

Getting dressed as a social activity:

The interactional competence of an autistic teenager who doesn't use speech

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Abstract

Up to 25% of children diagnosed with autism spectrum disorder are classified as “nonverbal.”

Building on interactional research on the communicative skills of autistic children and of individuals who do not use speech, this article uses video data to examine the interactional competence of an autistic bilingual Latino teenager who does not use speech to communicate. A comparison of multiple instances of the teenager’s getting-dressed routine shows that contrary to the clinical framing of this routine as individualized and efficiency-oriented, getting dressed can be a social achievement that relies on the collaboration of multiple social actors in community settings. While a core feature of an autism diagnosis is social and communicative impairment,

the analysis demonstrates that autistic interaction is highly social and richly communicative as well as affectively engaged.

Keywords: autism, collaboration, embodiment, routine activity, sociality

Introduction

In keeping with what has been framed from a neurotypical standpoint as a “war on autism” (McGuire, 2016), traditional research on autism is clinical, experimental, intervention-driven, and deficit-based. Most studies view autism through a pathologizing, ableist, and dehumanizing lens (Broderick & Ne’eman, 2008) that emphasizes what autistic persons purportedly cannot do (e.g., lack of eye contact, lack of joint attention, lack of emotional expression, lack of social connection) rather than examining their many capabilities and strengths. Clinical research often asserts that autistic children are deficient in crucial social communication skills and are thus unable to interact effectively with others. Such research is framed as “helping” these children develop “essential” skills through interventions that impose a specific way of communicating—namely, the way neurotypical children do.

In this article, we argue for an understanding of the communicative practices of autistic children as evidence not of incompetence but of competence. The concept of interactional competence that we utilize is rooted in the foundational insight of interactional analysis: Everyday human communication is a highly sophisticated, delicately balanced system of coordinated action that requires a great deal of knowledge and skill from participants (Enfield & Levinson 1996; cf. Psathas, 1990). The term *interactional competence* appears without formal definition in several interactional studies of autistic children’s communication (e.g.,

Korkiakangas & Rae, 2014; Ochs & Solomon, 2010). Building on this work, we define *interactional competence* as the observable ability to jointly produce a sequence of action through talk and/or embodied communication, including the initiation of action as well as sequentially appropriate responses to prior action. Interactional competence therefore has the following characteristics: (1) It is empirically identifiable through detailed analysis of interaction; (2) it is enacted through the use of well-described interactional machinery, such as interactionally coupled utterances (i.e., adjacency pairs) and sequentially organized embodied actions; and (3) it is inherently social and relational rather than cognitive and individual. For this reason, any evaluation of an individual's interactional competence must also consider other participants' contributions to the interaction.

This article is grounded in ethnographic interactional analysis, which provides a rigorous methodology for directly examining social interaction while illuminating human experience through intersubjective empathy with participants (Solomon, 2010a). Research on autism from this perspective centers autistic personhood and agency and thus advances the goals of the neurodiversity movement, a growing intellectual and social justice movement that advocates for the civil rights, inclusion, and self-determination of autistic and other neurodivergent people (Singer 1999). Following practices promoted by this movement, we use terms preferred by many members of the autistic community, especially identity-first language (e.g., *autistic people*) rather than person-first language (e.g., *people with autism*). We also use community-preferred terms like *nonautistic* rather than deficit-based terms such as *normally/typically developing*. As such language suggests, the neurodiversity movement promotes the reconceptualization of autism through a human diversity lens (Sarrett 2012), challenging the assumption that autism is a "disorder" that needs to be "fixed" or "cured."

Ethnographic interactional methods align with the goals of the neurodiversity movement by focusing on diverse ways of being and of experiencing the world. Such research enables the detailed investigation of autistic people's abilities, unlike artificially controlled research conducted in clinical or experimental settings, which tends to minimize or overlook these capabilities (Maynard & Turwetz, 2017; Sterponi & de Kirby, 2017). In these studies, researchers analyze audio- and video-recordings of social interaction, often in everyday environments such as the home or school (e.g., Dickerson, Stribling, & Rae, 2007; Korkiakangas & Rae, 2014; Ochs & Solomon, 2004; Solomon, 2010b; Sterponi & Shankey, 2014). This approach typically examines autistic children's practices in their own contexts (i.e., during daily activities with familiar interactional partners) and on their own terms (i.e., doing what makes interactional sense to them within these contexts), without being prompted by outsiders.

