UC Riverside
Issues in Applied Linguistics

Title
Interactional Contrasts Between Typically Developing Children and Those with Autism, Asperger's Syndrome, and Pragmatic Impairment

Permalink
https://escholarship.org/uc/item/1nq0v0z8

Journal
Issues in Applied Linguistics, 13(2)

ISSN
1050-4273

Author
Wootton, Anthony J.

Publication Date
2002-12-30

DOI
10.5070/L4132005060

Peer reviewed

eScholarship.org Powered by the California Digital Library
University of California

Interactional Contrasts Between Typically Developing Children and Those with Autism, Asperger's Syndrome, and Pragmatic Impairment

Anthony J. Wootton
University of York, UK

This paper begins by identifying certain features of sequential understandings which are oriented to within the interaction of typically developing young children from about the age of 2;0 onwards. It then examines literature bearing on the interaction of children with autism, Asperger's syndrome, and pragmatic impairment which suggests a diminished regard on their part to local, on-line details of their interaction and a heightened involvement with bodies of knowledge which they bring with them to any occasion. These themes are explored in the context of the ways in which these children initiate interaction, ways through which they make conversational contributions, and with regard to interactional features which generate distress. The paper draws out how the contrasting interaction profiles of typically developing children and those with pragmatic disabilities can have implications for our ways of understanding both the development of children with autism and the acquisition of cultural knowledge by typically developing children.

Among those children who display disabilities which set them apart from others, there are some whose development shows such marked contrasts with that of typically developing children that they have been viewed as having developmental disorders. The most obvious case in this respect is that of autism. Children with this condition display a variety of unusual forms of behaviour, these usually being grouped under three headings: impaired social interaction, impaired communication, and restricted, stereotyped interests (American Psychiatric Association, 1994, *Diagnostic and Statistical Manual of Mental Disorders, 4th ed. [DSM-IV]*; for discussion see Volkmar, Klin, & Cohen, 1997). In each of these areas there is a checklist of potential "impairments" which can be used to identify such children. "Impaired social interaction" covers things such as a failure to develop appropriate peer relationships and a lack of spontaneous sharing of interests with other people. In the sphere of communication, delay in the development of spoken language is normal, though mutism can sometimes occur. Among those who learn to speak, the mastery of syntax, though usually slow, is claimed not to be abnormal. Phonological development and some aspects of semantic development also seem intact. It is pragmatics and prosody which are the principal areas of deviation. Further aspects of communication which mark out children with autism include impairments in the

Issues in Applied Linguistics
ISSN 1050-4273
© 2002/2003, Regents of the University of California
Vol. 13 No. 2, 133-159

pretend play. The third domain of anomalous behaviour, restricted and stereotyped interests, includes such things as repetitive motor mannerisms, a persistent preoccupation with certain objects, and an inflexible adherence to routines and rituals (for an overview of many of these features, see Lord & Paul, 1997).

Increasingly, it seems likely that children with autism form the extreme end of a spectrum of conditions containing somewhat parallel features to those described above. This would include those with Asperger's syndrome, though for various reasons we know less about the development of children with this condition. Whereas autism is now routinely identified at the age of about three, in Asperger's, where language development often does not show signs of delay, diagnosis is usually not made until age eleven (Howlin & Moore, 1997). Consequently, there is a dearth of studies exploring these children's early development. Also within this spectrum of conditions there is a numerically larger group of children sometimes known as having a *semantic-pragmatic* impairment, who I shall refer to as *pragmatically impaired* (Bishop & Rosenbloom, 1987; Rapin & Allen, 1983). These children form a sub-group of children who are deemed to have a specific language impairment (SLI), this broader class including children with speech production or comprehension problems that are not related to a recognised clinical condition (such as autism), nor to features like hearing loss, low intelligence, physical speech production problems, bilingualism, etc. The pragmatically impaired are usually held to be a distinctive sub-group of those with SLI because in their case their delay in the development of language is especially associated with forms of behaviour suggesting impairments in the pragmatic dimensions of language skills. There is still a good deal of debate about the clinical and theoretical status of this pragmatically impaired group of children; for example, some think pragmatic impairment to be a sub-type of autism rather than a sub-type of SLI (for debate, see Gagnon, Mottron, & Joanette, 1997; Boucher, 1998). But there is little doubt that they display a profile of skills which in certain respects is analogous to that which finds more extreme expression in autism. Such children make up about 10% of 7-year-olds attending special language classes in the UK (Conti-Ramsden, Crutchley, & Botting, 1997). This spectrum of children, those with autism, Asperger's, and pragmatic impairment, probably make up about 60 children in every 10,000 (Baird et al., 2000). Within this paper they will be collectively referred to as the *pragmatically unusual.*

Because the distinctiveness of the pragmatically unusual hinges around aspects of their manner of conduct and language use, these matters have received a good deal of investigation. Some features seem to characterize the discourse of all three subgroups. For example, there is a tendency within all three groups for these children to arrive at literal understandings of what people say and to have difficulties in judging the type and amount of information which it is socially appropriate to provide (e.g., Attwood, 1998, chap. 3; Bishop & Adams, 1989; Loveland & Tunali, 1993). Other features may be more restricted to one or other of the subgroups. For example, the forms of repetition referred to under the heading of *echolalia* (which

I sometimes refer to as *echoes* or *echoing*) are more widely reported in the speech of children with autism (Fay, 1988), whereas a certain type of pedantic speaking style seems more characteristic of those with Asperger's (Ghazziudin & Gerstein, 1996). Tager-Flusberg notes that during the 1990s "there has been a move towards providing a unifying theoretical account to explain the specific pattern of language and communicative functioning in autism" (1996, p. 169). One way this has become evident is through research focusing especially on those parameters of communication which have a particular significance for the various theoretical accounts under consideration. One such parameter in the case of autism is the emergence of gestures and talk through which the child displays an interest in sharing her experiences with other people, for example by showing things to them. Claims concerning the relative absence of this kind of orientation among young children with autism have figured as part of the empirical warrant sustaining the *theory of mind* account of autism (Baron-Cohen, 1989). Consequently, detailed accounts of the early vocal and gestural repertoire of children with autism have revealed much concerning this facet of the communicative process (Charman, 1998). I shall come back to discuss this theory of mind perspective at the end of this article.

Within this varied research, one useful strategy has been to consider in detail the functions of those unusual forms of behaviour found among the pragmatically unusual through examining the talk of the child in the context of the details of the sequence in which it takes place. In this way, for example, Prizant demonstrated that both the immediate and delayed echoes of children with autism were often vehicles through which the child was attempting to engage in different kinds of communicative acts (Prizant & Duchan, 1981; Prizant & Rydell, 1984). Assembling analyses from local sequential detail, rather than through reliance on traditional coding practices, is a research strategy that has been highly developed within conversation analysis (CA), and it is therefore no surprise that CA research has played an increasing role in the analysis of communication practices among various "disordered" groups (e.g., Dobbinson, Perkins, & Boucher, 1998; Local & Wootton, 1995; Radford & Tarplee, 2000). In the present paper I try to bring together some of such studies which bear on the pragmatically unusual, in conjunction with the results of other research which touches on relevant aspects of these children's behaviour. The aim here is *not* to provide an overview of all such research but rather to suggest the potential significance of certain interactional parameters which become accessible once actual instances of interaction are subjected to detailed examination, and to indicate the potential value of this level of analysis to various debates both within and outside studies of those who are pragmatically unusual. In the latter respect this also involves drawing out parameters of contrast between pragmatically unusual and typically developing children; indeed, I shall argue that our thinking about the mechanisms involved in standard processes of culture acquisition can be significantly enhanced through comparison with the pragmatically unusual. In addition, I also argue that such an interactional perspective has the potential to open up lines of thinking about the pragmatically unusual

themselves which may have a bearing on understanding how it comes about that these children's development proceeds in the way it does.

I begin by examining a conversation extract from a typically developing child, one who is not pragmatically unusual. This permits the identification and illustration of certain competences which are germane to understanding many aspects of the child's conduct in her third year of life. In the second section I review various bits of evidence from research on the pragmatically unusual which suggest that such competences are much less prominent, that these children lean on different ways of trying to bring orderliness to their interactional world. And finally, I'll draw out various implications of the points that have been made.

