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CHAPTER 9

Using conversational structure as an interactional resource

Children with Asperger's syndrome and their conversational partners

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One of the diagnostic criteria for children with Asperger's Syndrome (AS) is pragmatic impairment. Yet, minimal interactional research has been carried out on what exactly 'pragmatic impairment' might mean. What do children with AS do (or not do) when interacting? What do they find interactionally 'difficult'? What do the conversational partners do to manage social and pragmatic difficulties as they emerge, moment by moment, in interaction? Using a conversation analytic framework, this paper explores some of the ways in which two pragmatically impaired children with AS, aged 8 years, interact with four different conversational partners. Using a competence model, it examines the conversational partners' use of adjacency pairs as a scaffolding device enabling the children with AS to make contributions to the talk-in-interaction in a safe, predictable environment. It also examines the different strategies used by the children with AS in environments in which the talk is less well-scaffolded, such as when initiating new topics or repair sequences. The analysis highlights the need for further research into how interaction is collaboratively managed by children with AS and their interactional partners.

Previous research has shown that children with High Functioning Autism (HFA) and Asperger's Syndrome (AS) find social interaction difficult (e.g. Attwood 2000; Fine, Bartolucci, Szatmari & Ginsberg 1994; Gillberg & Gillberg 1989; Minschew, Goldstein & Siegel 1995; Rendle-Short 2003; Tager-Flusberg & Anderson 1991; Wing 1981; Wootton 2003). Yet social interaction is of utmost importance, especially for developing peer relationships and in forming friendships (Erwin 1993; Margalit 1994). Being able to make and keep friends is important for *all* children, including those who have been diagnosed with AS. Friendship offers long-term

benefits for school adjustment, improves self-esteem and personal well-being, and reduces loneliness and the possibility of depression (Diehl, Lemerise, Caverly, Ramsay & Roberts 1998; Dunn 2004; Erwin 1993; Margalit 1994). Yet Koning and Magill-Evans (2001) reported that within a group of twenty-one adolescent boys with AS nearly half of them reported having no friends.

In order for children to show friendship through displayed feelings of belonging based on shared concerns, interests or other activities, and to voluntarily show mutual respect for each other (Margalit 1994), they require the necessary interpersonal skills and the ability to understand the reciprocal nature of social interaction. For example, they need to know how to initiate a conversation, how to be a 'good listener', and how to let their conversational partner (a potential friend) know that they are listening, through gaze or minimal response tokens. They need to realise not to ask inappropriate questions or not to talk repeatedly about the same idea, especially if their conversational partner is not interested in what they are talking about. They need to learn to moderate the volume of their voice. Yet these are the sort of difficulties experienced by children with AS (Knott, Dunlop & Mackay 2006).

So it is not surprising that children with AS who lack the fine interactional control required for successful social interaction find friendships difficult (e.g. Attwood 2000; Bauminger & Kasari 2000). Even though they might *want* to make friends with other children, they tend to approach the other child in a clumsy and not very successful way (Prior et al. 1998). They may also find it difficult to maintain the quality of the friendship as they are not skilled at reciprocal play and talking about things in common (Bauminger & Kasari 2000). As a result of such difficulty in forming individual friendships, they are less likely to be included in larger friendship groups, resulting in further social isolation (Margalit 1994). So even though children with AS might want more social interaction with peers (Bauminger & Kasari 2000), because they are less able than their similar aged cohort to engage in social interaction, they experience difficulty in forming friendships (Attwood 2000; Koning & Magill-Evans 2001) and strong peer relationships.

Although we might have an intuitive understanding of some of the pragmatic difficulties experienced by children with AS, we are only beginning to appreciate what it is that children with AS do, or do not do, when interacting with others and how this might impact on their ability to form friendships. One of the reasons for the lack of social interaction research within the field of autism is due to the context-specific nature of interaction. Quantification may show that children with autism generally initiate fewer bids for interactions, comment less often and respond less often to family member communication bids (e.g. Jones & Schwartz 2009), but it is only through detailed analyses of how participants behave in real time that we can begin to understand the interactional difficulties for this group of children, including, how they organise structural aspects of interaction (e.g. Kremer-Sadlik 2004;

Ochs & Solomon 2004; Ochs, Kremer-Sadlik, Gainer Sirota & Solomon 2004; Rendle-Short 2003), how they manage repair (e.g. Stribling, Rae & Dickerson 2007; Volden 2004) and how they display mutual understanding or intersubjectivity (e.g. Sterponi & Fasulo 2010).

Previous research into the interactions of neurotypical children has demonstrated the children's interactional competency across a range of settings. Focus has been given to how their talk is designed and received within the unfolding organization of social interaction, foregrounding the competencies that children demonstrate, whether talking to peers (e.g. Blum-Kulka & Snow 2004; Church 2009; Cobb-Moore, Danby & Farrell 2009; Danby & Baker 1998b; Goodwin 1990; Sheldon 1992, 1996), or adults (e.g. Filipi 2009; Forrester & Reason 2006), including interactions within specific institutional settings, such as medical settings (e.g. Cahill 2010; Silverman 1987), child counselling (e.g. Hutchby & Moran-Ellis 2001; Hutchby 2002, 2010), or parent-teacher interviews (e.g. Silverman, Baker & Keogh 1998).¹ Particular emphasis has been given to young children's display of mutual understanding or intersubjectivity (Filipi 2009; Gardner & Forrester 2010; Jones & Zimmerman 2003; Sidnell 2010) through use of repair and questioning repeats (e.g. Corrin 2010; Filipi 2009; Forrester 2008; Jones & Zimmerman 2003; Laakso 2010; Pike 2010; Salonen & Laakso 2009; Sidnell 2010; Wootton 2007), use of gaze as social control (Kidwell 2005), and use of interactional devices to co-construct and maintain social order (e.g. Cobb-Moore, Danby & Farrell 2009; Danby & Baker 1998a, 2000, 2001; Goodwin & Kyratzis 2007; Kyratzis 2007).