While interactional research on autism offers an invaluable counterpoint to clinical studies, much of this work focuses on people who use spoken language. It has been estimated that up to 50% of autistic children rarely or never use speech to interact with others, but there have been relatively few interactional studies of such children. These studies, which examine the communicative use of embodied resources like gestures, nonlinguistic vocalizations, eye gaze, tapping, and laughter (e.g., Auburn & Pollock, 2013; Chen & Kwong 2016; Damico & Nelson, 2005; Dickerson, Stribling, & Rae 2007; Ochs, Solomon, & Sterponi 2005; Stiegler, 2007), demonstrate that interactional methods are especially well suited to challenge deficit views of social actors who do not use speech to communicate (Goodwin, 2004). Further research is crucial both to enhance understanding of the communicative practices of autistic young people who do not use speech and to shed light on the shared human capacity for social interaction.

The following analysis focuses on a specific context, the getting-dressed routine. In clinical autism research, getting dressed is conceptualized as an individual, personal activity and is often characterized as “self-help” or “self-care”; formal intervention programs to train autistic children in dressing skills aim to improve “efficiency” and “independence” (Çetrez İşcan et al., 2016; Fantuzzo & Smith, 1983). However, from an ethnographic interactional standpoint, daily embodied routines like getting dressed are not contexts for intervention but natural research settings in which children’s interactional competence can be recognized and described more fully and precisely. Research on children’s routines, such as having a meal or getting ready for bed, has identified several characteristics that make these activities key sites for understanding children’s social interaction (e.g., Goodwin, 2007; Lerner, Zimmerman, & Kidwell, 2011; Sirota, 2006; Tulbert & Goodwin, 2011). Daily embodied routines are spatiotemporally predictable in that the sequence of tasks is repeatedly performed through specific embodied and, often, linguistic actions carried out at specific times and places, thus providing a consistent (i.e., semi-controlled) setting for data collection. Yet such routines are also interactionally contingent, produced anew in each instance in collaboration with others. Far from being mere rote sequences, then, routines are complex achievements that require considerable interactional competence from all participants. Moreover, much of the above research demonstrates that routines are not only task-based but also affect-laden, emerging in conjunction with a range of emotional stances and often functioning as a source of social connection, enjoyment, and love.

Daily embodied routines are especially important for understanding the interactional competence of autistic children, and particularly those whose communicative practices are primarily embodied, because they constitute a “domain of orderly social coordination” where autistic children are more likely to display interactional competence (Ochs & Solomon 2010:

76). Many autistic children also find the predictability of routines comforting (Ochs et al., 2004), in contrast to unfamiliar clinical experiments and interventions. At the same time, because routines are also partly unpredictable, participants must manage interactional contingencies from moment to moment and thereby enact interactional competence. Finally, as sites of social connection and emotional encounter, routines are often deeply meaningful to autistic children beyond completion of the task at hand, keeping them engaged for an extended period. Indeed, we argue that for autistic young people, social and emotional connection may play a more important role than efficiency in carrying out “self-care” and other embodied routines, a reframing of the traditional clinical understanding of such routines. (On autistic people’s rich affective lives, see Sterponi & Chen 2019.)

This article examines the interactional competence of a bilingual Latino teenager, José (a pseudonym), who does not use speech as he participates in his daily getting-dressed routine with family members. We show that José skillfully interacts without speech by drawing on various interactional resources, including receptive knowledge of Spanish and English, vocalizations, and embodied actions. Our analysis demonstrates that he orients to daily embodied routines not as solitary mechanical tasks but as socially significant interactions that involve both collaborative problem solving and emotional pleasure. Based on our findings, we challenge deficit-based view of most clinical autism research by arguing that the interactional competence of autistic—and nonautistic—people is not a set of individual characteristics or traits but rather an ability that is socially distributed and jointly accomplished.

