

A Multidimensional Reappraisal of Language in Autism: Insights from a Discourse Analytic Study

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Abstract In this article, we leverage theoretical insights and methodological guidelines of discourse analytic scholarship to re-examine language phenomena typically associated with autism. Through empirical analysis of the verbal behavior of three children with autism, we engage the question of how prototypical features of autistic language—notably pronoun atypicality, pragmatic deficit, and echolalia—might conceal competencies and interactional processes that are largely invisible in mainstream research. Our findings offer a complex picture of children with autism in their use of language to communicate, interact and experience others. Such a picture also deepens our understanding of the interactional underpinnings of autistic children’s speech. Finally, we describe how our findings offer fruitful suggestions for clinical intervention.

Keywords Autism · Language · Discourse analysis · Conversation analysis · Echolalia · Pronoun reversal and avoidance · Pragmatic deficit

Introduction

In this article, we leverage theoretical insights and methodological guidelines of discourse analytic scholarship to re-examine language phenomena typically

associated with autism. Through empirical analysis of the verbal behavior of three children with autism, we engage the question of how prototypical features of autistic language—notably echolalia, pronoun reversal/avoidance and pragmatic deficit—might conceal competencies and interactional processes that are largely invisible in mainstream research.

By focusing on talk-in-interaction—that is, spontaneously occurring verbal activities in their ordinary contexts of occurrence—discourse analytic approaches engage perspectives on language traditionally neglected in autism research. This way, the prototypical features of autistic language are given interpretations that expand the classic view. In mainstream autism research, these verbal behaviors are generally taken to be symptomatic of the affected individual’s underlying condition—direct manifestations of deficits in areas such as social relatedness, perspective taking, and abstract thought (e.g. Charney 1980; Hale and Tager-Flusberg 2005; Happé 1995). While certainly not denying that there is a neurological basis of autism, nor that affected individuals have difficulties in these general domains of functioning, discourse analytic approaches provide much needed nuance, caution and alternative interpretations, leading to insights that have the potential to transform our perspective on language in autism. These insights also offer fruitful suggestions for intervention (see “Discussion” section).

Discourse analytic approaches include discourse analysis proper, interactional linguistics, linguistic anthropology and—our predominant focus in this article—conversation analysis. With theoretical underpinnings in ethnomethodology, conversation analysis (CA) has articulated a set of principles and methods for studying talk-in-interaction (e.g. Heritage 1995; Schegloff 2007) that have permeated discourse analytic approaches as a whole. These constructs

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and procedures will be discussed further below. While differing in disciplinary origin, discourse analytic approaches are united by the view that social interaction is the primordial scope and domain of language (Schegloff 1989), and therefore that naturally occurring interaction should be privileged as a source of data—particularly when research questions explicitly reference social interaction, as is often the case in research on autism.

In the next section, we provide a theoretical background for our findings by delineating a multidimensional perspective on language that brings together fundamental assumptions of discourse analytic approaches. More specifically we explicate how discourse analytic approaches treat language use as an interactional accomplishment, as social action, and also as an experience in and of itself. This theorization of language and methodological approach offers a corrective to the dominant and largely tacitly held view that language, in its essence, is a referential system and a reflection of an individual's cognition (e.g. Chomsky 1965; Lyons 1969). Following the “[Theoretical Background](#)” section, we provide information about our data corpus and analytic procedures.

In the “[Findings](#)” section, we consider prototypical features of autistic language, i.e. pronoun atypicality, pragmatic deficit and echolalia, and analyze illustrative extracts from our data corpus of spontaneous verbal interactions of children with autism. The extracts were selected because they exemplify prototypical features of autistic language and are amenable to deficit interpretations of social withdrawal, impaired cognition, and limited communicative ability. In our analysis of the exchanges, we demonstrate that the theoretical foundation and methodological tools of discourse analytic approaches afford alternative interpretations and—addressing our central research question—can indeed bring to light competencies and interactional processes that have not been previously documented and recognized.

From our analyses, what emerges is a complex picture of children with autism in their use of language to communicate, interact and experience others. Such a picture expands and deepens our appreciation for autistic children's personal agency and social sensitivity. At the same time our findings bring attention to the influence—at times limiting, at times facilitative—of the interlocutor on the child's verbal production. Finally, we suggest directions for clinical intervention that reflect the strengths and vulnerabilities that our study highlighted in children with autism.

Theoretical Background

Underpinning mainstream research on verbal communication in autism is a view of language as a referential system through which we refer to and predicate on the world.

Furthermore, a speaker's linguistic ability—from her lexical inventory to her syntactic repertoire—is viewed as commensurate to her cognitive faculty. This view is not unique to autism research but reflects a longstanding theoretical trend in several other disciplines, notably linguistics (e.g. de Saussure 1959).