Overwhelmingly, the research demonstrates that as children go about their everyday mundane tasks of interacting with parents, siblings, teachers, and doctors they are competent manipulators of verbal and interactional resources (e.g. Bruner 1983; Cromdal 2009; Ervin Tripp 1979; Forrester 2008; Garvey 1984; Keenan 1974; McTear 1985; Ochs 1988; Ochs & Schieffelin 1979, 1983; Salonen & Laakso 2009; Schieffelin 1990; Sidnell 2010; Wells 1981; Wootton 1994, 2006, 2007).

Against this background of the interactional competencies displayed by children in general, it is important to examine how children with AS cope within a neurotypical world. This paper, therefore, focuses on the interactional competencies of two 8-year-old children with AS as they interact in naturally-occurring situations. Such detailed interactional analysis is in response to recent calls in the autism literature for fine grained micro-level analyses of social behaviour in naturalistic settings (e.g. Geils & Knoetze 2008; Macintosh & Dissanayake 2006; Muller & Schuler 2006).

1. For an overview, see Hutchby 2005.

Pragmatic and social difficulties for children with AS

Overwhelmingly, as indicated in the diagnostic criteria (American Psychiatric Association ([DSM-IV-TR] 2000)) and as described in the literature, children with AS find social interaction more difficult than their typically developing peers. Attwood (2000: p. 85–86) lists the most conspicuous characteristics of social difficulty, including lack of reciprocity; little appreciation of social cues; failure to share enjoyment, interests or achievements with other people; an inability or lack of desire to interact with their peers or a failure to develop peer relationships appropriate to the child's developmental level; a failure to adequately use eye gaze, facial expressions, body posture and gesture to regulate social interaction; socially and emotionally inappropriate behaviour, and difficulty reading emotion from facial expressions.

Cognitive explanations for why children with AS have difficulty with social skills have highlighted executive dysfunction, weak central coherence, and difficulties in engaging and shifting attention (see for example, Barry et al. 2003: p. 686), including an impairment in the fundamental ability to 'mind read' (Baron-Cohen 1995). Whereas typically developing children understand (from the age of around 4 years) that other people have thoughts, knowledge, beliefs and desires that influence and explain other's behaviour, many children with AS may have considerable difficulty conceptualizing and appreciating the thoughts and feelings of others. As Attwood (2000: p. 87) says, they are not able to 'think about thoughts'. This makes social reasoning much more difficult as they are not able to understand or 'read' what it is that the other person is doing. Such children are often uncertain as to whether the other person is just doing something accidentally (for example, just happening to look at them at that particular moment) or whether there is some intentionality involved (for example, the other person looked at them because they expected a response to a question or comment). Not being able to work out what is behind someone's talk or non-verbal cues, or not being able to 'read' the interaction, results in confusion concerning what the other person might be saying/doing (or not saying/doing).

In terms of their interactive and discourse ability, one area of difficulty for children with AS is that they do not seem to intuitively understand how to link ideas together (Wing 1981). Fine et al. (1994), for example, found that children with AS made unclear references, showing an inability to design their talk for their interlocutor or conversational partner. In another study examining how autistic children maintain and develop topics of conversation, Tager-Flusberg & Anderson (1991) showed that the clearest difference between the high functioning autistic children in their study and the controls (children with Down's syndrome) was that the children with autism failed to develop categories of discourse that added new information to the topic of discourse. In an analysis of narratives, Solomon

(2001, cited in Ochs et al. 2004: p. 150) found that high functioning children with autism spectrum disorders atypically used connective markers such as 'and', 'but' and 'so' to link topically disjunctive propositions. Such lack of cohesion, combined with the tendency for children with AS to monopolise the conversation through perseveration of their favourite topics of interest (Wing 1981), can make it difficult for conversational partners to keep the conversation 'on track' by following the expected conversational rules and structuring principles.

Interactional scaffolding

Interaction is a jointly constructed activity that requires both participants to make appropriate and timely contributions to the progression of talk (Sacks, Schegloff & Jefferson 1974). If one of the interactional participants is pragmatically impaired then it may fall to the other person, the conversational partner, to interactionally manage the conversation as it emerges, moment by moment. This interactional management of the conversation can be likened to the process of scaffolding, whereby a child can be assisted in solving a problem, carrying out a task or achieving a goal which may be beyond his or her unassisted efforts (Wood, Bruner & Ross 1976). Kirchner (1991) has utilized this notion of scaffolding when facilitating conversational participation in children with language impairment. The scaffolding process enables the more competent interactant (generally an adult) to control "those elements of the task that are initially beyond the learner's capacity, thus permitting him [*sic*] to concentrate upon and complete only those elements that are within his range of competence." (Wood, Bruner & Ross: p. 90).

Given the structural organization of naturally-occurring conversation (Sacks et al. 1974), more competent interlocutors can use conversational structure as a scaffolding device. One possible interactional scaffolding device is the adjacency pair. The adjacency pair is made up of an action initiating first pair part (FPP), sometimes simply called a 'first', and a second pair part (SPP), or 'second', that completes the action initiated by the first (Sacks et al. 1974). Classic adjacency pair sequences are question and answer sequences, in which there is a clear expectation of 'conditional relevance', such that given a first, the second is the socially expected next action. As argued by Schegloff (1968: p. 1083), the strength of the conditional relevance is such that if the second does not occur it can be heard as being 'officially absent' and therefore accountable in the ensuing talk. For example, a missing SPP may be commented upon or the FPP may be asked again in a reformulated form. Adjacency pairs in which FPPs are routinely followed, with minimal gap and minimal overlap, by SPPs are therefore both predictable and stable (Ochs et al. 2004: p. 158; Sacks et al. 1974).