Data and Methods

José was fourteen years old at the time of data collection in October 2017. He was diagnosed as autistic at the age of three and was also clinically classified as “nonverbal,” meaning that he did not use speech to communicate with others; instead, he interacted using a combination of vocalizations and embodied resources such as eye gaze, gesture, and touch, as well as a bilingual computer tablet app designed for those who do not use speech. At the time of the study José lived with his family in a working-class coastal city in Southern California; both Spanish and English were used in his home. The other participants are José’s mother “Mami” (‘Mother’) and José’s sister “Hermana” (‘Sister’), who was twenty years old at the time of the research. The siblings’ father chose not to participate in the study.

It is important to note that neither author is autistic, a limitation of most autism research and one that is a focus of critique among researchers who are themselves autistic (e.g., Kapp, 2020; Milton, 2019). We have tried to mitigate this limitation to the extent possible in several ways. To begin with, we ground our work in the insights of autistic researchers and activists, and we use ethnographic interactional methods to place José’s perspective and practices at the center of our analysis. In addition, a draft of this article was shared with the family for their feedback and the videos were shared with José. Moreover, the first author, Erika, is a bilingual Latina who is a longtime friend of José’s sister and knows him and his family well. Erika got to know José prior to the study through her volunteer work at a city-funded recreational program for autistic and other disabled youth in which he was a frequent participant. An undergraduate major in psychology at the time, she noticed that her personal experiences of interacting with José in the program did not correspond to the clinical view of autistic persons as socially and communicatively impaired, which she had encountered in her psychology classes. She witnessed firsthand the complex and effective ways that José communicated with coaches, volunteers,

teammates, and family members without the use of spoken language; she observed similar communicative skills in his family interactions during her visits to their home.

Because José was not considered able to give informed consent for this study, his mother provided consent on his behalf. Erika requested that the family video-record their day-to-day interactions while paying special attention to José's willingness to be recorded. She explained that she wanted to document and analyze José's abilities as opposed to focusing on his supposed impairments. This participant-centered method of data collection ensured that the family had primary control over what and when to record while minimizing disruption of their daily routine. No detailed guidance was given regarding what or how to record, other than to focus on everyday interactions between José and other members of the family, such as mealtimes. The presence of the camera became analytically relevant in some interactions, as we demonstrate in our analysis.

Interactions were recorded for three consecutive weeks, yielding approximately four and a half hours of video data. This data set was indexed by activity context and inductively coded for José's communicative resources, such as pointing, eye gaze, facial expression, and body positioning. The video data that José's family members recorded consisted of a variety of routine activities: having lunch at the dining table, doing household chores, interacting with the family dog, and going for a walk in the neighborhood park. Family members may have chosen to record some interactions and not others with the researchers in mind; the data set therefore is unlikely to represent a comprehensive picture of family activities. Nevertheless, it provides detailed documentation of José's daily embodied routines. We selected the getting-dressed routine for analysis as a family activity that yielded extensive analyzable video data in which José was a central participant.

Interactional competence was not the initial focus of analysis but emerged through repeated viewing of the video data. Evidence for interactional competence was identified through turn-by-turn analysis of multiple instances of the getting-dressed routine. These instances were transcribed using a set of transcription conventions developed for the representation of embodied interaction and informed by the Jeffersonian transcription system as well as the Santa Barbara system for discourse transcription (Du Bois 2011).