Discourse analytic approaches have broadened this perspective of language, by bringing to the forefront its interactional, praxeological, and phenomenological dimensions. Drawing from Goffman's symbolic interactionism, discourse analysts have posited the inseparability of language from communication and communication from social interaction. Whereas linguists and philosophers of language eschewed the analysis of the interactive matrix of speech, discourse analysts made such interactional substratum the chief focus of their investigation (Goodwin and Heritage 1990). Furthermore, drawing from Garfinkel's ethnomethodological insights, which in turn were deeply rooted in phenomenology, discourse analysts have acknowledged that language is deeply entangled with experience. Language does not simply represent experience. Our apprehension of things in the world includes the very experiencing of those things as having certain linguistic denotations or being parts of certain language game (Wittgenstein 1953). Similarly, intersubjective understanding is not the precondition for communication, preceding the interpersonal experience, but rather a joint achievement, perpetually constituted and renewed in talk-in-interaction (Garfinkel 1967). We shall consider the interactional, praxeological and phenomenological dimensions of language, one by one here below.

Language as Interactional Accomplishment

Language can be conceptualized as a cognitive tool that enables humans to organize and express internal mental processes. From this perspective, what a person says is often regarded as an isolated production, a transparent window into the person's thoughts and feelings. Naturally, then, an individual's utterances are assumed to provide straightforward evidence of his/her language development and linguistic competence. This general view licenses the examination of a person's utterances in isolation, whatever the particular research question.

Discourse analytic approaches, however, maintain that this decontextualized view does not take into account that language is inherently situated in interaction (Schegloff 1989). Sentences in communicative exchanges, therefore, emerge as the product of an interactional process between speaker and hearer, accomplished over time and incrementally (Goodwin 1979, 1980; Schegloff 1982).

At a most basic level, for instance, the talk by one speaker involves the collaboration of the other participants

in the exchange, who contribute by remaining silent or by uttering small increments (vocalizations such as ‘uh huh,’ ‘yeah’) precisely placed in the unfolding talk of the speaker. Communicative interchanges are also interactional outcomes insofar as the interlocutors construct their turns in ways that display an orientation to their recipients. An elementary specification of this idea resides in the CA concept of *recipient design* (Sacks et al. 1974): speakers articulate their turns in such a way to make it specifically appropriate to the persons they are addressing. Recipient design includes a wide range of features, from simple elements like the modulation of volume depending on how far the recipient is from the speaker, to more complex processes like formulation of questions, which is informed by what the speaker assumes the recipient knows and/or is capable to answer to. Furthermore, turns are not solely designed for an addressee but also to solicit from him/her a certain response. In addition, turns are most often also responsive to prior talk. In other words, in communicative interchanges there is a mutual orientation among participants towards the joint contribution to a course of action. These ideas are encapsulated in the CA notions of *adjacency pair* and *conversational sequences* (Sacks 1992; Schegloff 1968). Many types of utterances in talk-in-interaction conventionally come in pairs: question–answer, greeting–greeting, invitation–acceptance/rejection, etc. The production of the first part of an adjacency pair establishes an expectation that the recipient will produce a reciprocal action (second pair part) at the first possible opportunity, following the completion of the first part. The production of the expected response is indicative of the recipient’s understanding of the first pair part as such, that is as a certain kind of initiation invoking a certain kind of response. If the second pair part is not offered, its absence will not pass unnoticed and will likely become the object of remedial effort. While the adjacency pair organization only comprises a relatively narrow range of conversational actions, the underlying mechanism is germane to a much wider range of conversational actions: turns in conversation are interlocked; a current action projects a next relevant action and often responds to a prior action.

The critical conclusion is that interlocutors create opportunities for and at the same time constrain each other’s actions in conversation (Goodwin and Heritage 1990). This fact cautions us from evaluating a child’s utterances in isolation, and compels us to think about child language not solely in terms of cognitive and linguistic development. A child’s verbal contribution to a communicative exchange does not only relate to his/her developing cognitive capacities and linguistic competence, but also to the specific contingencies of interaction in which he/she is engaged (Gardner and Forrester 2010; Sidnell 2010).

Language as Social Action

Disciplines concerned with language and communication have traditionally assumed that the essential function of linguistic utterances is to make statements about some state of affairs in the world (Carnap 1952; de Saussure 1959), which are then exchanged between speakers and hearers in communication (Shannon and Weaver 1949). This view is predicated on the linguistic system’s capacity to articulate and convey propositional content. In taking naturally occurring everyday conversation as their focus of analysis, however, discourse analysts contended that more critical in shaping the ‘meaning’ of utterances is the language capacity to implement social actions. Thus, in analyzing language in use, it is essential to consider not only utterances’ propositional content, but also what actions they are accomplishing. Undoubtedly, in everyday exchanges language is mobilized to do things—to request, invite, excuse, defer, greet, and so on, as well as to inform.¹

Students of conversation have posited “the omnirelevance of action” for talk-in-interaction (Jefferson and Schenkein 1978; Schegloff 1995): utterances are produced by their speakers and attended by their recipients for the actions they implement. For instance, utterances like, ‘Do you know what happened to me?’—and generally turns with the syntactic format of ‘Do you know + [embedded WH—question]?’—are routinely treated as pre-announcements, despite their structure as polar (i.e. yes/no) questions (Schegloff 1988). Thus, they are usually answered with a repeat of the question word included in the pre-announcement (‘What?’ or ‘What happened to you?’ rather than ‘No’), which moves the sequence forward and gives the go-ahead for the announcement proper. In other words, talk-in-interaction is first and foremost constructed and interpreted as action—in fact, sequences of action, which are responsive to prior actions and implicative for following actions.