THE TYPICALLY DEVELOPING CHILD

My initial focus is on an incident, shown below as Extract 1, which took place in the home of a typically developing child when she was aged 2;9, and which is drawn from a broader study that has explored this child's interaction between the ages of 18–36 months (Wootton, 1997). The bare bones of this extract are as follows. Amy, the child in question, is preparing to play shopkeepers with her mother and father. In the course of this her mother is told to sit on a chair—"You sit on this chair mister shopkeeper" (line 3). Then, between lines 11–20, there is a passage of interaction between Amy and her father about the disposition of a further chair and a bag that the father is to hold. At line 22 Amy turns again to her mother and then exhibits distraught forms of reaction to what she can see. Her several versions of "No" become increasingly tearful, and as she says them she stamps around the room (lines 23–25); she then pulls her mother up from where she is sitting and directs her towards another room (lines 26–36). After putting her mother in the room Amy shuts the door on her and rejoins her father.

Extract 1

Father (F), mother (M), and Amy (A) are close to the dining table. There has already been discussion about playing shops, and Amy carries a bag that she has fetched for this purpose. F has just suggested to A that M be the shopkeeper. (For a list of transcription conventions, see Appendix.)

1	A:	**C-c-c-come o:n?** ((to M, as A moves across room))
2	M:	((laughs))=
3	A:	**=<u>You</u> sit o:n- o:n this: <u>chai</u>r (mis[ter) shopkeeper** ((to M))
4	F:	**[Ye:::s**
5	F:	**Ye:s** ((then chuckles))
6	M:	**I'm going [to sit the:re am I,** ((then M gets up to move
7		towards [the chair))
8	F:	**[Yes** ((then laughs))
9		(5.7)
10		((during this pause M goes to the chair and F moves other chairs about))

F: **Ye::s the shopkeeper should sit (way)**
(1.7)
A: **No no: you ca::nt sit 'ere** ((to F as he picks up a bag off the floor: A infers that F was about to sit down somewhere here))
F: **We:ll I'm just putting this:-,** ((as he moves a chair under the table))
(4.2)
F: ((A passes a shopping bag to F)) **Ye:s I know I've got to hold tha:t**
(2.1)
((A turns for the first time to see where M is seated))
A: **NO: NO: NO:::::::::::::: NO::::::::::::::=** ((to M; intonations becoming more tearful in the course of the turn; stamping and moving around room as words are said; then, at end of turn, takes M's hand))
M: **=Whe:re do I sit the:n** ((smiley voice))
A: **NO::::::,** ((pulling at M's arm to get her up, M laughing))
(.)
A: **(GE::T U::P),** ((though by now M is up))
M: **Whe:re do I si:t?** ((being pulled across the room, out of camera shot from here on))
A: **GO: AWA:::::Y,**
M: **Oh: dea::r I sat on the wrong seat I think**
((A has now taken M into an adjacent room, all out of camera shot))

In this sequence I focus on those features which appear to make it possible for the turmoil after line 22 to take place, features which date back to what occurs earlier on. At line 3 Amy tells her mother to sit on a specific chair. Although the extract is available as a video recording, the chair in question cannot be seen by us. But in fact there are two chairs in that vicinity, one a small child's chair and one that of an adult. At lines 6–7 Amy's mother gives every indication that she is willing to comply with Amy's directive to sit in the chair. But when Amy next turns to look at her mother, at line 22, after being engaged in preparatory discussion with her father, what she witnesses is her mother sitting in a different chair to the one Amy felt she had agreed to, the small chair instead of the big chair. At least, this order of offence is what seems to be implicated by Amy's distraught reactions from line 23 onwards; and it is also consistent both with the analysis displayed by Amy's mother at line 34, "Oh dear I sat on the wrong seat I think," and also by Amy herself when eventually there is some resumption of this activity, at a later time not shown in the transcript. So, one of the things that underpins this turmoil is that the child treats an earlier agreement, an understanding that her mother would sit in a particular chair, as binding, as constituting a basis for later finding a parental action to amount to an offence. Such earlier-in-the-sequence understandings are routinely oriented to by children of this age, and they have three important properties: first,

they are local, second, they are public, and third, they are moral.

By *local* it is meant that the understanding which the child appears to take into account is one that is particular to the occasion in question. In this home, for example, there was no general expectation that Amy's mother would always sit on any particular chair when playing games of this kind. Everything hinges on the particular nature, the local nature, of that which had been established, or which Amy thought had been established, earlier in this sequence. This locally established character of the understanding brings us to its second property, namely its *public* nature. It would be theoretically possible for the child to have some private sense as to how matters should proceed on such occasions, some idiosyncratic expectation as to where someone should sit or how some action should be done. Indeed, parents can sometimes treat such behaviour as bound up with childish whim, seeing in it symptoms of irrational states which in the vernacular can be referred to by such terms as "spoiltness." But close inspection of my data always reveals an orderly sequential basis for the child's distraught behaviour (for fuller support see Wootton, 1997, chap. 4). In every case there is, as in Extract 1, an earlier overt, public agreement regarding what should take place, an agreement the breach of which is recognisably connected to the child's later distraught behaviour. It is in this sense, then, that the understandings which inform such behaviour are public. The third property of these understandings is their *moral* nature, by which it is meant that the child, as in Extract 1, appears able to draw on them so as to identify shortcomings in the conduct of her recipient. They appear to be usable as a basis for claiming what ought or ought not to have taken place. What has been agreed at some earlier point in interaction can now be invoked as a basis for finding fault in other people's actions. It is in this sense that these understandings also have a moral parameter, and, of course, by the same token, a potential connectedness to the child's emerging moral sensibility.

From about the age of two onwards there is ample evidence, both in this study and elsewhere (e.g., Gerhardt, 1990, 1991; Tarplee, 1996), that children track with great care the sequential details of interaction. Being able to take account of such local understandings affords the typically developing child a greater measure of predictability and control over what takes place in interaction. When she can take account of what has happened earlier, the way is open for her to select an action which is consistent with what occurred, or to act in a way that knowingly subverts such expectations. All this relies on her tracking the details of discourse so as to be aware of, and to hold in short term memory, that which could later come to be relevant to subsequent lines of conduct. Furthermore, it relies on her giving these understandings a privileged status. Prior stances within interaction come to be matters that cannot just be disregarded; around the age of two the child is developing the capacity to give them due regard. Among the pragmatically unusual, however, such an interactional orientation is much less evident. I now want to address a number of facets which have been investigated in studies of these children, so as to highlight certain features of their interactional skills. Three such parameters will

be addressed: the first concerns the ways in which these children initiate contact with other people; the second, how their talk is shaped by what has taken place in other settings; and the third concerns emotional turbulence.

THE PRAGMATICALLY UNUSUAL

Initiations

Among the pragmatically unusual there are usually important differences between developmentally younger and older children with regard to the extent to which they initiate interaction with others. Whereas the speech of typically developing children aged between 12-24 months is replete with requests and other kinds of initiation, a pattern that is evident in the form of protowords combined with gestures even prior to the acquisition of conventional vocabulary (Carter, 1978), younger pragmatically unusual children verbally initiate to only a very limited extent. Reports of pragmatically unusual children (especially those with autism, in the early stages of their language development) suggest that this is true across the range of initiation types found in the speech of young children — even though the reduced level of initiations is especially pronounced for acts involving declarative pointing rather than for certain other acts, such as requests for objects (Lord & Paul, 1997). For example, in the speech of a boy with autism who we called Kevin, John Local and I (1995) estimated that about 5% of his speech amounted to initiations based on several hours of recording made in both his home and school. Kevin was aged 11, but his productive language age was probably that of a child aged between about 2;0-2;5. Even this figure of 5% does not mean that 5% of *all* his talk was made up of initiations. The base total excluded the large amount of non-communicative delayed echoing that was to be found in his talk, a phenomenon to be discussed later. So in practice, initiations made up a very small fraction of his overall speech output, and his overall communicative speech profile was slanted overwhelmingly towards answering questions that adults asked of him. In an account of the development of a child with pragmatic impairment, that of a boy called Tony reported by Conti-Ramsden and Gunn (1986), it is noted that when this boy was aged 4;4 he had a comprehension age of about a child of two and that he initiated no conversation.