Our analysis focuses on interactional structures in the getting-dressed routine. It might be expected that such structures would prominently include directive/response sequences (Goodwin 1980a), which are common elements of embodied daily routines in caregiver-child interaction (Goodwin & Cekaite 2018); we analyze these sequences when they arise, but they are relatively rare in the data below. Much more frequent are what we term *action/assessment sequences*, in which an initiating action by one participant receives an assessment (e.g., confirmation, indication of trouble) by another participant. These sequences organize the complex joint activity of getting dressed in a stepwise fashion, an interactional format that has been shown to be particularly effective in supporting autistic children's needs (Rendle-Short 2014). José plays a central role in initiating and sustaining these sequences: He regularly produces the initiating action and then uses eye gaze to solicit an assessment from his interactional partner. This use of eye gaze has also been documented in previous interactional research on autistic children who do not use speech, as evidence for "a level of orderly social coordination heretofore not attributed to children severely affected by autism" (Ochs & Solomon 2010: 85). Our analysis provides additional evidence for the social skills underlying autistic interaction by showing in detail the interactional competence of José—and, by extension, other autistic young people who do not use speech—in carrying out daily embodied routines in collaboration with others.

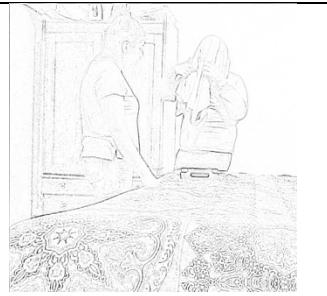
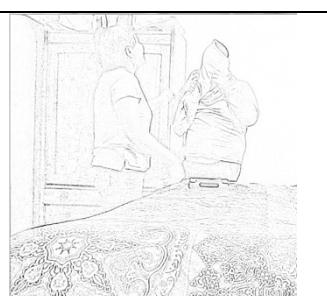
Analysis

The analysis examines three examples of José's getting-dressed routine, which represent varying participant frameworks as well as varying levels of success. We consider success as both practical, as indicated by continuing progress through the routine, and relational, as indicated by the participants' mutual engagement and affective stances. We focus on examples in which trouble arises, since managing and resolving trouble in an activity in progress highlights the complex interactional work involved even in a familiar routine. In the first example, in which José's interactional partner, Hermana, is an active participant and the camera has been placed in a fixed position, the routine is practically as well as relationally successful, despite the fact that trouble arises with the task. In the second example, when José's interactional partner, Mami, operates the camera and participates less actively, the routine is less successful, both practically and relationally. In the third example, Hermana holds the camera but maintains a high level of participation, and the interaction is once again successful in both practical and relational terms.

Joint participation in the getting-dressed routine

As seen throughout Example 1, José and Hermana orient to the getting-dressed routine as a highly social activity, which helps them to overcome several challenges as José puts on his shirt. As Example 1a opens, the siblings are in José's bedroom; he stands beside the bed while Hermana stands next to him. The camera is on the dresser on the other side of the room. José has just picked up the shirt from the bed and prepares to put it on.

Example 1a (Week 1)¹

1 00:05:40	<José holds the shirt by the hem and looks at Hermana; Hermana meets José's gaze and nods>	
2 00:05:41- 00:05:42	<José pulls the shirt over his head while Hermana watches>	
3 00:05:43	<José tries to put his head through the shirt sleeve>	
4 00:05:44	Hermana: Uh oh. @	

5 00:05:45	Hermana: @@@@ <Hermana moves closer to José and lifts her right hand toward his head>	
6 00:05:45	<As José repositions the shirt, Hermana drops her arm, smiling>	
7 00:05:46	<As José puts his head through the neck of the shirt, Hermana steps back, still smiling>	

Throughout, both participants use embodied resources to organize the activity and especially to produce action/assessment sequences: Following most of his actions, José uses eye gaze to invite Hermana's assessment, while Hermana uses nods, gestures, and occasional touch as well as talk to offer her assessment in response. The first such sequence occurs in line 1, when José gazes at Hermana while holding his shirt hem in order to solicit her confirmation that his action is appropriate and that he should move to the next step in the routine.

