press) described a pattern of fluent aphasic speakers constructing turns largely or wholly from proforms. In some cases in this data there are quite dramatic examples of speakers choosing to achieve progressivity at the expense of semantic content. In extract 7, for instance, aphasic speaker AC uses the proform “something” along with the proverb “do” over a number of turns. While this pattern looks very different to normal talk, by putting a proform in the relevant “slot”, AC provides a complete turn and also a target for her daughter AMC on which to base her guesses (lines 390 and 392).

While the data from ESRC project R000221841 highlighted the use of proforms in fluent aphasic talk, data from the current project has shown that proforms are also utilised as a resource by non-fluent aphasic speakers. Speaker CG, for instance, produces largely agrammatic TCU patterns (as will be discussed below), but of the few non-agrammatic turns she produces, most make use of proforms, as seen in extracts 8 and 9.

3. Fronting
A significant pattern noted in the non-fluent aphasic data in the project is a pattern which we have termed “fronting” and which to the best of our knowledge has not been discussed previously in relation to aphasia. The term refers to a pattern of turn construction where a noun phrase and/or a temporal phrase is fronted to the start of a turn-constructional unit. The pattern of noun fronting resembles another syntactic construction which is present in this data and which linguists have termed left dislocation (Geluykens 1992). Here a noun phrase is placed in initial position and its canonical position is filled by a pronoun.

Extract 10 shows examples of these patterns. In line 1 speaker CG places a temporal phrase in initial position (“last week”) before constructing the rest of the TCU. This also occurs in line 9 with “July- no June”. In lines
10-11 she produces a left-dislocation-type utterance with “three tier wedding cake (0.2) I make it”. There appear to be interactional advantages for aphasic speakers in using these patterns. In both patterns, the speaker is able to break up what would be a complex semantic and syntactic sentence into at least two simpler parts. The left-dislocation allows her to access and produce the noun phrase separately and then produce a simpler sentence consisting of a proform rather than a more complex noun phrase. The fronting of the temporal phrase for example allows time information that would often be carried by verb tense to be produced separately, again allowing a simpler syntactic utterance consisting of present tense which can, within its context, convey either past (line 1) or future (line 10/11) action.

4. Sequential construction of utterances
Another pattern in the non-fluent aphasic data is that turns are constructed in such a way that results in the construction of a proposition from a sequence of contextually linked referents. Studies have demonstrated that participants in talk are strongly motivated to view sequential positioning as a basic device for relating two contributions to talk (Sacks 1992). In our data some speakers exploit and develop this resource to compensate for their syntactic deficits. In extract 11, for instance, CG is telling her conversation partner where she will buy the hexagon-shaped cake tins she needs in order to bake her friend’s wedding cake. In line 94, she provides information about the whereabouts of the cake shop that she will visit (“Edgington Green (0.3) cake shop”). Her utterance does not contain a verb, and there are no syntactic links between the two elements of the proposition. JG’s turn in line 95, (“oh is there one there?”), demonstrates that she has interpreted the two noun phrases in line 094 as being linked by their sequential placement to convey a proposition concerning the fact that there is a cake shop in Edgington Green. Thus, JG does not orient to CG’s turn in line 94 as being problematic in any way. A second example here is in lines 102-3. JG asks the specific location of the shop (“whereabouts?”), to which CG replies with another proposition that is constructed from a sequence of referents, here three noun phrases before the use of a preposition phrase (“(market)=eh tuh (0.6) /Eβ=πτ/ Green (0.4) um (0.4) library (0.3) ‘cross the road’”). Again there may be marked differences between the speaker’s syntax in conversation and on language assessments. On assessments, for instance, CG is often able to produce complex syntactic utterances, as can be seen in extract 12.

5. Direct Reported Speech
Direct Reported Speech (DRS), where speakers report another’s talk as if in the manner of its original production (Holt 1996), is relatively common in aphasic talk (Wilkinson et al., in press). In this project we have started to explore why this device may be attractive to aphasic speakers and in particular have focused on its syntactic properties. One reason appears to be that DRS is a linguistically economical way of reporting an event and someone’s reaction to it (Holt 1996). Aphasic speakers can thus often perform quite complex conversational actions using relatively simple syntax such as use of present tense and a lack of the embedding which may be necessary with indirect reported speech. Also, aphasic speakers regularly syntactically simplify DRS further by omitting the speech verb which usually introduces it (e.g. “she said…”). In extract 16, KD can be seen to do this twice, even though it can be seen from line 228 that she has the ability to produce such verbs at least on occasion.