Although these low levels of initiation among developmentally young pragmatically unusual children are evident from a wide variety of studies, full consideration has yet to be given to their sequential corollaries and implications. What seems to be entailed is a reduced opportunity and incentive for the pragmatically unusual child to engage in certain kinds of on-line scanning of conversation sequences. For example, there are two ways in which such a pattern of initiation can have consequences for the child's development of *repair* techniques. One property of initiations is that they seek some sort of fitted response on the part of the recipient; they have some or all of the properties of what conversation analysts have called the first part of an *adjacency pair* (Schegloff & Sacks, 1973). One major

sequential position in which the typically developing young child is called upon to engage in repair is shortly after the child herself has produced a first pair part: After the child has made, for example, a request, parents often say things like "You want what?" or "What is it you want?", forms of talk which seek some clarification of the child's communicative intent. Studies suggest that these forms of clarification occur frequently in the child's second year of life (Golinkoff, 1986) and that in the course of producing a reply to such queries the typically developing child gains practice in enacting relevant forms of repair. This mode of involvement in repair seems to be the first kind of systematic repair experience engaged in by the child; other modes, such as seeking repair from the parent regarding something the parent has said, are later developments. The point here, then, is that if a child does not engage in much initiation, as in the case of the young pragmatically unusual, then she or he does not gain practice in responding to queries which relate to those initiations, practice in producing types of response designed to remedy the problem that the person seeking clarification has had with the child's prior initiation — a matter that may also have connections with the restricted ways of responding to requests for clarification exhibited by older children with autism (Paul & Cohen, 1984).

The second aspect of repair which is affected by a low level of initiation relates to the child's opportunity to engage in remedial work upon finding that the parent has in some way misunderstood what the child has initially said. If the young pragmatically unusual child is employing the first parts of adjacency pairs infrequently, then the child is not gaining experience and practice in assessing the adequacy of the interpretations placed on those first pair parts, interpretations which are revealed through the nature of the recipient response. The position in which the child has both the interactional incentive and the opportunity to exhibit such an analysis is immediately after the recipient's reply; during their second year of life typically developing children develop various ways of exhibiting that they have detected different orders of inadequacy in these replies (Wootton, 1994). If child first pair parts are relatively absent, then sequences cannot emerge in which there is a subsequent incentive or opportunity for the child to develop an orientation towards assessing the adequacy of parental understandings. In this respect there are obvious connections with the achievement of intersubjectivity in talk if this is viewed, as conversation analysts suggest (Heritage, 1984, chap. 8), as a process which involves accepting or rectifying the interpretations placed on talk by others, a process that clearly requires these participants to have the means and incentive to engage in such rectification.

Among developmentally older children who are pragmatically unusual, patterns of initiation can often be quite different. In his original descriptions of older people with autism, Kanner (1943) noted that questions sometimes had a high frequency of occurrence, that their content was unusual, and that they often lacked any relation to the immediate context. One 9-year-old autistic boy called Bryan with an expressive language age of about 2;5, studied by Coggins and Frederickson (1988), produced the same question, "Can I talk," 618 times in the space of three

hours! Although research has shed some light on the functions performed by such repetitions—in Bryan's case they were often used to curtail lines of talk and action directed towards him by adults—there is little in the way of detailed sequential analysis bearing on this kind of phenomenon. Clinical symptom descriptions of pragmatic impairment suggest parallel patterns—here we often find phraseology such as "the continual asking of questions with no notice taken of replies." Fortunately, in the case of pragmatic impairment there is one study which enters more closely into the interactional detail surrounding the child's questions.

Radford and Tarplee (2000) have examined the topic management skills of a boy they call David (aged 10;6) when talking with non-pragmatically unusual boys of similar age. They focus particularly on the ways in which he initiates new topics. He does not seem to initiate new topics by employing news announcements, that is, announcements about, for example, events which have recently happened in his own life. Rather he relies on questions of the kind that can be found in Extract 2:

Extract 2
David, 10;.6 (from Radford & Tarplee, 2000)

1 David: **and em and and do you have any brothers or sisters**
2 Adam: **no**
3 David: **no**
4 Adam: **no**
5 David: **and what's your mum's name**
6 Adam: **that'd be telling**
7 David: **and what did you do over the week-end**

"And what's your mum's name" (line 5), takes the form of what Button and Casey (1984) have called an itemised news inquiry; while line 7, "and what did you do over the weekend," looks like a topic initial elicitor, again in the terminology of Button and Casey drawn on by Radford and Tarplee (2000). So, the first possibility raised by their analysis is that particular utterance designs for broaching new topics may characterize the talk of children such as David. A second point relates to the fact that questions make up much of what David has to say to the other children of similar age on the recordings, so frequently we find strings of questions akin to what we see in Extract 2. One way through which such strings are produced is through the questioner not displaying an orientation to a use for the reply which a question has elicited. At line 3 David simply repeats back Adam's prior reply, the word "no"; his final turn in the extract does not address Adam's prior reply, "that'd be telling." A third feature hinges around Radford and Tarplee's claim that David's style of involvement in this kind of questioning sustains the impression of an event in which he is taking the role of a teacher; indeed they suggest that on these occasions with other children David may be transplanting into this occasion the conversational style of teachers and therapists that he has experienced over the years. The initial *ands* being employed by David in Extract 2 are of special interest

in this regard. The questions they preface do not seem to arise out of the content of the immediately preceding talk—there is no obvious connection, for example, between knowing his mother's name and the question which he asks next, "and what did you do over the weekend." Here the analysis of the use of *and* by Heritage and Sorjonen (1994) is pertinent. They suggest that through the marking of a question with an *and*-preface a speaker can mark that question as a next move within an overall activity unit that in some way links this question with prior talk. So, even where the *and*–prefaced question is topically disjunctive with immediately preceding material, the use of *and* can serve to make visible the fact that such a broader activity shapes the nature of what is taking place. On the face of it, it is difficult to discern any broader activity unit which David could be orienting to within his talk, so much so that his use of *and* here could attract the conjecture that it is something like an idiosyncratic stylistic device. But here we need to note that one context in which a child such as David will have been regularly exposed to the use of such a device is in the talk of teachers and speech therapists—for example, on occasions such as morning news rounds—"What did you get for Xmas Adam? And what did you get Betty?" The possibility arises, therefore, that the form of the child's questions, in part revealed through their *and*-prefaced design, is modelled on those they have heard employed by adults on other occasions. Note also how the substance of some of the questions in Extract 2 also seems compatible with this: "What's your mother's name" hardly looks like the standard peer talk of a 10-year-old boy. Such features, taken together, are also loosely compatible with another impression that such children foster, namely that they act like adults and are old before their time. In general, the argument that a child is mapping the speech use pattern of one type of occasion onto another type of occasion is a complex one to sustain, but if true it is of potential importance for understanding the organization of these children's interactional practices.

Radford and Tarplee (2000) also mention a further intriguing feature of David's initiations, the fact that he sometimes repeats questions verbatim where the question repetition appears to disattend the fact that a reply to the question has already been given. This phenomenon is also reported by other researchers, especially in studies of autism. Extract 3, taken from Capps, Kehres, and Sigman (1998) contains an example of the phenomenon, involving an 11-year-old boy with autism who has a language age of about 6;0.

Extract 3

From Capps et al. (1998): an excerpt from "informal, semi-structured conversation" between a psychological assessor (the examiner) and the child, in which, over the course of about six minutes, the examiner engages the child in talk about vacation, friends, and school:

Examiner: **Do you like cracker jacks?**
(3 second pause)
I like cracker jacks

Child: **I like cracker jacks.**
Do you like cracker jacks?
What's your name?
Examiner: **Cindy.**
Child: **I like cracker jacks.**
What's your name?

At one point the child asks the examiner "What's your name?", but even after being given what looks like an adequate reply, he repeats the question in the final turn of the extract. Here I take it that the way in which the child says the second "What's your name" does not display an orientation to the fact that the information has already been provided; in other words, it's not something like "What's? your name," as though needing a further voice sample of something that has already been provided. One possible basis for the question repetition could be that it is an outcome of short term memory loss of the kind that afflicts some elderly people. However, there is no suggestion of weakness in short term memory in relevant research into those with autism, so another possibility which suggests itself is that among children who exhibit such repetitions there is, at least on some occasions, a somewhat different way of tracking and monitoring the ongoing stream of talk, one which has as its outcome that the child appears less constrained by the earlier particulars of the sequence in which their talk is housed. Whatever the procedures involved in this, the impression it sustains is that the child is just using questions to maintain contact, that they do not have the wherewithal to extend the trajectories of talk much beyond the production of question-answer pairs. Careful examination of both the child's verbal and non-verbal behaviour within such sequences could well permit a more detailed specification of the procedures involved.