The crucial role of action/assessment sequences becomes clear when trouble arises. When José takes the next action and starts to put his head inside his shirt sleeve (line 3), Hermana first

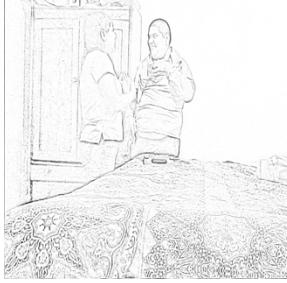
signals the problem by providing an assessment through talk, saying “Uh oh”; only then does she raise her hand to assist him (lines 4-5). This use of verbal assessment before embodied intervention conforms to the interactional preference for self-repair over other-repair (Schegloff, Jefferson, & Sacks 1977) and indicates that Hermana views José as a fully competent interlocutor who is capable of remedying the problem on the basis of this minimal assessment. Further evidence of Hermana’s orientation to José’s interactional competence is her affective stance: Her assessment in line 4 is followed by a brief laugh. This lighthearted signaling of trouble without specifying its nature both suggests that this situation has happened before and treats it as nonserious. That Hermana’s confidence in José is well placed is confirmed by his next action: Even as she lifts her hand, he has already begun to correct the mistake, and she drops her hand without touching him or his shirt (line 6) and then steps back as he continues to dress himself (line 7).

A similar dynamic is seen in the next instance of trouble. In Example 1b, Hermana initiates a joint assessment sequence that enables both siblings to simultaneously check the correctness of José’s action in putting on his shirt. This sequence is followed by a repair sequence in which, as in Example 1a, Hermana provides just the minimum prompting needed for José to solve the problem.

Example 1b

8 00:05:47	<Hermana extends her right arm toward José>	
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9 00:05:48	<p>Hermana: Okay.</p> <p>Ready?</p> <p><Hermana touches José's shirt collar></p>	
10 00:05:49- 00:05:50	<p><Hermana folds down the front of José's collar; both gaze downward></p>	
11 00:05:51- 00:05:52	<p>Hermana: <sing-song> Uh o::h.</p> <p>¿Qué tenemos <u>aquí</u>?</p> <p>('What do we have here?')</p> <p><José raises his gaze slightly></p>	
12 00:05:53	<p><Hermana taps her fingers on the tag inside the collar of José's shirt; José lowers his gaze to the tag></p>	

13 00:05:54	<p>Hermana: <sing song> The ^ta:g. <José raises his gaze to Hermana></p>	
14 00:05:54	<p>José: ^Hm::: <José quickly touches his shirt collar and smiles slightly; Hermana removes her hand from the collar; José and Hermana meet gazes></p>	
15 00:05:54	<p>Hermana: ¿Dónde va?= ('Where does it go?') <José and Hermana hold gazes; Hermana makes an open-handed appeal gesture and then lowers her arms></p>	
16 00:05:55- 00:05:57	<p><José begins to turn the shirt while maintaining mutual eye gaze with Hermana; Hermana nods> José: <sing-song> =^Hm-m:-m:-m:.</p>	

Through both talk and touch, Hermana engages José in the shared act of assessment: She first says, “Okay. Ready?” (line 9) and then leans in to fold down the front collar of his shirt, establishing joint attention. At this point she says, “Uh o::h” for the second time, with a playful sing-song intonation (line 11), highlighting that a new problem has arisen. The nature of the trouble is only specified gradually, however, as she first asks, “¿Qué tenemos aquí?” ‘What do we have here?’ (line 11) and then answers her own question both verbally (“The ^ta:g”)—again with a sing-song intonation—and with repeated taps on José’s shirt collar (lines 12-13). However, as in lines 4 and 5 above, she does not explicitly direct José to reposition the shirt, indicating that this hitch in the routine has also occurred before and that she expects him to be able to solve the problem without her direct intervention.

José moves to correct the problem, quickly touching the shirt collar and almost swatting his sister’s hand away in the process (line 14). While doing so, he hums and smiles slightly as he looks at her, demonstrating that he too recognizes the problem and is not dismayed by it. After Hermana asks, “¿Dónde va?” ‘Where does it go?’ (line 15), the siblings engage in another action/assessment sequence: José continues to gaze at her as he adjusts his shirt, and she gives a nod of approval (line 16). At the same time, he hums, using a sing-song intonation similar to Hermana’s in lines 11 and 13; this prosodic resonance (Du Bois 2014) suggests that José, like Hermana, is orienting to the minor trouble in a playful way.