Adjacency pairs and children with autism spectrum disorders

Research from ethnographic and discourse analytic studies show that individuals with autism spectrum disorders experience difficulty responding to questions (Kremer-Sadlik 2004). This may be due to the complexity of the question or their inability to take the interlocutor's perspective into account. For example, young adults with autism do better on short simple questions compared to questions that draw inferences (Hewitt 1998) and, in a single case study, it was shown that an 8-year-old girl with AS was most successful at answering yes/no questions (Rendle-Short 2003).

In addition, an ethnographic study (Kremer-Sadlik 2004) examining the conversational skills of 8–12-year-old children with HFA or AS showed that when interacting with family members at home, the 16 children who participated in the study demonstrated a strong knowledge of the socio-cultural norms of providing an answer when asked a question: they answered 85% of the questions, and only ignored 15% of them. Kremer-Sadlik (2004) argued that this high response rate may have been due to the fact that the children were in a familiar environment with lots of scaffolding by the conversational partners.

Furthermore, Dobbinson, Perkins and Boucher (1998) showed that children and adults with autism spectrum disorders have longer pauses both within turns and between one turn and the next when answering questions. For example, in the context of an adjacency pair, such as a question and answer sequence (Sacks et al. 1974), it has been shown that children with autism spectrum disorders may delay responding to the question (e.g. Rendle-Short 2003; Ochs et al. 2004). Whereas an adult or a typically developing older child would respond immediately with minimal gap (Sacks et al. 1974) and if there was a short pause, it would be less than a second (Jefferson 1989), for children with AS they may take longer than a second to respond to a question (Rendle-Short 2003; Ochs et al. 2004). Providing an explanation for such pauses is not easy. One explanation is that children with AS have an impairment in information processing (Bauminger 2002) which means that they may not be able to react fast enough to the presence of social cues in the conversation, so that they do not 'keep up with' what is happening. However, as pointed out by Ochs et al. (2004 p. 162) longer pauses may just reflect a desire to withdraw from the interaction at hand.

This paper contributes to our understanding of social interaction for children with AS in two key ways. First, it examines whether conversational predictability, through interactional sequences such as adjacency pairs, provides scaffolding opportunities for children with AS and their conversational partners. It contrasts interactions with conversational predictability in which children with AS are able to make a contribution to the talk-in-interaction in a safe, predictable

environment, with interactions which are not so predictable, such as when initiating new topics or repair sequences. Second, using a competence model, it examines the specific conversational skills and interactional strategies that children with AS use in these less predictable environments.

Data and methodology

This paper uses the methodological framework of conversation analysis to analyse the way in which two 8-year-old children with AS talk to their conversational partners. Conversation analysis (CA) arises from ethnomethodology (Garfinkel 1967; Garfinkel & Sacks 1970) and is based on the premise that talk is orderly and organised (Sacks 1984; Sacks 1992). Sacks et al. (1974) demonstrate orderliness through ideas fundamental to CA including the 'turn construction unit' (TCU) as the basic unit of talk and the 'transition relevance place' (TRP) as the point in interaction where speaker change becomes interactionally 'relevant'. TCUs can be complete sentences, phrases or even single words. A speaker beginning a turn of talk has the right to produce a single TCU, although speakers often produce turns composed of more than one TCU. In determining possible completion points of a TCU (in other words, the point at which speaker change *could* occur), next speakers orient to the grammar, intonation and pragmatics of the current speaker's emerging talk (Sacks et al. 1974).

One of the advantages of using the methodology of conversation analysis is that it provides a powerful lens for examining social activity through its rigorous and finely-tuned analysis of ordinary conversations in naturally-occurring settings. Such fine-grained analysis is important given the subtle social and pragmatic difficulties experienced by children with AS. A second advantage relates to the fact that conversation analysis works from the premise that any claims made *about* the data must be demonstrable *in* the data. Instead of drawing on abstract theories or pre-determined analytical constructs, conversation analysts treat the data as the participants' phenomena, as evidence of how the participants themselves understood and acted upon each others' contributions. A third advantage arises from the way in which the methodology of conversation analysis encourages analysts to apply a competence model with emphasis placed on what it is that children with AS *can do* rather than adopting a deficit model that emphasises the children's poor social interaction skills.

The naturally-occurring conversational data analysed in this paper is taken from a larger data set of children with AS interacting with friends and family. The data under consideration in this paper consists of two case studies of two 8-year-old children each talking to two different conversational partners. Both children

have diagnoses of Asperger's Syndrome. The conversational partners are either family members or close friends. In the first case study, Jancis (pseudonym) was audio recorded during a telephone conversation in which she rang her friend, Tyffany (pseudonym), after she had not been at school one day. She initially talked to her friend's mother and then she talked to Tyffany herself (also aged 8 years old). It was just before Easter, and Jancis rang her friend to ask if she had brought back her decorated boiled egg from the classroom. In the second case study, Will (pseudonym) was video recorded while talking at home in the living room. First of all, Will is talking to his mother on the couch and then to his slightly older brother (aged 10 years).

The first case study consists of 4.4 minutes of data with a total of 104 TCUs: 29 TCUs were spoken by Jancis; 57 TCUs were spoken by her friend, Tyffany; 18 TCUs were spoken by her friend's mother. The second case study consists of 12.8 mins of Will talking to his mother (with a total of 266 TCUs: 137 TCUs were spoken by Will; 129 TCUs were spoken by his mother) and 12.3 mins of Will talking to his brother (with a total of 297 TCUs: 171 TCUs were spoken by Will; 126 TCUs were spoken by his brother). The complete data sets were transcribed using CA transcription conventions (see Appendix).

The following analysis is based on 9 representative extracts from the data sets that most clearly demonstrate the phenomenon under discussion. As with any micro-level analysis of a limited data set, the following analysis is not intended to be generalised to all cases. Rather, the aim of the analysis is to utilise the principles of conversation analysis to highlight the interactional complexity of naturally-occurring conversations and to highlight the interactional work done by both the child with AS and their conversational partners. The more we understand about how individual children with AS interact, the more we will be able to understand the broader population of children with AS.