In methodological terms, the awareness that utterances implement social actions entails careful attention to the sequential context in which utterances appear. It is the contextual embeddedness of utterances in specific interactional trajectories that enable them to perform actions, and to be recognizable for the actions they accomplish. After all, depending on context, a single utterance can perform a range of actions, and a particular action can be implemented by a range of specific utterances.

¹ It is beyond the scope of this article to trace the development of the pragmatic perspective of language, a lineage that—even if cursorily outlined—would need to span across disciplines to include Malinowski’s anthropological writing (1923), Wittgenstein’s *Philosophical Investigations* (1953), and Austin’s speech act theory (1962).

Language as Mode of Experience

Across many disciplines, the conventional wisdom has been that language stands apart from experience, and that this language-experience divide is what allows language to function as a means of symbolizing the world. Being inherently outside of the realm of things and experiences, language forms can refer to them and take on meaning in the process. The essence of language, in this view, lies in its symbolic function, supplying arbitrary symbols with which to refer to the outer world of non-linguistic objects and the inner world of subjective experiences.

Recent theoretical formulations of linguistic anthropologist and discourse analyst Ochs (2012) have broadened our view by infusing a phenomenological appreciation of language. In her visionary essay “Experiencing language,” Ochs has contended that “the focus on language as symbol [...] has largely occluded a view of everyday speech as an experience in itself” (Ochs 2012, p. 149). In other words, Ochs argues that ordinary talk is permeated by “enactments of language”, where language affirms itself “as experience.” Apart from their referential and instrumental functions—that is, beyond predicating upon the world and performing social actions—“enactments of language are *experienced* as they are produced and as they are perceived” (ibid., p. 150).

Drawing from Agamben, Ochs provides the simple but incisive example of the word “shoe”; our experience of producing and hearing the word inevitably becomes a part of how we experience the objects to which the word refers. That is, part of what we know and experience about the objects we call “shoes” is precisely that we call them “shoes.” What it is like to produce and hear the acoustic contours of the word is a constitutive part of our experience of the object—much in the same way as the physical contours of the material object. Incanting the word “shoe” temporarily brings into being one of its qualities: it’s “shoe”-ness. Language has the capacity to function like our senses, allowing us to explore the object of our attention as if with sight or touch or taste, drawing us in. And what we explore with the experiential mode of language both depends upon and is itself the saturated entanglement of language and experience (Ochs 2012).

Approaching language with a phenomenological sensibility compels discourse analysts to complement the semantic, syntactic and sequential foci with attention to the non-referential facets of language, to the sound and form of utterances, aspects that are particularly salient in *experiencing language* (Jefferson 1996; Ochs 2012; Sacks 1992).

In summary, in this section we have articulated a multidimensional perspective on language that constitutes the theoretical foundation of discourse analysts’ empirical work. First, we explicated how discourse analytic

approaches treat language use as an interactional accomplishment and why this premise entails careful attention to the inevitably constraining influence of an individual’s interlocutor. This stands in contrast to approaches that take utterances to be transparent reflections of an individual’s cognition, and which scrutinize subjects’ utterances in isolation, blind to the influence of the interlocutor, who—in autism research—is often functioning as a “neutral” experimenter or interviewer. Second, we detailed how discourse analytic approaches treat language as social action, and therefore give attention to the sequential context in which utterances are produced—to where the focal utterance appears and what it accomplishes in the sequence of turns that constitute the communicative exchange. This orientation to language and analytic approach markedly contrasts with a great deal of mainstream autism research, which takes the essence of language to be a referential system that encodes descriptive information about states of affairs in the world, and which decontextualizes utterances from the flow of ongoing interaction. Finally, we explained how discourse analytic approaches acknowledge that language is also an experience in and of itself. The acoustic and formal properties of speech are part of the experience of what language is accomplishing in the very moment it is engaged.

Methodology

Data Corpus

Our data set was generated from spontaneously occurring verbal interactions of three 6-year-old children with autism and their family members as they engage in habitual activities in the home setting.² These activities include meals, personal hygiene, play, music lessons, and bedtime preparations. The activities were video-recorded bi-weekly for a month and a total of approximately 16 h of video-recording for each child were obtained. The video-recorded data were fully transcribed according to conversation analysis transcription procedures (Jefferson 2004).

² In carrying out our research project we followed the ethical guidelines of UC Berkeley Institutional Review Board (IRB). Specifically, in recruiting families for voluntary participation in our study we informed them about the purposes of the research; that at any point during the study they could withdraw their participation; and that their expectations and rights to privacy and confidentiality were to be honored. Since participants included minor children and members of a vulnerable population, ethical treatment required that we collected surrogate informed consents for them in addition to the consent forms for the adults participating in the study. All personal names used in this article are pseudonyms.