In the final part of the example, further difficulties lead to an upgrading of Hermana’s role in the activity: She physically identifies the problem and then verbally initiates a directive/response sequence. At the end of the example, however, José reasserts his right to guide the activity by initiating a final action/assessment sequence before moving on unprompted to the next step in the routine.

Example 1c

17 00:05:58	<José puts his right arm into the sleeve, maintaining eye gaze with Hermana>	
18 00:05:58	<Hermana raises her hand and holds the sleeve; José shifts his gaze slightly and withdraws his arm from the sleeve>	
19 00:05:59	<Hermana points her hand at José and then drops her arm as she speaks> Hermana: Keep ^ <u>turning</u> please.	
20 00:06:00- 00:06:03	<José resumes turning the shirt; as he does so, he closes his eyes, then opens them and looks at Hermana, then looks away>	

<p>21 Hermana: <u>O:okay.</u> Ahora sí. 00:06:03- ('Now it's good'.) 00:06:04 <Hermana takes a step back; José begins to put his right arm through the sleeve></p>	
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The next action/assessment sequence occurs when José stops turning the shirt and begins to put his arm in the sleeve while continuing to gaze at Hermana (line 17). In this case, Hermana's assessment of José's action is entirely embodied: She holds the sleeve, making it impossible for her brother to proceed further until removes his arm from it (line 18). She next produces two directives, one embodied and the other verbal: She says, "Keep [^]turning, please" and makes a pointing gesture (line 19). In response, José turns the shirt to move the tag to the back, but as he does so, he closes his eyes, displaying that he needs no further guidance for this task. When he completes the action, he solicits an assessment through eye gaze (line 20), which Hermana provides (line 21). At this point, Hermana takes a step back, communicating to José the appropriateness of his actions, and he again begins putting his arm through the sleeve. For the next 15 seconds, not shown in the example, José puts his arms through the sleeves and pulls the shirt down without seeking Hermana's gaze and with only slight nods from her.

Example 1 demonstrates the high degree of sociality involved in José's getting-dressed routine: The participants work together to complete a shared task and to solve any problems that obstruct that goal; at the same time, both build social connection through affective resources such as smiling and lighthearted intonation. The routine is successful in this example not only practically but relationally, thanks to the siblings' attentive mutual engagement and affective

alignment. Throughout, Hermana's efforts both to guide her brother and to give him space to perform the task are carefully calibrated. In each instance of trouble, she limits her interventions to the minimum required to prompt José to remedy the problem himself, using stepwise cues that become increasingly directive as needed, and she literally steps back when it is clear that José has the situation well in hand (lines 7, 21). However, as we show in the next example, if José's interactional partner fails to participate actively and affectively, then the forward progression of the activity is disrupted and the emotional tone changes dramatically.

Reduced participation by the camera operator

In Example 2, the participation framework is substantially different: Mami holds the camera and does not actively participate in the routine. In this case, the disruption created by her divided attention results in a less successful activity from a practical as well as a relational standpoint: José encounters more difficulties, which take longer to resolve, and his affective stance is much more negative than in Example 1. As the example opens, José is sitting on a chair next to his desk, facing Mami, who is holding the camera. José has just started to pull a hoodie over his head.

Example 2a (Week 1)

1 00:10:34- 00:10:38	<José gazes at Mami/the camera; he moves his right hand into the shirt sleeve>	
2 00:10:38- 00:10:39	<José continues to try to put his arm into the shirt sleeve; he looks away, then back to Mami/the camera, with a slight grimace>	
3 00:10:40	Mami: Está ^mal. ('It's not right'.)	
4 00:10:40- 00:10:42	<José takes his right arm out of the sleeve and reaches for the shirt collar> Mami: ^Mhm.	