In discussing the initiations of older pragmatically unusual children I have especially dwelt on observations which suggest that their positioning and shape reveal the initiations to be oriented in unusual ways to the specifics of the sequences in which they occur, tendencies which are consistent with themes touched on in the next section. Much remains to be explored in these areas. For example, whether and in what ways such children exhibit recognitions of the constraints that operate in adjacency pairs is not at all clear, as most analysis has simply been concerned with assigning functional descriptions to first pair parts and counting their frequency. The intricacies involved in the management of sequences hold important clues as to the kinds of sequential trajectory that, for these children, are activated through initiations. Unravelling these clues will be particularly difficult in the developmentally young because of their disinclination to engage in initiatory activity with other people.

Echoing and Inapposite Conversational Contributions

Echolalia is the term often used in the literature to refer to a common form of behaviour found among autistic children. Sometimes this involves the child immediately repeating something that has just been said to him or her, which is known

as *immediate echoing*, but the type which is of relevance to us here is known as *delayed echoing*. This refers to forms of talk which are recognisable as having their home in some other speech use context. For example, the 10-year-old autistic boy referred to earlier called Kevin often says things like "That's a naughty boy" and "That's a bad boy" (Wootton, 1999). The apparent unrelatedness of these utterances to what is taking place at the time at which they are uttered, and their intonation, usually make them recognisable as having some connection with talk that he has had some order of involvement in elsewhere, most likely in the special school that he attends, where such castigation is not infrequent. In Kevin's case, most of these forms of talk, even when constructed in the presence of other people, have features which make them difficult to connect to the current state of interaction with the co-present person. Two examples of such echoes from Kevin's recordings are contained in Extract 4, at lines 5 and 17.

Extract 4

Kevin is at home, sitting on the floor with his back against a sofa, writing words for his father. Lisa, his younger sister, is also sitting in the room out of camera shot; she plays no apparent role within this sequence. The paper on which he writes is laid on the surface of a low stool; Kevin's legs extend underneath the stool, straight out on the floor. His father also sits on the floor, leaning against the settee, by his side. Kevin's leaning back and raising his pen from the paper prompts his father to treat this bout of writing as completed. He says, "That's a good boy" and then "Good boy" before going on to say:

1 F: **Shall we draw something [now?** ((as he starts to say this F begins to lift some
2 [of the paper from the surface of the stool))
3 K: **[(To-)**
4 (0.7)
5 K: **↑S : ma: : :ck.= ↓To: dora::n re-,** ((during the word "smack," and
6 synchronized with its production, K raises his LH in a semi-circular
7 motion to head level, forming a point; the point decomposes
8 on the downward trajectory as the palm prepares to take the pen from his
9 own RH. During the remaining words he takes his clenched hands, and
10 also his face, down close to the page; by the end of the turn both head
11 and hands are returned to their original position))
12 (.)
13 K: **Ah** ((rubs his own chin with RH))
14 (.6)
15 F: **Let's draw [something.** ((F is still leafing through papers that are on the stool,
16 [both prior to this turn and after it))
17 K: **[S : ma: : ck ↓todododo** ((both hands kept up by chest; slight hint
18 of them both being opened a little at the start of "todo" and also
19 lowered; also a hint of the head being lowered, i.e., a diminished
20 version of those actions which took place in the second part of
21 line 5 above))

22 (1.3) ((here K looks at the end of the pen and then starts to chew it))
23 F: **See you draw an elephant.** ((by the end of the turn the papers are almost in
24 final/ drawing position on the stool))
((after this, K takes his left forearm to his nose, in a gesture which may imitate the trunk of an elephant. The words accompanying this are "I kill him"—another favourite echo—and this echo is repeated several times before Kevin's father re-opens the possibility of K drawing))

The possibility that these turns of Kevin are in certain ways decoupled from his father's line of talk is suggested by a number of features. First, it is difficult to identify any connection between these turns and the father's turns which precede them at lines 1 and 15, a difficulty which is further evidenced by the father's behaviour in that he displays no analysis of their being connected, thus in effect disattending their presence. Second, his father's disattending of these turns does not appear to be treated by Kevin as a noticeable absence. Although what he says and what he does at line 17 is similar in several ways to line 5, there is no sense of line 17 being composed for a recipient who misanalyzed line 5, or who failed to attempt uptake. Kevin's hand actions transcribed at lines 17-21, for example, represent a diminished version of those in lines 5-11; but they have no design feature other than their similarity to what has taken place before which recommends them being viewed as a further attempt on his part to secure uptake. Third, line 17 contains design features which, among others (see Wootton, 1999), are quite uncharacteristic of the parts of Kevin's talk in interaction which are recognisable as built to be coupled into immediately prior talk. The playful exploitation of word sounds, as in "todododo" (line 17), is never found in utterances by Kevin that are clearly built so as to display that they arise from an analysis of his interlocutor's prior turn of talk. To view, on these grounds, Kevin's turns at lines 5 and 17 as being decoupled from the surrounding talk, and to suspect that the production of the word *smack* is linked to some other activity context, does not mean that a description like *delayed echoes* amounts to an appropriate characterization of the job that the saying of these words is performing for the child. That task awaits further analytic attention. In the meantime a more neutral description such as *favoured turn construction unit* might be more apt, as it would not imply that in producing such words the child was specifically trying to reproduce words that he had heard elsewhere, as though that were the point in saying them—when that remains just one possibility. But for the time being, whilst recognising these limitations, I continue to use the phrase *delayed echoes* to index turns of this kind.

The discussion so far may suggest that for a boy like Kevin, delayed echoes function as would something like pretence for the normal child, that is as a kind of pastime that is separate from and secondary to on-line transactions with other people. This would be misleading because a variety of evidence suggests that for Kevin the reverse is true, that for him such echoes form at least part of the mainstream of his life. These delayed echoes make up virtually all his spontaneous

talk, that is, talk which is not a direct response to something like a question from another person. And even where he is being questioned, the construction of such echoes can often take priority over the production of fitted responses to a question, as is the case in Extract 4. Furthermore, it is also clear that a preoccupation with particular echoes can endure across various on-line interactional involvements with other people. For example, Kevin's preoccupation with the word *smack* in Extract 4 is in fact the second in a series of such episodes over a 12 minute period, the word *smack* consistently being reproduced with similar prosodic features. In these kinds of ways, then, Kevin's delayed echoes and his talk in interaction are non-equivalent. Among normal children of his expressive verbal age, that is children aged about 2;5, a primary commitment is displayed, in a variety of ways, to interaction with other people. But this is much less clear for children like Kevin. The features I've described enable us to glimpse the living of a life in which there is a diminished interest in certain parameters of face-to-face interaction and a heightened involvement in matters expressed in memorised phrases transposed from other interactional occasions.

An unusual and extensive reliance on such memorised phrases continues to be found in autistic children in their later stages of development. Ricks and Wing (1975, p. 207) note how words originally heard in one context, such as "Do you want a biscuit?", said by a parent as a way of making an *offer* to the child, can be reused by the child on subsequent occasions, in this case as a way of making *requests* to the parent for biscuits. In later research the various ways in which such echoes can be drawn on to engage in a variety of communicative activities by the child have been amply and systematically documented by Prizant and Rydell (1984). Evidence of a continuing reliance on a stock of memorised formulas in later life can be found in other kinds of research bearing on autism, notably the autobiographical writings of people with this condition. Donna Williams, one such person who holds a university degree and who has written widely on this subject, describes a variety of ways in which she continues to rely on stored memories in dealing with communication difficulties that she experiences. Here she describes the part that memories of commercials can play:

> I still use many of their phrases to make my speech more fluent at times. An example of this is the line of a commercial for a cleaning fluid, "Jif Micro Liquid, where are you?". This has the useful phrase "where are you" in it. If I want to know where someone is and want them to appear (like the detergent does on the TV commercial in response to the question) it is sometimes difficult to recall what I need to say or to regulate volume or intonation to get someone to respond, or remember how to connect physically in forming those words at the moment. If the need for someone to appear triggers this line from the commercial it can be much easier to call out the tail end of that commercial and the words, volume and intonation are all there without effort (Williams, 1996, p. 149)

Apart from the role that can be played by ads here, notice also the way she formulates the situation where she wants to find someone as one in which she has "to recall what I need to say or do." Identifying relevant parallel occasions from her past has an ongoing salience to her mental life which may be quite unlike our own. These what she calls "serial memories" are sometimes usable in constructive ways, as here, but at other times they are experienced as interfering with and complicating her life in a manner that she and other autistic people try to find ways of resisting.