Analytic Procedures

Following conversation analysis, our method of analysis is centered on the *composition* and *position* of utterances that present prototypical features of autistic language.³ More specifically, we have first identified occurrences of pronoun reversal/avoidance, pragmatic deficit, and echolalia and examined their linguistic constituents as well as aspects of their vocal delivery, such as stress, enunciation, intonation and pitch. We have then considered a heuristic question that is pivotal to any CA inquiry: “Why that now?” (Schegloff and Sacks 1973). In other words, why does that particular atypical utterance appear where it does—what is it doing there? We note that this question puts pressure on the assumption that atypical language features occur all the time or randomly in the speech of autistic children and are comprehensively explained in terms of the underlying neurological impairments intrinsic to the affected individual.

The illustrative exchanges extracted from our collections for discussion in the “**Findings**” section were selected because they are typical examples of the autistic language features under inquiry. Our analysis of the exchanges broadens the perspective on these phenomena beyond deficit interpretations and discerns resources, abilities and interactional processes previously unrecognized.

Findings

Pronoun Atypicality

Atypical use of person pronouns is one of the most distinctive features of autistic language. Children with autism are reported to use the second person pronoun *you* or third person pronoun *he/she* to refer to self and to use the first person pronoun *I* to refer to the person addressed. This behavior is referred to as pronominal reversal. In addition, affected children make frequent use of proper names to refer to self or the addressee and sometimes deploy agentless passive constructions. These speech patterns are referred to as pronominal avoidance.

Difficulties with the use of personal pronouns in children with autism are long recognized. Kanner (1943) documented occurrences of atypical personal references in his first description of infantile autism and considered the phenomenon as characteristic of the condition, along with echolalia. In current mainstream research, pronoun atypicality continues to be considered as dysfunctional and

epiphenomenal of an underlying impairment in self-other differentiation (Charney 1980; Hobson et al. 2010).

Our data corpus was not devoid of pronoun atypicality. In fact occurrences of anomalous pronoun use, particularly the avoidance of the pronoun *I*, were especially frequent in the speech of Ivan, the child with lower linguistic ability among our subjects. Ivan was 5; 11 at the time of the video-recording and had a Mean Length of Utterance (MLU) of 2.28.⁴ Notwithstanding his rather restricted linguistic repertoire, Ivan was an active participant in verbal interactions with family members and tutors. He often initiated conversational sequences, most typically basic adjacency pairs, and was fairly responsive to those launched by his interlocutors.

Given Ivan’s significant delay in language development, it seems plausible that his tendency to ‘avoid’ personal pronouns is primarily manifestation of his limited linguistic competence. However, attention to the sequential context in which Ivan’s pronoun errors occurred, which includes a consideration of his interlocutors’ contribution, adds important insights on why Ivan avoided the person pronoun *when he did*. In our data set of Ivan’s interactions, we have observed extended use of baby talk by adults when addressing the child. Baby talk is characterized by distinctive phonological, morphological, lexical, syntactic as well as intonational features, many of which are simplified alterations of the standard adult language (Ferguson 1977). Among such modifications are the use of nouns rather than pronouns (for example, “Can you help dad?” rather than “Can you help me?”) and third person constructions rather than first and second person ones (for instance “Where is Ivan going?” addressed to Ivan, rather than “Where are you going?”; or “Mommy is hungry” rather than “I’m hungry”).

When the interlocutors used parental names (i.e. Mom, Dad, Mommy, Daddy) or proper names for self-reference, and third person construction to refer to themselves or the child addressee, we found that the child adapted to the personal reference frame and syntactic construction of the interlocutor, which resulted in his ‘avoidance’ of person pronouns. This phenomenon is conspicuous in the following extract, in which Ivan is interacting with his after-school tutor Shelly. Ivan and Shelly are cleaning the board to begin drawing shapes. Ivan takes the initiative and indicates that he wants to draw a heart (line 1). His formulation of intent is grammatically appropriate and contains the first person singular pronoun ‘I.’ We shall see that Shelly’s subsequent clarification sequence introduces a shift in personal reference to which Ivan adapts in his response.

³ In Schegloff’s words: “both position and composition are ordinarily constitutive of the sense and import of an element of conduct that embodies some phenomenon or practice” (1993, p. 121).

⁴ The MLU of typically developing children of Ivan’s age is 4.5 (Brown 1973).

Extract 1—Drawing shapes with tutor (Ivan, Tape#1)

1	IVAN	I want to make a heart. ((seats in front of board with back to Shelly; holds a marker in hand))
2	SHELLY	okay. mmh. you want to make a heart?
3	IVAN	make heart. ((turns to look at Shelly))
4	SHELLY	who makes a heart. Ivan or Shelly?
5 →	IVAN	Ivan Shewy ((hands marker to Shelly)) Shewy make a heart.

In line 2, Shelly utters an understanding check that is in keeping—syntactically and in personal reference format—with Ivan’s opening utterance. Ivan’s echoic response in line 3 seems to be only partially satisfying for Shelly (Ivan’s response confirmed the action being projected but not the agent). In line 4, she formulates an open wh-interrogative (“who makes a heart”) and then appends an alternative question (“Ivan or Shelly?”) to it, which shifts personal references from pronouns to proper names, thereby instantiating a typical baby talk feature. The alternative question format projects a (type-conforming) response that contains a partial repetition (i.e. one of the provided options) (Raymond 2003). After echoing the two alternatives, the child selects one, Shelly as response (line 5). Ivan’s reply, which if taken in isolation would be treated as an occurrence of pronoun avoidance, thus emerges as an appropriate response to his tutor’s simplified alternative question.