Concluding remarks
In ways such as these noted above, results from the data have shown that the progressivity, or the syntax of turns-in-progress can be a problem for many aphasic speakers, and that these speakers have developed particular methods of adapting their syntactic resources to the environment of turns and sequences within which they are talking. It is precisely these difficulties and solutions which traditional aphasiology assessments omit, but which provide an extremely useful starting point for devising rehabilitation programmes to change aphasic speakers’ use of language in general and syntax in particular in real life talk through assisting them in optimally adapting to their language deficits in similar ways to those which have been shown to be successful for other aspects of aphasic behaviour (Wilkinson et al, 1998).
Activities

Dr Wilkinson, the principal investigator, and Ms Beeke, the research fellow on the award, have made a number of presentations related to the project (see Appendix 2). In many cases these have been invited presentations, displaying interest from the wider academic and clinical communities in this line of research.

The grant holders have also built up a number of networks. Dr Wilkinson’s invited presentation and Ms Beeke’s presentation within the category of ‘promising young researchers’ at the Euresco conference in Spa, Belgium in 2000 was recognition of the relevance of this work to the development of Interactional Linguistics as a field of study. Both Dr Wilkinson and Ms Beeke are also due to present at the second of the Euresco conferences on this topic in Helsinki in 2002, where there will be a session on “Language Disorders” for the first time.

There were several meetings of the ESRC seminars on “Conversation Analysis and Disorders of Communication” (R451 26 4651 97) during the time of the aphasic syntax-for-conversation project, and the grant holders presented a paper at one of these seminars to the seminar members and other users such as speech and language therapists. This seminar series has allowed the development and expansion of a network of linguists, psychologists, sociologists and speech and language therapists with an interest in the application of conversation analysis to communication disorders. One result of the ongoing development of this network was a seminar series organized by one of the ESRC seminar core participants Dr Charles Antaki on “The psychological assessment of persons with language impairments: insights from pragmatics and conversation analysis”, funded by the British Psychological Society. Dr Wilkinson was invited to participate in this seminar series. He attended the three meetings and presented data from the aphasic syntax-for-conversation project for discussion.

Dr Wilkinson presented a paper as part of a panel on “Reported Speech in Conversation” at the 7th International Pragmatics Association Conference in Budapest, Hungary, in 2000. Dr Wilkinson’s paper in the panel was the only one on communication disorders, thus bringing the topic of aphasic syntax-for-conversation to a wider academic audience. The panel organizers, Dr Liz Holt (Huddersfield University) and Dr Rebecca Clift (Essex University) are in the process of discussing with Oxford University Press the possibility of a book on this topic based in part on the papers presented in that panel.

Dr Wilkinson has been invited to participate in a “Workshop on Technology in Conversation Analysis” in Odense, Denmark in September 2001. This will allow dissemination of the technological innovations in data storage, transcription and analysis developed during this project and outlined elsewhere in this final report.

Outputs

One paper from the project is currently in press and there is another complete paper in final draft form which will be submitted to “Clinical Linguistics and Phonetics” in July 2001. See appendix 3 for details. Copies of both papers are included with this final report.

In addition a series of computer-readable transcriptions of conversation data and language assessment data from the project are being deposited with the ESRC data archive. As far as we are aware this will be the first time in which conversation and language assessment data from aphasic speakers have been collected, transcribed and presented in this way.

Impacts

One way in which work from this project has been seen to have an impact is that it has led to similar work in other languages. For example, we have been working with Ms Marianne Lind, Dept of Linguistics, Oslo.
Findings from the research have also started to be applied by Dr Wilkinson, Dr Maxim and other DHCS colleagues in research programmes investigating rehabilitation programmes for aphasic conversation (Wilkinson et al, 1998, in progress). From this work has emerged a substantial speech and language therapy resource pack entitled “SPPARC (Supporting Partners of People with Aphasia in Relationships and Conversation)” (Lock et al., in press). Ms Sarah Lock, the research fellow on the original project, and Dr Wilkinson are due to run a number of one day workshops for speech and language therapists on the application of conversation analysis to aphasia assessment and therapy in general and on the use of this resource pack in particular. Workshops booked in for the second half of 2001 so far include Salisbury, Glasgow, London, Belfast and Northampton. Findings from this line of theoretical research are thus becoming a standard part of speech and language therapy daily clinical practice.