In this section I have focused on ways in which phraseology and sentence structures deployed on other occasions have a particular and distinctive relevance to the conduct of children with autism. The phenomenon of delayed echoing appears to figure less prominently in the speech of the other kinds of children who are pragmatically unusual, but in the design of both their talk and that of children with autism there are further ways through which they display an attachment to stores of memorised knowledge and a diminished orientation to the pragmatic requirements of the interaction in which talk actually takes place. This is most obviously so with regard to how they tell other people information that they may have about some particular subject. Attwood describes a typical manifestation of this in the case of the child with Asperger's:

> For example, the child may approach a stranger in the supermarket, their first utterance being 'Do you have a cylinder mower?', and then proceed to give a monologue demonstrating encyclopaedic knowledge of garden machinery. Once the conversation has begun there seems to be no 'off switch' and only ends when the child's predetermined and practiced 'script' is completed. Sometimes the parents can predict exactly what the child is going to say next (Attwood, 1998, p. 68).

Similar observations have been made about developmentally more advanced children with autism (e.g., Ricks & Wing, 1975) and such features are included within the modes of assessment devised for children with pragmatic impairment (Bishop, 1998). Recent research, especially on autism, has identified further properties of such narratives, both in experimental and non-experimental contexts (Capps, Losh, & Sigman, 2000; Capps, Yirmiya, & Sigman, 1992; Solomon, 2001; Tager-Flusberg, 1995; Tager-Flusberg & Sullivan, 1995).

Emotional Turbulence

This third and final parameter of interaction, the nature and distribution of emotional turbulence, connects back to my earlier discussion of Extract 1. There it seemed that the distraught behaviour of the typically developing, non pragmatically unusual child, Amy, was bound up with a local understanding, the matter of where her mother was to sit, an understanding whose source lay within the immediately preceding sequence. By contrast with this there are various suggestions within the literature on the pragmatically unusual which suggest a different picture. The special attachment of these children to known routines is well established and

usually recognised within the diagnostic instruments for these conditions (Bishop, 1998; DSM-IV). One index of this attachment is the reported degree of upset generated when routines are ruptured. For example, Howlin and Rutter write that many children with autism

> become very distressed by minor changes in their environment, such as a door left in a slightly different position, or an ashtray moved a few inches out of its normal place or any redecorating in the house. A typical example of this was Stevie's distress when his parents removed a large fitted cabinet from the kitchen while he was away at school. On his return he screamed incessantly for two days, but finally, on the third night, much to his parent's relief he settled quietly. Only on waking the next morning did they discover their new paintwork completely ruined by a life size drawing of the original cupboard in indelible ink on the kitchen wall. (Howlin & Rutter, 1987, p. 83)

Conti-Ramsden and Gunn (1986) found similar events when studying the behavior of the pragmatically impaired boy called Tony. When he was 6 he found difficulty in handling changes in situations. They give the example of school trips when a teacher went to the same place twice within quite a short period of time. Tony was apparently distressed that she wore different clothes the second time.

These kinds of preoccupation are also evident in the final data extract, Extract 5, which involves a fluent and articulate 12-year-old boy with autism, who will be called James, speaking with one of his teachers, Fred, who, with the camera operator, is visiting James's home. The matter they are talking about is the fact that another of James's teachers, Miss Chalmers, is going to be away from school the following day. Within the available videorecorded data, made earlier the same day, this issue is touched on twice prior to Extract 5, the most recent occasion being one in which he gets very distressed about it. There is also evidence within these prior sections that the matter has been gone over on at least one additional prior occasion. In the available earlier material the rationale for Miss Chalmers's absence that James has been provided with is simply that she has to be away but that he will see her soon. At the beginning of the data fragment, which also occurs immediately after an edited cut in the film, James is sitting at the top of the stairs in his home, looking down towards Fred and the person with the camera.

Extract 5

There is a cut in the tape and we switch to a new location in the house, with James (J) sitting at the top of some stairs, elbows on his knees, hands by his ears. Fred (F) stands at the bottom of the stairs; the transcript below begins at the beginning of this filmed section:

1 J: ((his hands move to cover ears fractionally prior to turn beginning)) **We'll see**
2 **Miss Chalmers tomorrow=.hsh:::::::::** ((latter is lateralized bilabial fricative
3 on long single inbreath + coordinated harder pressing of
4 hands over ears + strained, tight closing of eyes))

(1.6)
F: ((quiet and brief clearing of his throat))
((J continues to hold his posture, though in this pause he opens
(4.6) his eyes and then closes them; timing of F's next turn may be
sensitive to a brief movement of J's hands away from, and back
to his ears, as though checking whether there is any sound))
F: **James I kno:w [you're upset**
[((J's hands tighten on his ears + opens his eyes, gazing at F:
then twice takes his hands quickly away from his ears, as
(2.5) though trying to time their return to the ear when F shows signs
of speaking; when F next speaks the hands do briefly flick back
towards the ears, but the full movement is stalled, and his
hands are away from the ears when F is speaking))
F: **Why you keep plugging your ears up** ((J's gaze shifts away from F after
end of turn; hand position changed in the later part of
this turn, so that both are now brought together in
front of his mouth))
(.8)
F: **You don't want to hear what I'm saying?** ((J's gaze returns to F at turn
beginning))
J: **Yea : : :h** ((then takes his hands to his ears, where his hands are held
momentarily in position before he moves them to a front of mouth position))
(.9)
J: [((as F begins to speak J moves his hands about half way to ears; at F's repair
[they are then moved to cover the ears))
F: **[Well you have to- you're gonna have to-**
(1.4)
F: **[Accept it Jamie**
J: [((J's hands begin to move from his ears; in front of his face again
by F's next turn))
(.7)
F: **That's the way things go sometimes**
(2.7)
F: **You'll see Miss Chalmers [soo::n**
J: [((J's hands go fast to his ears; held there for 1.8
seconds; then moved to a side of face position +
he looks intently at F))
(3.4)
J: **Tomorrow** ((as he says this he puts his hands back over his ears, and
keeps them there + still looks at F))
((then some non-verbal signal from F in response, probably a headshake, prompts J to start crying again))

In general, it seems that both here and in the earlier sections of the videorecording it is, as in the more anecdotal cases mentioned above, a change in some standard pattern of events, Miss Chalmers's normal presence at his school, that is the focus of the child's distress. By the beginning of this extract James is aware,

of course, that Miss Chalmers is going to be away, so when he says "We'll see Miss Chalmers tomorrow", at lines 1-2, he has ample basis for recognising that this will be received by those present in a climate of scepticism. Indeed, such an analysis is conveyed through other details of his behavior here. It is this that forms the obvious basis for him to be closing his eyes and ears in lines 1-4, techniques designed to exclude all signals of recipiency from those other people present that might serve to reveal such scepticism. For James, and any child who adopts such a strategy, an issue that then has to be handled is how the return to standard "open" communication is managed. In the subsequent parts of Extract 5 he attempts that initially by trying to time the removal of his hands from his ears for moments when Fred is not speaking (lines 7–15); subsequently he allows his ears to receive talk but keeps his hands in a state of readiness so as to be able, rapidly, to prevent himself from hearing what is being said to him. The precise timings of his resumptions of ear covering, at lines 28–29 and 39–40, suggest that they are sensitive to the possibility of Fred going on to imply or state some further disconfirmation of James's obviously preferred scenario, one in which Miss Chalmers will be at school on the following day—at line 39, for example, he tries to stop himself hearing any words following "Chalmers." Finally, with "Tomorrow" (line 43), he returns to his strategy of lines 1–2 by seeking some corroboration for his preferred outcome—the following day—and again his accompanying actions reveal worry about the reaction he is likely to get from Fred. In effect he constructs an action which while seeking such corroboration also attempts to preempt its recipient's capacity to deliver it, a predicament that Fred solves through selecting a nonverbal signal, probably a headshake.