One could object that Ivan’s response in line 5 indicates that his utterance in line 1 was actually an instance of pronoun reversal, referring to Shelly as ‘I.’ We would argue, however, that if the analytic focus is not limited to talk but includes also the moment-by-moment use of non-verbal semiotic resources, such as gaze, embodied action and object use, this interpretation can be easily refuted⁵: When Ivan opens the sequence (line 1) by announcing his plan of action, which linguistically constructs him as subject/agent via the indexical-referential ‘I,’ he faces the board and holds the marker in his hand. He continues to hold the marker and orient to the board during the first clarification sequence (lines 2 and 3). When the tutor poses the second clarification question, in line 4, Ivan turns to look at Shelly and then hands the marker to her, just prior to uttering his response “Shelly make a heart” in line 5. So Ivan’s bodily orientation and handling of the marker support an interpretation of the child’s referential forms as

⁵ While the term conversation analysis may lead anyone unacquainted with this approach to think that language is assumed as both primary and exhaustive focus of investigation, conversation and discourse analysts actually treat language as one of multiple semiotic resources that participants concurrently mobilize in the accomplishment of actions in interaction (Goodwin 2000; Muskett and Body 2013).

appropriately used. At the beginning of the sequence, the child was projecting and gearing up for drawing on the board. When he utters the choice for Shelly to draw the heart, he hands to her the marker and shifts his torso sideways to make room for Shelly to access the board.

In summary, in this extract we saw that the child’s ‘pronominal avoidance’ was actually an accommodation to a frame of personal reference set up by his interlocutor. As such, the child’s pronoun nonuse was contextually sensitive. In simplifying speech addressed to the child with autism, the interlocutor can constrain him to use simplified forms himself. Leveraging insights from conversation analysis, this finding was borne out of a consideration of language as interactional accomplishment and an analytic attention to the influence of the interlocutor.

Pragmatic Deficit

Deficits in pragmatic competence have been widely documented in verbal children with autism (e.g. Bernard-Opitz 1982; Tager-Flusberg 1981). While the term ‘pragmatic deficit’ came to be used only in the late 1970s (Baltaxe 1977) some of the early studies of autism described impairments that today would be subsumed under that term. Kanner, for instance, mentioned among the *peculiarities* of autistic language “the literalness that cannot accept synonyms or different connotations of the same preposition” (Kanner 1946, p. 242). Furthermore, he documented the frequent production of utterances that “have no meaningful connection with the situation in which they are voiced” (ibid.). Later studies found recurrent violation of Grice’s cooperative principle, especially the maxim of quantity and the maxim of relevance, resulting in perseverative and irrelevant speech respectively (Surian et al. 1996; Tager-Flusberg and Anderson 1991). These discourse phenomena have been connected primarily to underlying impairments in theory of mind and to general cognitive inflexibility (Baron-Cohen 1988).

Discourse analytic approaches’ attention toward the praxeological dimension of language compels us to broaden the perspective on pragmatic deficits in autism, particularly on irrelevant or incongruent speech. In advocating for an action-oriented approach to the analysis of talk-in-interaction, Schegloff has exposed the problematicity of taking propositional content of utterances as the chief analytic tool (Schegloff 1990). In Schegloff’s own words, “focusing on ‘the topic’ of some unit of talk risks the danger of not addressing analysis to what participants in real worldly interaction are *doing* to or with one another with their talk, with their talk-about-something, or with particular parts of it; that is all talk is then treated as talk-about, not as talk-that-does [...] much talk is best understood in the first instance for *what it is being used to do*,

more than *what it is being used to talk about.*” (1990, p, 52).

In the analysis of occurrences of pragmatic deficits in our data corpus we have thus assumed action as primary organizing unit for talk-in-interaction. This way we found that topically incongruent utterances were frequently responsive to or enactive of specific courses of actions. More specifically, we observed that the child’s ‘irrelevant’ and ‘literal’ utterances often served to resist and deflect an undesirable course of action set forth by his interlocutor.

To illustrate we present an extract from another child in our data corpus, Aaron, who was 5; 10 at the time of the video-recording. Aaron’s MLU was 3.92, which is only slightly below that expected in typically developing children of his age. Aaron was an active participant to verbal interactions with his parents and familiar interlocutors. While his verbal interactional bids are not frequent, Aaron is responsive to others’ initiations and is able to build on their turns to remain engaged and expand the conversational exchange.

Aaron is having lunch with his mother. At the beginning of the meal, Mom has stipulated with Aaron that if he eats ten peas he will then get a cookie. Aaron, however, is reluctant to eat that many. In the following selection, we see Mom trying to persuade Aaron to keep eating peas by asking him to take two at a time. In response, he initiates an exchange about ballet class that appears to be a classic example of autistic pragmatic impairment, in that it is topically irrelevant and introduced with no attempt at a comprehensible transition from previous talk. In our analysis, we will posit that although Aaron’s move is indeed atypical, it also demonstrates responsiveness to Mom’s moves and her overarching pragmatic goal.