Future research priorities

The researchers have secured further ESRC funding to continue to pursue this line of research:

Wilkinson, R., Maxim, J. and Beeke, S. R000239306: Long term adaptation to conversation by people with aphasia and their partners. (£131, 110)

This project will take forward findings from the ESRC projects R000221841 and R000222754. In particular it will be examining aphasic adaptation in syntax and other areas (including adaptation by the conversation partner) over a period of two years from onset of the aphasia. Discovering how couples adapt to conversation with aphasia over time will allow this work on aphasic adaptation to be linked with our current work on aphasia conversation rehabilitation, allowing therapists to assist couples in adapting optimally to living with aphasia over time.
APPENDIX 1: EXTRACTS

Extract 1

117 → FF (0.8) and e- [(0.4) /e?e?/ (0.4) /e??/ /ζ?/ th- the the
((mimes pulling equipment up and down))
118 → (eh) I want to=
((mimes using both arms))
119 LF =the arm (thing)= strengthening yer ] arms
120 FF ] (2 syllables)
((cont.))
121 → y’ ] know
122 LF ] yeah
123 → FF (0.4) and eh- (2.4)
124 → and e- and er (1.1)
((mimes pulling something towards him))
125 LF the rowing mach ine
126 → FF (eh)- ] no no (the)=
((cont.))
127 LF =oh right=
128 → FF =(eh)- (0.4) ] but er (1.8) *oh dear* (0.7) em
((mime ends))
129 → (2.5) *tuh* (1.4) ] ‘y’know ehhh ehh (it’s) (1 syllable) ]
((mimes pulling something towards him))
130 → (0.4) you’re you’re (0.4)
131 LF ] oh
132 FF ] (2 syllables)=
133 LF =what you pull the weight towards you
134 FF yeah

Extract 2

464 KD very pretty girl sh’attractive
465 (0.3)
466 KD lovely face “huh I noticed yesterday when she was
467 → LD lookin’ at me yesterday her eyes are so (0.4)
468 → LD big ] she’s got ] big eyes
469 KD ] ( )- ] (pictures) when she looks
470 at (things yeh-) her eyes go so big an’
471 (0.8)
472 KD don’ they
473 LD “mmm”
474 (3.3)
475 LD “big gob to match”

Extract 3

037 DI so how was Linda about it all,
038 still the same or
039 → RI (0.6) umm (0.7) well it’s just
040 → DI ] she didn’t say much
041 → RI yeah- e- exactly yes *yeah*
042 DI Mm
Extract 4

380  DA if you notice Jennie she keep [puttin’ her hand up an’
381  →  JA [goin’ like that she don’t like] people takin’ her
382  JA [hhhhhh heh
383  DA [picture]
384  JA [heh
385  DA [0.3]
386  JA "hhh no
387  (5.0)
388  JA "oh dear"
389  DA What
390  JA Nothing
391  (0.5)
392  DA why d’you keep sayin’ oh dear [then
393  JA [eh nothing
394  DA tired?
395  JA (0.2) no
396  (0.8)
397  JA yeah
398  (0.3)
399  DA you are
400  JA yeah
401  DA too tired
402  JA no!
403  (0.3)
404  JA no
405  DA "(3 syllables)"
406  (0.4)
407  JA I don’t know
408  DA [\dunno [huh heh heh heh that’s what you keep sayin’]]
409  JA [huhhhhh heh heh heh (. heh heh heh]
410  JA "huhh
411  JA you always say that (.) I don’t know
412  JA [yeah
413  (0.3)
414  DA "huhhh
415  (0.4)
416  DA I don’t know
417  (3.2)
418  DA I’ve gotta do tidyin’ up
419  (1.9)
420  JA what
421  DA we’ve gotta go out the (kitchen) ain’t we (0.2)
422  "(we’ve gotta-) (0.3) *(cos)* the dustmen’ll be here in
423  a minute
424  JA yeah

Extract 5: JA’s performance on three items from the PALPA (using CA transcription) (p = prompt from assessor)

<table>
<thead>
<tr>
<th>TARGET</th>
<th>PICTURE NAMING RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comb</td>
<td>✓</td>
</tr>
<tr>
<td>Bear</td>
<td>p</td>
</tr>
<tr>
<td>Horse</td>
<td>p</td>
</tr>
</tbody>
</table>