Such materials leave little doubt that a boy like James has the ability to take into account stances and alignments that have been taken up by other people in prior interaction. There is every suggestion, though, that information which brings into question the operation of standard patterns and practices comes to have a particular salience in this regard, and a particular capacity to generate distress, especially when contrasted with the properties of sequences which incur distress on the part of the typically developing child, as in Extract 1. To some extent this salience is documented by the frequency with which these carers have obviously had to go over Miss Chalmers's absence with James in the recent past, but his manner of dealing with this breach of practice in Extract 5 further displays a singular attachment to the practice in question. His various actions seem geared towards the restoration of the practice, towards acting as though Miss Chalmers will, after all, be there at the school as normal—as though the teacher's forthcoming absence has the potential to be talked back into her presence. This resolves the problem of disorder by attempting to reinstate the earlier order. Alternative angles and solutions are not countenanced, such as asking when she is coming back, asking who is going to teach his class instead of her, not going to school the days she is away, or talking about the problems created by her absence and possible solutions. The attempted reinstatement of the status quo here is reminiscent of Stevie's solution

with his indelible ink. It may then be the case that within the interaction of the pragmatically unusual it is not just the issues which generate distress which may be distinctive; the strategies and solutions designed to deal with such contingencies may also reveal distinctive ways of approaching and analysing such occasions by these children. More detailed examination of these kinds of sequence, at different developmental ages, both among pragmatically unusual and typically developing children, would clearly be rewarding.

DISCUSSION

Some parameters of interaction have been highlighted which characterise the behaviour of those I have called pragmatically unusual. Whereas typically developing children, from the age of about 2, give a privileged regard to matters which are specific to the interaction sequence in question, a process that entails ongoingly and incessantly monitoring talk for the state of play in relation to such matters, such an orientation is less evident among the pragmatically unusual. Children with autism, Asperger's and pragmatic impairment appear to have modes of involvement in interaction which accord a diminished regard to certain matters embedded within the local specifics of any given occasion, and they lean more heavily on forms of knowledge which they bring with them to the event.[1] In the remainder of the paper two themes are addressed which have connections with the prior discussion: the first concerns autism and research by psychologists on the distinctive psychological profile that is associated with this condition; the second concerns typically developing children and what is involved in their acquisition of culture.

Implications for Autism

Research on autism has expanded rapidly over the last 20 years. Psycholinguists came to recognise that many of the language abnormalities found in autism were not so much specifically linguistic as grounded in limited ways of understanding the immediate social world. Subsequently much effort has gone into specifying both the nature of these limitations, some of which have been touched on above, and their origins. A great deal of evidence now suggests that autistic people have difficulties with regard to making inferences about other people's beliefs and mental states. For example, whereas 4-year-old typically developing children can recognize that other people can believe something which they, the 4-year-old, knows not to be true, such inferencing skills do not seem to be within the capacity of most children with autism even in the developmental equivalent of early adolescence (Baron-Cohen, Leslie, & Frith, 1985; Mitchell, 1997). Limitations in these respects have been connected to the absence of further skills usually found at earlier stages of development. For example, in autism we do not find children engaging in pretence involving role play of a kind that most children engage in from about the age of 2 (Lewis & Boucher, 1988). Nor, as noted at the beginning of the article, do we find young autistic children engaged in the referential pointing found among typically

developing children when aged about 12 months, pointing which may be predicated on the assumption that a recipient might find it of interest to have something drawn to their attention (Baron-Cohen, 1989).

Within recent psychological theorising, this profile of divergence from the normal trajectory of development is commonly held to be fundamental for understanding many of the well-known characteristics of autism. A failure to understand the beliefs of others, for example, may account for both the excessively literal interpretations of speech and at least some of the other problems which are exhibited in the domain of pragmatics (for an overview see Baron-Cohen, 1995). Explanations of this profile of divergence have mainly focused on faulty cognitive mechanisms, the principal suspects here being either modules of the mind which orient the child towards the possibility of shared attention or a more generic executive function deficit (see Waterhouse & Fein, 1997, for a useful overview). In various ways these deficits are seen as having the capacity to generate abnormal features of development such as those mentioned in my discussion.

It is, of course, difficult to anticipate the ways in which detailed investigation of the interactions of children with autism, along the kinds of lines suggested in the main body of this article, will add to or modify our knowledge about this condition. Within the investigation of other disorders in which more interactional research has been carried out, notably aphasia, it seems clear that the examination of behaviour within its sequential context, with due regard for the details of its design and placement, can shed light on a variety of issues (e.g., assessment, remediation strategies) which turn on claims made about the communicative competences of people (see, e.g., Wilkinson, 1999; Wilkinson et al., 1998). There seems no reason to doubt that parallel contributions can arise from similar forms of inquiry into the pragmatically unusual. Whether such a perspective has the capacity to yield its own explanatory frameworks with regard to such conditions is as yet less clear. In my earlier discussion of the pragmatically unusual, especially of children with autism, I hope to have suggested how their interactional profile carries with it certain tendencies, preferences, and consequences. Their low level of initiation when young can carry with it a reduced incentive for developing those procedures used by typically developing children, between the ages of 1–2, to rectify misunderstanding by their recipient and to bring about an orientation towards the achievement of intersubjective awareness. Their preoccupation with standard, routine patterns in a variety of ways leads to a diminished involvement in tracking the alignments and stances of those conversing with them in the here and now. Such a system of interaction, when set in motion along a particular path, has its own kind of momentum and set of entailments, and, by virtue of this, may also come to have an order of explanatory power with regard to the emergence, or nonemergence, of certain skills. The reduced attention to tracking the alignments of other people in an on-line way entails a reduction in opportunity and practice for participating in those kinds of occasion in which the young typically developing child seems likely to develop a working proficiency in taking account of people's likes, wants, beliefs and so

on, the domain which has been of special interest in recent psychological work. It is not difficult to imagine, then, that an interactionally grounded form of analysis might be able to offer accounts for how at least some of the distinctive limitations so far found to characterise children with autism may come about—to demonstrate that systems of interaction have the capacity to generate "deficit" just as much as faulty cognition. This may not account for how these children set out along such a path, but it may contribute to understanding how it is that the path takes some of the particular directions that it does.

The kind of programme implied in the above would be more straightforward if we had available to us some compelling account of how the interactional practices of typically developing children assist, for example, in them coming to be able to take into account, and make inferences about, what is in the mind of another person. But most developmental work is more focused on tracking the changing properties of modules which house relevant batches of cognitive equipment associated with such skills, and with developing explanatory frameworks which either marginalise the significance of the child's interactional environment or trivialise it through a selective attention to certain measurable dimensions of talk which are usually conceptualised in terms of environmental "input." The exploration of the interactional laminations that we have highlighted requires both a different orientation and different methodologies from those extant within much research on children; without this, a full appreciation of the skills which are embodied within the design of children's practices will go largely unnoticed. But perhaps of even more concern is that several of those approaches which *do* place more weight on the role played by interaction processes in shaping the more typical child's cognition lean on ways of conceptualising the shared social component which have limitations attached to them. In this respect, as we shall see, consideration of the pragmatically unusual can be instructive.

Typically Developing Children

Within the literature which grapples with the question of how the cultural shaping of human beings works, one influential strand of thought stresses the role played by the transmission of cultural models or scripts. These ideas play a significant role across a variety of disciplines, including artificial intelligence (Schank & Abelson, 1977), psychology (Mandler, 1984), and anthropology (Holland & Quinn, 1987). Of most immediate relevance are attempts to incorporate such thinking into the investigation of how children gain their *initial* access to culture during the early years of their life. Here it is psychologists such as Nelson (1993), Bruner (1983), and Valsiner (1987) who have most clearly articulated such a perspective, figures who, in the course of this, try to take further the Vygotskyan programme of charting the role of social practices in shaping human development. Within Bruner's (1983) work, for example, the young child comes to be social through what he calls a language acquisition support system, one in which cultural presuppositions become transmitted to the child by his/her carers in the course of conversations revolving

around the performance of speech acts, the meeting of felicity conditions and so on. In effect, this kind of account leans heavily towards being an empiricist, transmission model of culture acquisition, one which lays emphasis on the transplantation of knowledge held by parents into the minds of their offspring, this knowledge being accumulated in memory by the child in a script-like way, in a form which shapes and constrains the child's course of action selection on subsequent occasions (for critical discussion see Forrester, 1992; Wootton, 1997. For wider critique of script-type analysis see, e.g., Lave, 1993, and Suchman, 1987).