Extract 2—Meal with Mom (Aaron, Tape#2)

1	MOM	how about two more peas.
2	(11.0)	((Aaron hums and rocks in his chair, not looking at Mom))
3	MOM	how about two more peas.
4	(5.0)	((Aaron looks up at Mom, she raises her eyebrows))
5	MOM	what do you think. (1.0) you’ve got eight more to go.
6	(2.0)	((Aaron keeps eating and hums))
7	MOM	‘cause you only had two.
8	(22.0)	((Aaron continues to chew his food, turning his upper body away from Mom, before turning back towards the table as he swallows his bite))
9 →	AARON	(I’m gonna) get one more class, or I can do private lesson for,
10	(2.0)	
11	MOM	what are you talking about.
12 →	AARON	after two more classes I can do a private lesson

13	MOM	what are you thinking about. ((shaking head no))
14	AARON	Lo:ttie. ((turning torso leftside))
15	MOM	oh::: (1.0) Lottie.
16	(1.5)	
17	MOM	are you thinking about ballet?
18	AARON	° yes °
19	MOM	so do you want to get private lessons or do you want to do the class?
20	AARON	the class.

At the beginning of this sequence, Aaron does not proffer the response invited by Mom through her four successive prompts, in lines 1, 3, 5 and 7, as well as the pause containing Mom’s nonverbal cue (raising eyebrows expectantly) in line 4. Long pauses fill the space in which Aaron’s reply was expected. Only after the fourth and longest pause of 22 s does the child contribute a turn to the conversation (line 9), but the reference of his turn seems disconnected with what immediately preceded, hence unresponsive to Mom’s prompts. Mom’s 2-s hesitation to respond and her confused reply “What are you talking about.” emphasize the strangeness of Aaron’s turn. He simply appears to have launched into another subject without preparing Mom for the shift—and in fact the incomplete construction of his turn, ending with a preposition, seems designed to obtain a collaborative completion by the interlocutor (Lerner 1996), as if he presumes Mom should know what he is talking about. After she asks for clarification (in line 11), he responds with a revised version, “After two more classes I can do a private lesson,” and then when met with confusion for a second time (“What are you thinking about”), Aaron replies with “Lottie,” the name of his ballet teacher (line 14). Mom finally recognizes what Aaron is referring to and then goes along with his topic shift to discuss Aaron’s ballet lessons and his desire to have private lessons rather than a group class.

At first glance, Aaron’s topic-shift seems wholly inappropriate and even inconsiderate of his interlocutor, who needs to ask for clarification twice in order to comprehend the shift. However, his out-of-place statement is actually responsive to one of Mom’s earlier turns, though not in the sense that she had intended. One of Mom’s usual methods of regaining Aaron’s focus when he appears distracted or withdrawn is by asking the question “What are you thinking about.” With this familiar utterance, she solicits his reengagement via the disclosure of his inner thoughts. Therefore, it is noteworthy that in line 5, Mom’s question “what do you think.” is similar to this usual attention-getting device—even though in this context her turn was clearly referring to the proposition of “How about two more peas?” and therefore meant to be responded to with

compliance rather than interpreted literally. Furthermore, when looking at this exchange with a lens that delineates turns as social actions, it becomes apparent that Aaron is pursuing a very specific goal with this ‘inappropriate’ topic shift: that of diverting Mom’s attention from her aim of getting him to finish his peas. He first does not reply and remains silent, but Mom’s persistence is eventually met with a conversational move by Aaron that is so out-of-place and confusing that Mom is moved to respond to it instead of continuing to pursue her objective. In discussing a plan for ballet lessons, Aaron is very engaged and the exchange unfolds for approximately 7 min.

We can thus see that, when viewed from a perspective of language that acknowledges its potential for social action, we can reappraise Aaron’s move as functional and even strategic, rather than simply indicative of an underlying pragmatic deficit. His move pointedly responds via resistance and distraction towards Mom’s imperative to complete a non-preferred activity, and is successful in deferring his acquiescence.

In summary, we suggest that approaching language as social action offers an important dimension of intelligibility to the verbal communication of children with autism. Turns that might be perceived as inappropriate—because topically irrelevant, syntactically incongruent, or alternatively as too literal or formulaic—may emerge as sensible and fitting with respect to discernible courses of action that the child is pursuing. Of course, the autistic *modus operandi* with language may remain atypical even under an analysis informed by a sensitivity to social action and sequential context. However, such an analysis uncovers orderliness and purposefulness which traditional interpretation overlooks.

Echolalia

Echolalia, generally defined as the repetition of the speech of others, is one of the defining features of autism spectrum disorders and one that has been noted since the first description of childhood autism by Kanner in 1943. This language phenomenon has been associated with a proclivity towards sameness, an inward orientation, and an impoverished repertoire of communicative actions. Although Kanner acknowledged that echoes were sometimes used functionally, to offer an affirmative response to the interlocutor, echolalia was considered, until well into the late 1960s, a dysfunctional phenomenon, governed rigidly and obsessively by asocial preoccupations (e.g. Carluccio et al. 1964).