Analysis

The following will show how the two children with AS under analysis are, on the one hand, very skilled interactionists who at times may appear to behave like many of their unaffected friends or peers. However, it will also show how the children can be vulnerable to pragmatic language challenges that may result in the interaction not proceeding as anticipated. The first two sections of the following analysis demonstrate the structured predictability to the interaction when responding to an action initiated by a conversational partner. Initially the focus is on how conversational partners use the adjacency pair structure as a scaffolding device enabling the two children with AS to make contributions to the talk-in-interaction in a safe, predictable environment. It builds on a comment

by Ochs et al. (2004: p. 158) that adjacency pairs exhibit a 'conventional interactional implicature' that is both predictable and stable. This is followed by analysis of how the second child with AS, Will, responds with an extended turn to a query about his day. Providing a telling requires the child to structure the talk so that it is coherent and makes sense to the listener. This contrasts with the different scenario whereby the child might have to initiate a new action themselves. The third and fourth sections of the analysis focus on why the children might find it difficult to move from the predictable position of responding to the prior talk, to the more challenging role of initiating a new topic or repairing some aspect of the prior talk. In the discussion section, the paper returns to a consideration of the implications of the findings for understanding the role played by conversational partners. It discusses the children's vulnerability to pragmatic language challenges that may result in the interaction not always proceeding as anticipated.

Predictability: Responding within the adjacency pair format

Overwhelmingly in the conversations under analysis, and in accordance with the findings by Jones and Schwartz (2009), conversational partners were much more likely to use FPPs to initiate actions compared to the children with AS. Such first pair parts (FPPs) with their 'conventional interactional implicature' (Ochs et al. 2004: p. 158) provide a high level of orderliness and structure to the conversation, and more specifically to turn-taking. As a result, the children only have to provide an appropriate SPP of the same pair type.

The following extract shows the mother of Will asking a series of questions while they are sitting on the couch together.

- (1) [Will and mother]
1. M: where did you get that one from.
 2. W: huh huh. the fair.
 3. at Saint Thomas.
 4. M: yeah?
 5. W: I got it from trash and treasure.
 6. M: you did. didn't ya.
 7. you're lucky you found some treasure.
 8. W: yeah.
 9. M: do you remember how you found it?
 10. (1.0)
 11. W: in a little bit of a ugh ugh ugh like that.
 12. wasn't it. ((nonverbal action and noises of pushing))

The adjacency pair sequences in the above extract provide a structured predictability to the interaction. The mother asks the questions and the child provides the

answers. But the child is doing more than just showing that he is able to answer questions – he demonstrates his interactional ability in a number of different ways. In line 2, in response to the question asking where he got the book from, he initially laughs before providing the necessary information. The laughter contextualises the response, demonstrating his appreciation of the event as funny. In line 5, he appropriately treats the mother's rising intonation 'yeah' in line 4 as a request for additional information. In line 8, he appropriately provides an agreement token to his mother's comment about being lucky to find some treasure. Finally in line 11 he resorts to a nonverbal response when he is not able to explain how he found the book at the trash and treasure.

Initial evidence that this 'do you remember' question might be more difficult is provided through the pause in line 10. Normally, there is a minimal gap between a FPP and SPP (Sacks et al. 1974) and if there is inter-turn silence the maximum length of silence in adult conversations would generally be between 0.8 – 1.2 seconds (Jefferson 1989). So although this 1.0 second silence (line 10) is within the expected maximum length of pauses between turns (Jefferson), the silence indicates potential difficulty in answering the question (Pomerantz 1984; Schegloff 2007). During this silence the mother looks at the child, but does not assist him by rephrasing the question or by providing a candidate answer. Instead, she waits and in line 11, Will non-verbally shows his mother what happened and how he and another child had 'a little bit of a' push as they both tried to get the same book. He accompanies his pushing gestures with appropriate noises to illustrate the action.

Sometimes, however, the child with AS does not respond to the FPP. If a question is not 'appropriately' responded to, the conversational partner has choices as to whether they rephrase the question (extract 2) or pursue an adequate response through a slightly different question type (extract 3).

(2) [Will and brother]

12. W: and then we went to Kmart,
 13. and shopped for my clo::thes.
 14. Br: and what did you ge::t.
 15. (1.0)
 16. W: NOTHING NICE.
 17. Br: and what did you get.
 18. (1.0)
 19. W: coloured (clothes).
 20. Br: what colours
 21. W: green, yellow, blue, and navy.

(3) [Will and mother]

17. M: but that was- =you found that book
 18. before then. didn't ya?

19. W: yeah I did.
 20. M: where did you find that one.
 21. W: I found it when I was looking for books.
 22. (1.2)
 23. M: mhm.
 24. do you want to tell me about it?

In extract 2, the conversational partner (the brother) does not accept Will's SPP in line 16 as an adequate response to the 'what did you get' question. Already the inter-turn gap in line 15 indicates that there may be a problem in providing a SPP. Then the louder than expected statement 'NOTHING NICE' (line 16) marks the response as being in some way different from expected. So although Will demonstrates his understanding of the requirements of the adjacency pair format and that an SPP is expected, his brother does not accept this louder SPP and he re-asks the question in exactly the same form (line 17). Will again delays 1.0 second before providing a response to the second question. But this second time, he does provide the information, as asked, although in a minimal form.

In contrast, in Extract 3, the response to 'where did you find that one' (line 20) is not a type conforming response in that the answer indicates 'when he found it' not 'where he found it'. However, the conversational partner (mother) does not comment on the inappropriate response. Instead there is a 1.2 second pause (as possible indication of trouble associated with an inappropriate response), an acknowledgement of the SPP ('mhm.' in line 23), followed by another FPP. This telling-request FPP opens up a space for Will to answer the question about finding the books in his own way.

If there is no response to a question, then the conversational partner might pursue a response as shown in extract 4 when Jancis is talking on the phone to her friend's mother (M).