The strands of research on the pragmatically unusual which have been discussed in this article suggest that the normative/script-like model of culture fits these children quite well. In the variety of ways that has been outlined, their conduct displays a faithful regard to various kinds of social patterning in life. From what Donna Williams said in the earlier quotation it may even be possible that they literally approach decisions about what to say by recalling a fittedly analogous situation or script from the past, using that as a template rather in the manner that G. H. Mead (1913/1964) imagined mental life to work. In these ways it seems clear that in such children certain kinds of script-like knowledge can be well developed, and thus a certain kind of cultural competence. But the possession of this order of competence still sets them apart; the ways in which they conduct themselves in relation to this knowledge in any specific interaction, especially among those with autism and Asperger's, can continue to strike most of us as decidedly odd. This in turn yields characteristic paradoxes and problems of the kind noted by Rutter and Bailey, who say that "it is a commonplace observation in the social skills training of autistic adults that often they are quite adept at saying what they should do in particular social circumstances, but are quite hopeless in doing what is needed when they actually encounter such circumstances" (1993, p. 493).

All this serves to put into relief what we have argued to be important differences between typically developing children and the pragmatically unusual. A key ingredient for the construction of normal lines of human action among young children is the availability of a set of procedures through which they display analyses which are linked in accountable ways to what is taking place in the here and now, the local spate of action in which they are in some way engaged. It is these local understandings which demonstrably constitute what, for the child, is the relevant context that informs the design of his/her subsequent actions, and it is through their participation in the shaping of these understandings that those involved with children can, in these initial stages of socialization, exercise a degree of influence over the shape of the culture that the child comes to reinvent. The significance of the child's capacity to engage with this local order of detail is also in part suggested by the strange profile of competences displayed by the pragmatically unusual, children who display, as we have seen, different tendencies in their on-line management of interaction with others.

AUTHOR NOTE

Earlier versions of this paper were presented to the International Conference on Disorder and Order in Talk, held at the School of Oriental and African Studies, London, in June 1997, and at the Conference on Language, Interaction, and Culture held at UCLA, Los Angeles, in May 2000. Helpful comments have been given by Emmy Goldknopf and two of the referees for this journal. Correspondence should be addressed to Dr. A. Wootton, Department of Sociology, University of York, York YO10 5DD, United Kingdom. Tel: 01904 433041; fax: 01904 433043; e-mail correspondence should be addressed to ajwoott@ajwoott.plus.com.

APPENDIX

Transcription Conventions

↑ ↓	arrows indicate large upward or downward pitch shifts relative to the speaker's preceding talk or in relation to the speaker's usual range
? ,	mark the pitch contour on last beat of the preceding words
?	indicates rising pitch; "," indicates level pitch. The absence of a pitch marker indicates falling pitch
‾‾┐└‾	
words	stepped pitch drops
::	extension of preceding sound
___	underlining indicates stress on the underlined symbols
AND	capital letters indicate high amplitude
–	as in "jus-" indicates a sound cut-off
[	marks points of overlap, usually speech overlap; it may also denote a simultaneous start by two speakers
=	denotes no gap between speech on either side of the symbol
( )	single parentheses either indicate untranscribed words or enclose words about which the transcriber is uncertain
(( ))	double parentheses enclose information which is not formally incorporated into the transcript
(.)	short but noticeable pauses of under half a second; longer pauses are timed, e. g., (1.3)
RH/LH	right hand/left hand
.hh/hh	audible inbreath/audible outbreath

NOTE

1. It needs to be stressed that my argument is not meant to exclude the possibility that *in certain respects* pragmatically unusual children display close and detailed attention to their immediate interactional environment. In the context of data such as that provided in Extract 5, and the anecdotal evidence presented in that section, it is clear that these children can display, if anything, a heightened awareness as to whether the specifics of some event match parallel types of event which have taken place in the past. And there is a variety of evidence suggesting that the activities of these children can be very precisely coordinated with the current state of talk. Note, for example, how in Extract 4 Kevin's entry at line 3 takes place at a potential turn transition place in the prior talk at line 1—at the end of a turn construction unit, in the terminology of Sacks, Schegloff, and Jefferson (1974), thus

disqualifying itself from being what one might call an "interruption" of the prior speaker; and note how on finding himself to be in overlap with the prior speaker in line 3 Kevin aborts his turn at talk, only to resume when ensured of a position which is in the clear, at line 5. Whether or not these and other patterns are sufficient to warrant the claim that turn taking among children with autism does not display unusual features (Tager-Flusberg, 1996) seems questionable, as several of the potential parameters involved in turn taking have never been the subject of empirical analysis in the case of autism (for an outline of the normal parameters involved in just one such aspect, overlap, see Schegloff, 2000). If it *is* the case that turn taking among the pragmatically unusual does not display unusual features, then the interesting corollary would be that forms of talk can occur which, though orderly in this respect, can be recognized as routinely shaped in ways which make them strange, at the margins of human competences.

REFERENCES

American Psychiatric Association. (1994). *Diagnosis and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.

Attwood, T. (1998). *Asperger's syndrome: A guide for parents and professionals*. London: Jessica Kingsley.

Baird, G., Charman, T., Baron-Cohen, S., Cox, A., Swettenham, J., Wheelwright, S., et al. (2000). A screening instrument for autism at 18 months of age: A six-year follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 694-702.

Baron-Cohen, S. (1989). Perceptual role-taking and protodeclarative pointing in autism. *British Journal of Developmental Psychology, 7*, 113-127.

Baron-Cohen, S. (1995). *Mindblindness: An essay on autism and theory of mind*. Cambridge, MA.: MIT Press.

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a theory of mind? *Cognition, 21*, 37-46.

Bishop, D. V. M. (1998). Development of the children's communication checklist (CCC): A method for assessing qualitative aspects of communicative impairment in children. *Journal of Child Psychology and Psychiatry, 39*, 879-892.

Bishop, D. V. M., & Adams, C. (1989). Conversational characetristics of children with semantic-pragmatic disorder II: What features lead to a judgement of inappropriacy? *British Journal of Disorders of Communication, 24*, 241-263.

Bishop, D. V. M., & Rosenbloom, L. (1987). Classification of childhood language disorders. In W. Yule & M. Rutter (Eds.), *Language development and disorders* (pp. 16-41). London: MacKeith.

Boucher, J. (1998). SPD as a distinct diagnostic entity: Logical considerations and directions for future research. *International Journal of Language and Communication Disorders, 33*, 71-81.

Bruner, J. S. (1983). *Child's talk: Learning to use language*. Oxford: Oxford University Press.

Button, G., & Casey, N. (1984). Generating topic: The use of topic initial elicitors. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 167-190). Cambridge: Cambridge University Press.

Capps, L., Kehres, J., & Sigman, M. (1998). Conversational abilities among children with autism and children with developmental delays. *Autism, 2*, 325-344.

Capps, L., Losh, M., & Sigman, M. (2000). "The frog ate the bug and made his mouth sad": Narrative competence and emotional understanding in children with autism.