The work of Fay (1969) and Barry Prizant and associates (Prizant and Duchan 1981; Prizant and Rydell 1984) changed the perspective on echolalia by documenting

cognitive and communicative functions that echoic behavior can serve for children with autism. More recent studies informed by conversation analysis have deepened further our understanding of the communicative valence of autism echolalia (e.g. Local and Wootton 1995; Sterponi and Shankey 2014; Tarplee and Barrow 1999; Wootton 1999). Through the analysis of sequential position, pitch contour, and tempo of delivery, these studies have revealed variability that has debunked the assumed lack of processing and communicative intent behind immediate and delayed echoes.

Echoic behavior was observed in all three children in our study. In looking at when repetitive utterances were produced and what they accomplished, we found that echolalia responded to discernible interactional trajectories set up by the interlocutor, which the repetitive utterance sidetracked or redirected.

Analytic sensibility to language as mode of experience affords further nuance into the analysis of echolalia: It is commonplace to say that the words of others give us access to their experience. A phenomenologically infused perspective on language substantiates this lay idea by suggesting that it is through the interpenetration of language and experience that language affords more intimate contact with the perspective of another person. Thus, by appropriating and reanimating the words of another, one can, in a sense, “try on” another’s perspective (see also Urban 1989).

To illustrate the value of a sensibility to language as mode of experience for the analysis of autism echolalia, we examine an interactional sequence, again from Aaron’s data. In this sequence, the child is drawing with his grandmother seated beside him. He has been sketching portraits of himself and his grandmother engaging in activities from the same evening, and is now recalling and illustrating an event from earlier in the day with his mother and grandmother at church. Throughout this episode, Aaron alternates between explaining to his grandmother what he is drawing or preparing to draw, and voicing what he eventually confirms to be a dialogue from a past experience of following his teacher’s instructions while doing art in the classroom:

Extract 3—Drawing with Grandma (Aaron, Tape#8)

1	GRANDMA	are you drawing me again?
2	(4.0)	
3 →	AARON	color correct.
4	GRANDMA	color correct. °that’s right.°
5	(2.5)	
6 →	AARON	not wro:ng.
7	(7.5)	
8	AARON	now we need <u>eyes</u> .

9	GRANDMA	mm hm.
10	AARON	for grandmama.
11	GRANDMA	((chuckles)) that's right. (very good.)
12	(6.0)	
13 →	AARON	do it correct. (.) when you get grandmama, (1.0) when you get it, finish your work.
14	GRANDMA	I like that lipstick.
15	(2.5)	
16 →	AARON	like that.
17	GRANDMA	mm hm.
18 →	AARON	(look) great. this is correct.
19	GRANDMA	[uh huh.
20 →	AARON	[this is the correct answer.
21	GRANDMA	mm: hm.
[...]		
41 →	AARON	draw correct.((palatal click sounds)) draw my work. (0.8) if you finish my MOUTH (.) s-LIPSTICK. you wa-(.) do you any mouths? (.) CHECK. check. do you HAVE any eyes? CHECK. Check.
42	GRANDMA	((chuckles))
43 →	AARON	do you have any noses? CHECK check.
44	GRANDMA	((chuckles))
45 →	AARON	(when) you have any hair? CHECK. check.
46	GRANDMA	is that what your teacher says?
47	AARON	yeah,
48	GRANDMA	well a-she's a good teacher.
49	(3.0)	

Aaron begins to shift into delayed echolalia in line 3, when he characterizes his coloring with “Color correct.” In this turn and the ones following, his utterances are slower and more thoroughly articulated, with noticeable stress placed on utterance final words. These lines are repeated with a stilted, almost staccato rhythm that comes across as somewhat stern and authoritative. After several exchanges in which Grandma attempts to comment on the drawing or on Aaron’s vocalizations, to which she is met with minimal or no response, she appears to realize that Aaron is repeating his teacher and proffers an understanding check (in line 46) which he responds to affirmatively. After this, Grandma responds to Aaron’s performance as teacher with laughter and encouragement.

In this sequence we can observe not only the facility of language to act as a scaffold for physical action, that is—Aaron’s repetition of his teacher’s instructions of how to correctly draw faces facilitating the completion of his own drawing in the present. The indexical property of language is particularly salient in this sequence, layering a previous situation into the present so that Aaron is simultaneously in two places, with his grandma drawing and in the classroom *listening* to his teacher’s instructional directives for the

same activity. Therefore what *prima facie* could be interpreted as a sequence saturated with delayed echoes is in fact a compelling example of the experiential quality of language. Aaron’s performance comes alive through his dynamic recreation of the event, in much the same way as an actor makes the division between his identity as actor and character so transparent as to be experienced as both simultaneously. And furthermore, he is experiencing this transportative shift into both his recollected perspective as a student and an imagined one as the teacher—his modulations of volume and tone (slow, authoritative, and clearly articulated for the teacher, and the quieter, echoic confirmations of “check” from the students) indicate that he is actually trying on the role of the teacher giving instruction to a classroom of pupils even as he recalls his own experience as a student.