- (4) [Jancis and friend's mother]
 3. M: hello Jancis,=did you just call
 4. a minute ago an' then hang up?
 5. (1.6)
 6. J: y:es:, hh
 7. M: wh:y did you do that.
 8. (4.0)
 9. M: ↑yoo hoo::,↓
 10. J: he he.hh
 11. M: are ya there?
 12. J: ye::s, hhh
 13. M: what happened.
 14. J: heh heh

In this extract, the mother asks 'why did you do that' (line 7) in order to find out why the child rang a few minutes ago and then hung up. This is a difficult question

for the child to answer and she pauses for 4.0 seconds. However, the conditional relevance of the FPP is evident through the mother's pursuit of a response. In other words, it is not sufficient that no SPP is provided. The mother initially checks that the child is still on the phone (line 9). When the child responds by laughing, she checks again that Jancis is there (line 11). The mother then returns to the original question of why she rang a few minutes ago and hung up, although this time she reframes the 'why' question as a 'what happened' question.

Responding to an action initiated by the conversational partner provides a straightforward predictable context for the child with AS to demonstrate their conversational abilities. Following the interactional expectation that talk is structured through adjacency pairs (Sacks et al. 1974) with an initiated action only being completed once the action initiating turn (FPP) has been responded to by the SPP, children with AS only need display their ability to provide a SPP in response to the initiating turn. If their SPP is missing or insufficient the conversational partner can then ask a second FPP as a way of clarifying or obtaining additional information. This interactional scaffolding was provided in a range of ways in the above extracts: asking FPPs; refraining from talking during inter-turn silences; reframing FPPs; checking reciprocity. The scaffolding provides an interactional structure or framework for the children as well as providing them with an opportunity to learn what counts as legitimate responses or different ways in which interactive contributions are responded to.

Predictability: Providing a telling

Responding to questions about your day, such as 'how was your day' or 'what did you do today' are slightly more complex as they require the child with AS to order the talk into a coherent telling. In the following extract, Will and his brother were talking on the couch.²

(5) [Will and brother]

1. Br: hello Will.
2. W: HELLO. James.
3. Br: how was your da::y.
4. W: goo::d,

2. The beginning of this interaction highlights the difficulty of obtaining recordings of children with AS within naturally occurring settings – the brother begins the recorded interaction with 'hello Will' as if he were starting a conversation on the telephone.

5. Br: what didya do.
6. W: we we:::nt
7. (0.2)
8. Br: what did you do first.
9. W: we took you-
10. we went to the dentist,
11. and we took you to sch::ool,
12. and then we went to Kmart,
13. and shopped for my clo::thes.
14. Br: and what did you ge::t.
15. (1.0)
16. W: NOTHING NICE.
17. Br: and what did you get.
18. (1.0)
19. W: coloured (clothes.)
20. Br: what colours
21. W: green, yellow, blue, and navy.
22. and.hh (.) and then we went ho::me,
23. and I played on the computer
24. for a little while.

Understanding what is required interactionally may not always be clear, and in this extract Will requires some prompting. In response to the initial question 'what didya do' (line 5), Will begins a turn at talk (TCU) with an elongated 'we we:::nt', followed by a short pause. The brother interprets this incomplete TCU as evidence of difficulty in providing the telling. The brother then limits the scope of the question by asking, 'what did you do first' (line 8). Although breaking the question down into smaller components, facilitates the likelihood of the child with AS providing an appropriate response, Will is still not able to start a coherent account straight away. Again he stops talking before completing his first turn at talk. However, once he recommences his telling, the temporal ordering of his account gives the story a clear predictability and ordered structure. As shown in the previous extracts, the conversational partner provides the interactional scaffolding in a range of ways: by limiting the scope of the request for a telling (line 8); through repeated questions if the response is not satisfactory (in line 17 and as we saw in extract 2 above); and through requests for clarification (line 20).

But although the brother provided a clear context for the telling to encourage Will to tell him what happened during the day, the next bit of interaction shows that even with such scaffolding and high predictability, a child with AS can find it difficult to provide a coherent account.

- (6) [Will and brother]
22. W: and.hh (.) and then we went ho::me,
 23. and I played on the computer
 24. for a little while.
 25. but I decided to have fr- (.)
 26. some time off playing.
 27. so I- (.) do you know what I looked at?
 28. Br: what.
 29. W: the rug rats.
 30. Br: good.
 31. W: then I played the rug rats
 32. on the pla:y station,
 33. and d'you know what Emby said?
 34. Br: what.-
 35. W: there's no-one playing it.
 36. and do you know how I- (.)
 37. there's always time to pick you up
 38. when I come a:t
 39. Br: so.
 40. W: and so we went to the library,
 41. and d' you know what we-
 42. and I jumped-
 43. had time to borrow two books,
 44. and then we went out of the library,
 45. to pick you up,
 46. and then we went to gym.
 47. Br: so what did you do at gym.

One challenge for any storyteller is to order their talk using multi-TCU turns, to link subsequent ideas to prior ideas, and to have a story resolution. The extract shows Will continuing with the chronologically ordered telling with 'and' prefaced linking devices (lines 22 – 24). In line 27, however, Will breaks off a potential resolution 'so I-' to change the trajectory of the storytelling by asking a story-related question. Such a technique enables Will to shift the sequential ordering of the interaction while still talking about his day. It is an effective strategy to ensure smooth and continuing progression of the telling.