1. Comb ✓ Comb
2. Bear p /\pi\alpha/- eh (. eh (. eh (. eh (. (shakes head)) (p. /\beta\zeta\eta) a /\beta3 (. a /\beta\alpha/- (. /\beta\epsilon\eta/ er (. ah (. /\beta\epsilon\eta/- (p. it’s a /\beta\epsilon/ bear bear bear
3. Horse p uh /\theta\epsilon/ eh (. /\delta\Theta\eta/ er (. /\beta\zeta\eta/- er (. /\beta\zeta\eta/ nah ((shakes head)) (p. semantic) ((gestures ‘riding’)) (p. it’s a /\eta\Omega/) horse horse
Extract 6: JA’s performance on three items from the VAST (using CA transcription) (p = prompt from assessor)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TARGET</th>
<th>RESPONSE</th>
<th>CORRECT</th>
<th>WELL FORMED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>knitting</td>
<td>oh this one is ((gesture)) (.) is (.) /ν≡/ no (.) is um (.) (p. she’s /v/) knitting knitting knitting (p. what) I dunno I dunno (p. something stripey) yeah yeah heh (p. a scarf maybe) scarf yeah</td>
<td>p cue</td>
<td>N/A</td>
</tr>
<tr>
<td>2</td>
<td>climbing</td>
<td>uh (.) /µα/- uh (.) or /βα/- no (.) /β≤α/- no (.) (p. he’s /κξ≡/→/κλα/: (-) /κν/ (.) (p. climbing)→/κλα;I(.)/µν/ yeah climbing (p. climbing a /τ/) /τζη/ (p. tree?)→tree (.) tree (.) yeah</td>
<td>X</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Extract 7

383 → AC we’re doin’ something (else) (.) something
384 → >1 dunno what it is<<
385 → [(.) something I did (1.0) need (paint) something
   [(AC looks up at ceiling and around room)]
386 → something] σ(something so)σ
   ((cont.))
387 AMC °(pardon)°
388 → AC we’ll do it (0.2) like a (1 syllable) something something
389 good
390 → AC (0.7) you wanna do something good
391 AC yeah
392 → AMC like what
393 AC (0.7) °(like)° [all these changing
   [(AC gestures and looks towards window)]
394 AMC (0.4) the curtains
395 AC everything /μΠλ/ (.) /μΠλ/ (4 syllables)
396 AMC what wash them

Extract 8

020 JG oh God if it’s anything like the last
021 [one you made (wa)s brilliant ]
022 CG [naah /κ≡η/ [(m-)]]
023 → (1.7) [(looks away from JG)]
024 JG (0.6) well how did you do the last one
025 CG yeah (0.9) [(υοΥφ/ (2.5) uh- (0.3) three or four,
   [(moves hand in emphasis→)]

Extract 9

356 JG you ‘ain’ got (a) pressure cooker
357 CG [(yeh)
358 (0.8)
359 CG n [(o no]
360 JG nah
361 → CG m- (0.2) (0.2) mum has one
362 [1.1]
363 [((JG nods))]
364 JG (*d’you eh-*) have you ever used one
365 CG n(h)o

Extract 10

001 → CG last week(.) you go ↑ out
002 JG erm (0.4) *just one weekend away*
003 CG [°(oh right)* hheh hh
004 [((JG nods head and smiles))]
005 [1.1]
006 [((CG smiles at JG, who is grimacing))]
007 JG my (1 syllable) /ðuðˈæŋ/°
008 [ehheh heh heh heh (0.3) *hh]
009 [((silent laughter from CG))]
010 → CG July no- June um (0.2) tuh three tier
011 → JG =are ↑ yuh
012 [((pointing gesture dropped))]

Extract 11

087 JG you got tins
088 for that
089 CG no no (0.2) uh- I have (0.2) the tins
090 JG (0.7) you gotta get ‘em
091 CG yeah yeah
092 (0.4)
093 JG *oh right*°
094 → CG ‘m Edgington Green (0.3) cake shop
095 JG oh (is there one) (1 syllable)?
096 CG [yea(h)]°
097 [((smiles))]
098 JG oh I didn’ know that
099 CG [yeah]
100 [yeah]
101 JG whereabouts?
102 → CG (0.4) m- (market) eh (0.6) /Eβæπ/ three (0.4) um (0.4)
103 → library (0.3) cross the road
104 JG oh yeah=

Extract 12

CG on the TRIP: THREE-ARGUMENT STRUCTURES
S3-35 the boy’s showing the apple to the horse
m boy showing the apple to the horse
Extract 13

219    KD  cos >I mean< you (just sit down) look so miserable
220    →    (you) look as though ooh ain’ she miserable ain’ she
221    LD  >know what I me f’an<
222    KD  “no you’re not miserable”
223    LD  no! but you feel miserable cos you’re not answerin’
224    KD  you’re not talkin’ to nobody
225    (0.4)
226    KD  or ↑you do it’s-
227    LD  ↑strange place
228    KD  yeah an’ it’s yeah no (.) yeah no an’ you think oh god
229    →    you look miserable (0.1) but if I keep meself (0.5) busy
APPENDIX 2: RELATED ACTIVITIES: PRESENTATIONS RELATED TO PROJECT R000222754


APPENDIX 3: OUTPUTS: PUBLICATIONS SO FAR FROM PROJECT R000222754 (BOTH ENCLOSED)


APPENDIX 4: REFERENCES