We thus suggest that in animating the voices directed to him the child displays an understanding of the social and interpersonal nature of the interaction in which he was involved and those utterances were produced. In addition, in reenacting an interpersonal event and animating the voices of others, the child not solely maintains the “perspective-as-observer” but also assumes the viewpoint of the interlocutor. We thus invite to reappraise echolalia with a sensibility toward the experiential affordances that language yields: the repetition of an other’s utterances is evidence of a difficulty in self-other relatedness and at the same time can be thought of as mechanism to experience the other, or to access the experience of the other. In this sense, echolalia can be interpreted as a form of perspective-taking.

Discussion

In this article, we have integrated theoretical insights of discourse analytic approaches into a framework that expands the traditional view of language as referential system to acknowledge its functioning as form of social action and mode of experience. Furthermore, the framework dispenses with the idea that utterances can be examined in isolation, as outcome of speaker’s cognition, to promote a view of speech as interactional accomplishment, where interlocutors mutually construct their turns at talk. We have then demonstrated that adopting such perspective on language, inclusive of its multidimensionality, engenders reframing our vision of the most salient features of autistic speech, i.e. pronoun atypicality, pragmatic deficit and echolalia. More specifically we have argued that the insights of discourse analytic approaches serve to complexify traditional deficit interpretations of autistic language.

Investigating autistic speech as interactional accomplishment, social action and mode of experience does not

dismiss the child's difficulties with language-in-interaction, which remained apparent in our examination. Our analysis, however, has revealed that these difficulties are differentially manifested in relationship to discernible interactional frames or courses of action, often set up by the interlocutors. In addition, we have suggested that the child's difficulties sometimes also manifest precisely in the child's efforts to overcome them. Thus, prototypical features of autistic language appear not solely as expressing an underlying neurological condition, but as responses to contextual circumstances and as efforts of the child at finding his way in interaction.

The theoretical and methodological contributions of discourse analytic approaches have implications that extend beyond offering much needed nuance and caution to mainstream research on language and autism. These implications include general approaches to intervention—to supporting language development and social engagement. If we regard stereotypical features of autistic language as manifesting deficits alone, we are likely to make attempts to encourage the child to suppress or replace them. Indeed many interventions call for early abatement of those features (e.g. Carr et al. 1975; Foxx et al. 1988). Consider what would follow, by contrast, from an appreciation that these linguistic features often manifest important sensitivities and competencies, as we have illustrated in our data extracts.

From such a vantage, we may conceive of interventions with the aim of building on and scaffolding these developing abilities. Such efforts would require from the clinician a commitment to meaning, namely the assumption that the child's utterances, even those that seem most atypical, are meaningful forms of interaction with the world. A commitment to meaning would compel the clinician to ask what the child is doing with language in any given instance—what they are responding to, what course of action they are pursuing or resisting, and how the sound and form of language may be significant to their experience of the interaction and the world. Supporting and scaffolding these efforts would often mean following the child's lead, so to speak, thereby enabling more complex, successful and authentic social engagement with the adult than would otherwise be possible. On this regard, the insights generated by discourse analytic studies are consonant with work on joint attention in both typical and atypical population, in which maternal propensity to follow the child's focus of attention (*vis-à-vis* redirect it) was positively correlated with more sustained engagement in the ongoing joint activity and the child's vocabulary development (Tomasello and Farrar 1986).

As the autism scholarly community embraces the contribution of discourse analytic approaches to the study of

communication in autism—of which this special issue is remarkable testimony—ahead of us is the challenge of creating a fruitful dialogue across research strands.

Author Contributions Laura Sterponi is responsible for the study design and the data collection. Both authors have made substantial contributions to the analysis and interpretation of the data, have been involved in drafting the manuscript, and have given final approval of the version to be published.

Appendix: Transcription Notation

Notational conventions employed in the transcribed excerpts include the following:

.	The period indicates a falling, or final, intonation contour, not necessarily the end of a sentence
?	The question mark indicates rising intonation, not necessarily a question
,	The comma indicates 'continuing' intonation, not necessarily a clause boundary
:::	Colons indicate stretching of the preceding sound, proportional to the number of colons
> <	The combination of 'more than' and 'less than' symbols indicates that the talk between them is produced noticeably quicker than surrounding talk
< >	In the reverse order, they indicate that a stretch of talk is markedly slowed or drawn out
=	Equal sign indicate no break or delay between the words thereby connected
-	A hyphen after a word or a part of a word indicates a cut-off or self interruption
<u>word</u>	Underlining indicates some form of stress or emphasis on the underlined item
WOrd	Upper case indicates loudness
(())	Double parentheses enclose descriptions of conduct
(word)	When all or part of an utterance is in parentheses, this indicates uncertainty on the transcriber's part
()	Empty parentheses indicate that something is being said, but no hearing can be achieved
(1.2)	Numbers in parentheses indicate silence in tenths of a second
(.)	A dot in parentheses indicated a 'micropause', hearable but not readily measurable; ordinarily less than 2/10 of a second
[Separate left square brackets, one above the other on two successive lines with utterances by different speakers indicates a point of overlap onset

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