Will uses this technique again in line 33, 'and d' you know what Emby said'. Both times his 'do you know x' question receives a 'what' questioning response from his brother, thus allowing him to initiate an action in the form of a question while at the same time limiting the scope of the question. As a strategy for maintaining coherence it is very successful. It enables Will to provide additional information in response to his own question. It also works

well in terms of ensuring predictability, as the brother responds both times with 'what'.³

However, the next two times Will tries to use the 'do you know' strategy, it is less successful. Both times he doesn't complete the 'do you know' TCU and so the strategy of initiating an action and receiving a 'what' question in return doesn't work. In the first of these unsuccessful attempts, Will says 'and do you know how I-' (line 36), cutting off the end of the TCU before making it clear what he wants to say. In the second of these unsuccessful attempts, he similarly says 'and do you know what we-' (line 41), again cutting off the end of the TCU before making it clear what he wants to say. On each occasion the next TCU is incoherent. In the first instance, he says a partially incomplete 'there's always time to pick you up when I come at' (lines 36 – 38). In the second instance he says 'and I jumped-' (line 42) which doesn't fit the logic and temporal coherence of the telling.

So the data clearly shows that when Will completes his 'do you know' question, as in lines 27 and 33, it is a very effective strategy. However, when he doesn't complete the 'do you know' question, as in lines 36 and 41, the coherence is lost. The subsequent talk on both of these latter occasions consists of an incomplete TCU. Evidence of the lack of coherence is given by the brother who asks 'so' in line 39. The fact that the subsequent talk doesn't follow the logic of the question and is not complete, thus making the telling sound incoherent, contrasts strongly with the effectiveness of the strategy when it is provided in full.

So far the analysis has shown Will and Jancis' contributions to talk in fairly predictable environments, answering questions or talking about their day. In such contexts, they were responding to actions initiated by the other party and so there was an inbuilt predictability to the interaction. The FPP (such as 'where did you get that one from' or 'how was your day') limits the type of SPP, although when telling a story, it still requires the child to structure the talk so that it is coherent and makes sense to the listener. However, talking in less predictable environments is more complex. The second part of the analysis focuses on the way in which the two children deal with the more challenging task of initiating new topics or repairing the prior talk.

Reduced predictability: Initiating actions

Initiating an action rather than responding to an action requires participants to think about the sequential ordering of the interaction in a different way. There is a

3. The effectiveness of this interactional strategy has been provided in terms of sequential analysis. It may also be that Will is legitimately asking for information as to whether the brother 'knows x'. In other words, he may be checking what is known and not known.

predictability about providing a response that completes the action initiated by the first, both in terms of what is required (a type conforming response) and in terms of when it is required (within the maximum permissible time span).

In contrast, when initiating an action the speaker has to work out where in the conversation as a whole they should introduce this initiating talk. It is not possible to initiate a new action by, for example, asking a question or introducing a new topic just anywhere in the conversation; it needs to be sequentially relevant. An interactant might need to think about whether there is a lull in the conversation or whether other topics are still being talked about. The following example shows how even if a child might work out where a new topic might be sequentially relevant, they need to be able to execute it in a timely manner to ensure smooth transition of the information to the other person.

(7) [Jancis and friend]

1. T: are you still there?
2. J: yes.
3. T: good.
4. (1.2)
5. J: I wanted t'a::sk, hh (1.2)
6. T: Jancis guess what you missed.
7. J: wha'
8. T: a big easter egg 'cos
9. you brought all your homework in.
10. an' a li'le one too.
11. (1.0)
12. T: but [never mind.] you'll get i- them=
13. J: [()]
14. T: = on the first day back.
15. (0.8)
16. T: heh heh
17. J: hh.hh ((sniffing))
18. T: yeah.=what did you want me [to a::?-what] do=
19. J: [uhm hh]
20. T: =you want t' ask?
21. J: did you bring back my boiled e:gg?

Jancis chooses an appropriate place to initiate her new topic, following a short checking sequence in lines 1–3 and a 1.2 second silence. She commences her new topic with 'I wanted to ask' (line 5) which demonstrates an orientation to her reason for calling her friend. However, although the turn beginning indicates that a question is going to follow, there is a vulnerability of execution highlighted by the slow delivery and long intra-turn pause of 1.2 seconds. The vulnerability becomes

a reality when the friend Tyffany highjacks the turn by asking her own question in line 6. Tyffany orients to her question being 'out of place' in two ways. First, she uses an address term at the beginning of her turn in line 6, marking her turn as being different and maybe out of place. Second, she orients to the still relevant, yet unasked, question in line 17 when she says 'what did you want me to a::?- what do you want t' ask?'

So although Jancis does eventually get an opportunity to ask her question, this extract highlights how progressivity of the talk can be delayed due to the way in which Jancis chose to introduce the new topic into the conversation. Jancis' opportunity to ask her question only comes after Tyffany has told her own story about the Easter egg. Being able to finally ask her question also relied on her conversational partner remembering that the question was outstanding and that she still didn't know what Jancis was going to say. So although Jancis successfully chose a sequentially appropriate position to launch her reason for call, her delayed execution meant that the talk did not progress as anticipated and eventually it relied on her conversational partner to re-introduce the new topic. Once again, Jancis found herself in the more predictable position of responding to an action rather than successfully initiating her own action.

Announcing what you are going to do next is another useful way of letting your conversational partner know that you want to initiate a new topic.

(8) [Will and brother]

1. W: there's one last thing I need to talk about.
2. Br: okay?
3. W: <o::h I don't have to start,>
4. (1.5)
5. a::nd, (2.0)
6. the first of all the people you need
7. to know about Asperger's Syndrome,
8. that we enjoy TALKING ABOUT,
9. is that (1.5) even if it's a disability
10. and you don't have any strong (or),
11. it's just (1.0) you don't have to go
12. around the world complaining about it,
13. Br: yes. they are very special.
14. W: [AND]
15. Br: [so]
16. (2.0)
17. Br: I think I might go and watch:
18. some TV so [I'll
19. W: [but there's one more thing

20. I meant to say.
 21. Br: okay.
 22. M: you can go now
 23. Br: no. you can s [ay. [me
 24. W: [I:: [I:::
 25. Br: talk to me.=
 26. W: =me and many other people in the world
 27. about 300 or something (2.0)
 28. have ASPERGER'S SYNDROME.
 29. see ya.