Journal of Abnormal Child Psychology, 28,193-204.
Capps, L., Yirmiya, N., & Sigman, M. (1992). Understanding of simple and complex emotions in non-retarded children with autism. *Journal of Child Psychology and Psychiatry, 33*, 1169-1182.
Carter, A. L. (1978). From sensori-motor vocalizations to words. In A. Lock (Ed.), *Action, gesture and symbol: The emergence of language* (pp. 309-350). London: Academic Press.
Charman, T. (1998). Specifying the nature and course of the joint attention impairment in autism in the preschool years: Implications for diagnosis and intervention. *Autism, 2*, 61-80.
Coggins, T. E., & Frederickson, R. (1988). Brief report: The communicative role of a highly frequent repeated utterance in the conversations of an autistic boy. *Journal of Autism and Developmental Disorders, 18*, 687-694.
Conti-Ramsden, G., Crutchley, A., & Botting, N. (1997). The extent to which psychometric tests differentiate subgroups of children with SLI. *Journal of Speech Language and Hearing Research, 40*, 765-777.
Conti-Ramsden, G., & Gunn, M. (1986). The development of conversational disability: A case study. *British Journal of Disorders of Communication, 21*, 339-352.
Dobbinson, D., Perkins, M. R., & Boucher, J. (1998). Structural patterns in conversations with a woman who has autism. *Journal of Communication Disorders, 31*, 113-134.
Fay, W. H. (1988). Infantile autism. In D. Bishop & K. Mogford (Eds.), *Language development in exceptional circumstances* (pp. 190-202). Edinburgh: Livingstone.
Forrester, M. A. (1992). *The development of young children's social-cognitive skills.* Hove, UK: Erlbaum.
Gagnon, L., Mottron, L., & Joanette, Y. (1997). Questioning the validity of the semantic-pragmatic syndrome diagnosis. *Autism, 1*, 37-56.
Gerhardt, J. (1990). The relation of language to context in children's speech: The role of HAFTA statements in structuring 3-year-old's discourse. *IPrA Papers in Pragmatics, 4*, 1-58.
Gerhardt, J. (1991). The meaning and use of the modals HAFTA, NEEDTA and WANNA in children's speech. *Journal of Pragmatics, 16*, 531-90.
Ghaziuddin, M., & Gerstein, L. (1996). Pedantic speaking style differentiates Asperger's syndrome from high functioning autism. *Journal of Autism and Developmental Disorders, 26*, 585-595.
Golinkoff, R. (1986). 'I beg your pardon': The preverbal negotiation of failed messages. *Journal of Child Language, 13*, 455-76.
Heritage, J. (1984). *Garfinkel and ethnomethodology.* Cambridge: Polity Press.
Heritage, J., & Sorjonen, M-L. (1994). Constituting and maintaining activities across sequences. *Language in Society, 23*, 1-29.
Holland, D., & Quinn, N. (Eds.) (1987). *Cultural models in language and thought.* Cambridge: Cambridge University Press.
Howlin, P., & Moore, A. (1997). Diagnosis in autism: A survey of over 1200 patients in the UK. *Autism, 1*, 135-162.
Howlin, P., & Rutter, M. (1987). *Treatment of autistic children.* New York: Wiley.
Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child, 2*, 217-250.
Lave, J. (1993). The practice of learning. In S. Chaiklin & J. Lave (Eds.), *Understanding practice* (pp. 3-32). Cambridge: Cambridge University Press.
Lewis, V., & Boucher, J. (1988). Spontaneous, instructed and elicited play in relatively

able autistic children. *British Journal of Developmental Psychology, 6,* 325-339.
Local, J., & Wootton, A. J. (1995). Interactional and phonetic aspects of immediate echolalia in autism: A case study. *Clinical Linguistics and Phonetics, 9,* 155-84.
Lord, C., & Paul, R. (1997). Language and communication in autism. In D. J. Cohen & F. R.Volkmar (Eds.), *Handbook of autism and developmental disorders* (pp. 195-225). New York: Wiley.
Loveland, K., & Tunali, B. (1993). Narrative language in autism and the theory of mind hypothesis: A wider perspective. In S. Baron-Cohen, H. Tager-Flusberg, & D. Cohen (Eds.), *Understanding other minds: Perspectives from autism* (pp. 247-266). Oxford: Oxford University Press.
Mandler, J. M. (1984). *Scripts, stories, and scenes: Aspects of schema theory.* Hillsdale, NJ: Erlbaum.
Mead, G. H. (1913/1964). *Selected writings of G. H. Mead,* (Edited by A. J. Reck). New York: Bobbs-Merrill.
Mitchell, P. (1997). *Introduction to theory of mind: Children, autism, and apes.* London: Arnold.
Nelson, K. (1993). Events, narratives, memory: What develops? In C. A. Nelson (Ed.), *Minnesota Symposium on Child Psychology,* 26 (pp. 1-37). Mahwah, NJ: Erlbaum.
Paul, R., & Cohen, D. J. (1984). Responses to contingent queries in adults with mental retardation and pervasive developmental disorders. *Applied Psycholinguistics, 24,* 349-357.
Prizant, B., & Duchan, J. F. (1981). The functions of immediate echolalia in autistic children. *Journal of Speech and Hearing Disorders, 46,* 241-249.
Prizant, B., & Rydell, A. (1984). Analysis of functions of delayed echolalia in autistic children. *Journal of Speech and Hearing Research, 27,* 183-192.
Radford, J., & Tarplee, C. (2000). The management of conversational topic by a ten year old child with pragmatic difficulties. *Clinical Linguistics and Phonetics, 14,* 387-403.
Rapin, I., & Allen, D. (1983). Developmental language disorders: Nosological considerations. In U. Kirk (Ed.), *Neuropsychology of language, reading and spelling* (pp. 155-184). New York: Academic Press.
Ricks, D. M., & Wing, L. (1975). Language, communication and the use of symbols in normal and autistic children. *Journal of Autism and Developmental Disorders, 5,* 191-221.
Rutter, M., & Bailey, A. (1993). Thinking and relationships: Mind and brain (some reflections on theory of mind and autism). In S. Baron-Cohen, H. Tager-Flusberg, & D. J. Cohen (Eds), *Understanding other minds: Perspectives from autism* (pp. 481-504). Oxford: Oxford University Press.
Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics of turn-taking for conversation. *Language, 50,* 696-735.
Schank, R. C., & Abelson, R. (1977). *Scripts, plans, goals and understanding.* Hillsdale, NJ: Erlbaum.
Schegloff, E.A. (2000). Overlapping talk and the organization of turn-taking for conversation. *Language in Society, 29,* 1-64.
Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica, 7,* 289-327.
Solomon, O. (2001). *Narrative introduction practices of children with autism and Asperger syndrome.* Unpublished PhD dissertation, University of California, Los Angeles.
Suchman, L. A. (1987). *Plans and situated actions: The problem of human-machine*

interaction. Cambridge: Cambridge University Press.
Tager-Flusberg, H. (1995). "Once upon a ribbit": Stories narrated by autistic children. *British Journal of Developmental Psychology, 13*, 45-59.
Tager-Flusberg, H. (1996). Brief report: Current theory and research on language and communication in autism. *Journal of Autism and Developmental Disorders, 26*, 169-172.
Tager-Flusberg, H., & Sullivan, K. (1995). Attributing mental states to story characters: A comparison of narratives produced by autistic and mentally retarded individuals. *Applied Psycholinguistics, 16*, 241-256.
Tarplee, C. (1996). Working on young children's utterances: Prosodic aspects of repetition during picture labelling. In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in conversation: Interactional studies* (pp. 406-435). Cambridge: Cambridge University Press.
Valsiner, J. (1987). *Culture and the development of children's action: A cultural-historical theory of developmental psychology*. Chichester, UK: Wiley.
Volkmar, F. R., Klin, A., & Cohen, D. J. (1997). Diagnosis and classification of autism and related conditions: Consensus and issues. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and developmental disorders* (pp. 5-40). New York: Wiley.
Waterhouse, L., & Fein, D. (1997). Perspectives on social impairment. In D. J. Cohen & F. R. Volkmar (Eds.), *Handbook of autism and pervasive developmental disorders* (pp. 901-919). New York: Wiley.
Wilkinson, R. (1999). Sequentiality as a problem and resource for intersubjectivity in aphasic conversation: Analysis and implications for therapy. *Aphasiology, 13*, 327-343.
Wilkinson, R., Bryan, K., Lock, S., Bayley, K., Maxim, J., Bruce, C., Edmunson, et al. (1998). Therapy using conversation analysis: Helping couples adapt to aphasia in conversation. *International Journal of Communication Disorders, 33*, 144-149.
Williams, D. (1996). *Autism: An inside-out approach*. London: Jessica Kingsley.
Wootton, A. J. (1994). Object transfer, intersubjectivity and third position repair: Early developmental observations of one child. *Journal of Child Language, 21*, 543-564.
Wootton, A. J. (1997). *Interaction and the development of mind*. Cambridge: Cambridge-University Press.
Wootton, A. J. (1999). Delayed echoing in a child with autism. *First Language, 19*, 359-381.

Tony Wootton graduated from the London School of Economics, and has since taught at the Universities of Aberdeen and York. Most of his research relates to the conduct of young children, his most recent book being Wootton (1997). He is now an honorary research fellow attached to the University of York.