As in the previous extract in which Jancis set up her question with 'I wanted to ask', so too Will introduces the new topic with 'there's one last thing I need to talk about' (line 1). But once he has been given the go ahead in line 2, his hesitancy is evident and he even tries to delay initiating a new topic (even though he had set it up). In spite of the uncertain beginning (line 3), elongated pauses (lines 4 and 5), unclear grammar (lines 6–12), and intra-turn pauses (lines 9 and 11), the first part of his extended turn is heard to the end. It receives agreement and an assessment that people with Asperger's Syndrome are 'very special'. However, in spite of having said 'first of all' to show that there will be two parts to his talk, the second part isn't forthcoming. Will does say a louder 'AND' to foreshadow the second part at the end of his brother's assessment in line 13, but this is said in overlap with his brother's talk. Eventually, Will overtly says, 'but there's one more thing I meant to say' (line 19 and 20) in order to foreshadow that he has more to say.

Again, therefore, this extract demonstrates how difficult it can be for a child with AS to initiate a new topic and to ensure that there is enough interactional space to present their ideas. As with Jancis, although Will correctly chose an appropriate sequential environment to initiate his new topic, actually getting his ideas out is not straightforward, once again delaying the progressivity of the talk. As with Jancis, it relies on the conversational partner providing the necessary interactional scaffolding to ensure that the topic is eventually 'on the table'. Again, as with Jancis, Will found himself in the more predictable recipient role responding to the instruction 'talk to me' (line 25). So although metapragmatically, Will is able to show a sophisticated understanding of how to ensure that his talk is heard as intended, its execution is difficult and progressivity of the interaction is delayed.

Reduced predictability: Initiating repair

An interactionally more complex environment occurs when the conversational partner says something that is not correct. One possibility is that the child with AS could choose to ignore the incorrect statement; alternatively, they could tell the other person that they have said something that is not correct by initiating

a repair sequence (Schegloff 1992). Interactionally, this requires the child to initially recognise that the statement is not correct, and then to let the other person know that it is not correct. Difficulties for a child with AS are threefold. First, possible trouble sources can appear anywhere in the interaction and so interactants have to be alert to the possibility of the potential for repair. Second, repairing a trouble source needs to be done quickly, as close as possible to the trouble source (Schegloff 1992); yet repairing a trouble source in the next turn might be difficult for a child with AS due to their slowness in executive function (Barry et al. 2003). Third, initiating a repair can be difficult as it is very unlikely that a repair initiator will be the sequentially relevant next action.

Mistakes can occur at any point in the interaction and so the possibility that a repair is required is a potentiality that interactants have to take into consideration. The following extract, taken from the end of the telephone conversation between Jancis and her friend, Tyffany, highlights the unpredictable nature of talk.

- (9) [Jancis and friend]
5. T: heheh so (0.2) bye,
 6. I'll see you::hh in 300 days
 7. time. right?
 8. (1.8)
 9. T: you [still there?]
 10. J: [no. hh]
 11. T: alright by::e.
 12. J: by:e.
 13. T: bye. hang up.
 14. (0.6)
 15. J: I'll see you at Annie's party.

In line 5 Tyffany says 'bye' as a move toward closure of the conversation. The closing implicative environment consists of an arrangement to see each other 'in 300 days time'. But the fictitious arrangement of '300 days' is problematic for Jancis. She delays for 1.8 seconds before saying 'no' in line 10, in overlap with her friend checking that she is still on the phone (line 9). Eventually Jancis provides a different arrangement for when they will next see each other, by saying 'I'll see you at Annie's party' (line 15). Although the repair of '300 days' is successful in that Jancis correctly reminds Tyffany of Annie's party and that they will see each other at the party (in a week's time), the conversation is very nearly terminated (at line 14) before the repair is executed.

Between the trouble source (line 6) and the repaired arrangement (line 15), a number of different things happen – Tyffany asks if Jancis is still on the phone (line 9); Jancis already says 'bye' (line 12); Tyffany instructs Jancis to hang up

(line 13). Why was it difficult to carry out the repair? One difficulty was due to the delayed and overlapping ‘no’ in line 10. Jancis did not make it clear enough that there was a problem, and she didn’t do it soon enough. She delayed so long (and much more than the maximum possible of 1.2 seconds), that the conversation moved onto checking if Jancis was still on the line (line 9) and then moved to closure (lines 11 – 13) before Jancis was able to let her friend know that the 300 days statement was, from her point of view, not correct. As a result, the ‘no’ repair initiation was lost in overlap. Had it been more explicit, it may have been noted. But as it was, the conversation moved on and Jancis lost her opportunity to repair the statement.

Tyffany may not have been aware that the 300 days was problematic for Jancis. Even when Jancis does say that she will see Tyffany at Annie’s party, she does it in the form of an embedded repair, by framing the corrected arrangement within the same syntactic structure “I’ll see you x”, rather than overtly saying that the ‘300 days’ time frame is incorrect. In addition, the embedded repair occurs following the terminal sequence (that would normally lead to closure) which is a difficult sequential environment to introduce more information – it runs the risk that it may not be heard as her friend may have already put down the phone.

So, although Jancis’ repair of the 300 days was eventually heard and responded to (the following talk is not shown in the extract), it was not smoothly executed. The conversation faltered delaying progressivity and it may have moved to closure before any talk about Annie’s party was forthcoming. Extract 9 therefore demonstrates the difficulties and the risks involved in trying to do more than simply respond to actions initiated by the other person. In this instance, trying to repair the conversational partner’s talk was very nearly unsuccessful and very nearly led to the breakdown of the interaction. Having said that, utilising an embedded repair to repair another person’s talk without giving offence was an excellent interactional strategy that eventually enabled Jancis to achieve a successful outcome.

Concluding discussion

Conversations involving a child with AS can be quite variable. Sometimes the children appear to interact quite well enabling a smooth turn-by-turn flow of conversation with minimal silence between turns, minimal repetition of ideas and coherent topic development. But at other times, they do not cope so well – their responses may be delayed; they may not be able to express themselves grammatically; they may find it difficult to initiate new topics, and their talk may not always be coherent. This means that for frequent and familiar conversational partners

there is an accumulated sense that, at times, the interaction may not seem 'quite right'. The question that this paper has been trying to focus on is what is the nature of this accumulated sense of things being 'not quite right'.

Interaction is not like grammaticality in which there is a clear sense of whether an utterance is syntactically correct or not. Interaction emerges moment by moment and each person needs to listen carefully to what is said (and not said). Have the interactants understood what was just said or what just happened? Do they have an expectation of what might be done next or said next? Do they know what they themselves need to do next? Interactants have to listen carefully to what is going on so that they can appropriately respond to, and locally manage, the talk (Sacks et al. 1974). It is this *contextualised* nature of talk that makes it difficult to identify context-free norms of interaction against which one can assess the communicative abilities of children with AS. As a result, within a conversation analytic framework, any analysis of the interaction of children with AS needs to be situated within the local context of the talk – what the individual children and conversational partners are doing as they talk together at this particular moment in time. Through analysis of the next turn it is possible to see how the interactants themselves, at that moment in time, responded to a particular contribution to talk. For example, the next speaker will tell us, as analysts, if they understood the prior talk or if they needed more information. We saw this when Will was talking to his brother and the brother clarified questions (extracts 2 and 5) or when the brother tried to find a resolution to the telling (extract 6). We saw it when Jancis was talking to her friend's mother and the mother treated the silence as indicative of trouble – the mother asked whether the child was still on the phone (extract 4). We also saw it when Jancis was talking to her friend and her friend didn't realise that Jancis said 'no' because she thought that seeing each other in '300 days' was not correct (extract 9).

In terms of their competencies, the above analysis has shown that the two children are able to use specific conversational skills and a range of interactional strategies. For example, Will used the 'do you know' strategy to shift the sequential organization of the talk so that he could maintain interactional coherence. Although we saw that this interactional strategy did not always work, when it *did* work it was very effective. Similarly, Jancis used the strategy of saying 'I wanted to say' so that she could tell her friend why she made the phone call. Even though Jancis was not successful in immediately initiating the new topic of talk, she was eventually able to tell her friend what the call was about. So although these children may find it interactionally 'easier' to respond to FPP due to the structured nature of adjacency pairs, they were still able to ensure that their contributions to talk were successfully responded to by their conversational partner. However, as the analysis demonstrated, the interaction often had the potential to be delayed

and often depended on the conversational partner and their ability to provide the necessary interactional scaffolding.

One way in which the above conversations appear less polished or not quite as smooth as might be expected relates to the institutional, or tightly constrained feel, inherent in some of the conversations. Because children with AS are less skilled at initiating topics (e.g. Jones & Schwartz 2009), they tend to sit back and allow their conversational partner to take the lead. Wootton (2003), in a broader discussion of the 'pragmatically unusual', similarly showed that young children with autism, AS and pragmatic impairment find it difficult to initiate interaction. Additionally, even if they do provide a SPP or a response, the above data show that the children with AS found it difficult to develop the topic in sophisticated ways. For example, they did not add more information to the topic, challenge the ideas of the topic, or introduce related topics. This may be because they tend not to take the listener's perspective into account which affects their ability to engage in conversations in a sustained or meaningful way (Hale & Tager-Flusberg 2005).

The above analysis has shown that conversational predictability provides a structural framework for the ensuing interaction with it being easier for the children to respond to a FPP rather than initiating their own FPPs. However, when thinking about how such children would cope interactionally when talking to friends or peers at school, it is clear that if the conversational partner is not able, or willing, to manage the interaction by providing the necessary interactional scaffolding, then the children with AS may find it difficult to initiate and sustain a conversation. The above extracts showed how all 4 conversational partners scaffolded the conversations by re-asking and re-framing questions, limiting the scope of the questions, refraining from talking during inter-turn silences, checking reciprocity, requesting clarification, creating the interactional space for the child with AS to initiate a new topic. Similar aged peers who may not know that these children find social interaction difficult, may not be able, or willing, to do this sort of interactional work. As a result, ongoing difficulty in peer talk and conversations may make it difficult for children with AS to make friends and develop peer relationships.

So although this paper has shown that the two children with AS are, on the one hand, very skilled interactionists who may appear to behave like many of their unaffected friends or peers, it has also shown how they are vulnerable to pragmatic language challenges which might mean that at times the interaction does not progress as anticipated. The above analysis has shown how such challenges can be minimised through interactional scaffolding provided by conversational partners. Of course *any* interaction is locally managed and so *anyone*, including adults and children with no impairment, can also utilise such scaffolding techniques. But it seems that the children with AS themselves tend not to do the scaffolding work

and tend not to utilise interactional scaffolding strategies when resolving interactional difficulties. Instead, they rely on others, their conversational partners, to re-ask and re-frame questions, to limit the scope of questions, to check whether someone is listening, and to request clarification. Additional research into the nature of this interactional scaffolding, who uses the scaffolding, and how it provides greater stability and predictability to the interaction is required as we begin to understand in more detail the nature of pragmatic impairment for children with AS.

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Appendix

Transcription conventions are based on Gail Jefferson's notation (presented in Atkinson & Heritage (1984) and Jefferson (2004)). The principal notions are as follows:

hello.	falling terminal intonation
hello,	slight rising intonation
hello;	rising intonation, weaker than that indicated by a question mark
hello?	strongly rising terminal intonation
hel-	talk that is cut off
>hello<	talk is faster than surrounding talk
<hello>	talk is slower than surrounding talk
HELLO	talk is louder than surrounding talk

°hello°	talk is quieter than surrounding talk
he::llo	an extension of a sound or syllable
hello	emphasised talk
(1.0)	timed intervals
(.)	short untimed pause
.hh	audible inhalations
hh	audible exhalations
=	latched talk
[]	overlapping talk
()	transcriber uncertainty