As before, José's main task is to position the shirt correctly, and in some ways, the example resembles the previous interaction. Like Hermana in Example 1, Mami intervenes when trouble arises, and like Hermana she produces only a minimal utterance to initiate repair ("Está

^{^mal} “It’s not right”; in line 3). This repair is followed by an action/assessment sequence: As José prepares to adjust the hoodie, Mami says, “^{^Mhm}” to confirm the action (line 4). In other ways, however, her participation is very different from Hermana’s. Her affective stance is neutral, in contrast to Hermana’s playfulness. Moreover, Mami does not contribute to the routine after this point, and thus José must figure out how far to rotate the hoodie without her involvement. Consequently, José takes much longer to complete this step than he did with Hermana in Example 1. As seen in the next portion of the example, Mami’s limited participation also alters the routine by preventing the completion of a series of action/assessment sequences that José initiates.

Example 2b

<p>5 00:10:42-</p> <p>00:10:44</p>	<p><José rotates the hoodie to reposition it; he first gazes at Mami/the camera, then looks away></p>	
<p>6 00:10:45-</p> <p>00:10:47</p>	<p><José continues rotating the hoodie; he closes his eyes, then gazes at Mami/the camera></p>	

7 00:10:48- 00:10:49	<José puts his right hand under the hoodie and pauses briefly, gazing at Mami/the camera>	
8 00:10:50- 00:10:55	<José looks down and places his hand in various positions under the hoodie>	
9 00:10:56	<José pauses briefly, his hand still under the hoodie, and gazes at Mami/the camera>	
10 00:10:56- 00:10:59	<José shifts his gaze away from Mami/the camera and begins rotating the hoodie again>	

11 00:11:00- 00:11:03	<José rotates the hoodie until he sees that the hood is in the front>	
12 00:11:04- 00:11:10	<José continues to reposition the hoodie>	
13 00:11:11- 00:11:13	<José pauses, gazing at Mami/the camera>	
14 00:11:14- 00:11:17	<José looks away and begins rotating the hoodie in the other direction>	

15 00:11:17- 00:11:21	<José notices the shirt sleeve and begins to put his arm in the sleeve, gazing continuously at Mami/the camera>	
16 00:11:21- 00:11:24	<José shifts his gaze to the sleeve and puts his arm through it; he then returns his gaze to Mami/the camera>	

In Example 2b, José continually but unsuccessfully works to engage Mami more fully in the activity. He initiates seven different action/assessment sequences, each time following his action with solicitation of feedback by looking in Mami's (i.e., the camera's) direction (lines 5, 6, 7, 8-9, 10-13, 14-15, 16). At times, he even pauses the action altogether (lines 7, 9, 13), something only briefly observed in the first example. With few contributions from Mami, José has to problem-solve on his own rather than jointly; her lack of participation also eliminates the stepwise interactional format that he and Hermana established in Example 1. José responds to this situation with embodied actions that communicate his increasing frustration (Example 2c).

Example 2c

17 00:11:25- 00:11:26	<José looks away and scratches his head with his left hand, raising his eyebrows>	
18 00:11:27- 00:11:30	<José puts his left arm through the sleeve, glancing briefly at Mami/the camera, then away>	
19 00:11:30- 00:11:33	<José strikes his right hand on the desk, gazing left, and then stands up>	
20 00:11:34- 00:11:37	<José pulls his hoodie down with his right hand while making popping noises with his mouth against the back of his left hand, his eyes closed>	

21 00:11:38- 00:11:40	Mami: <i>¿Qué?</i> (‘What?’) <José gazes at Mami/the camera and sighs>	
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José takes a series of upgraded affective stances that display his dissatisfaction with the interaction, but Mami does not respond until the very end of the example. He takes the first stance after successfully putting on the right sleeve of his hoodie and receiving no feedback from Mami: He shifts his gaze away, scratching his head while raising his eyebrows (line 17). The second stance occurs immediately afterward: When he successfully puts on the left sleeve, again without any response from Mami, he slaps his hand loudly on the desk beside him (line 19). Next, when he stands up to pull down his hoodie he closes his eyes, thus withdrawing Mami’s access to what is a key interactional resource for him, eye gaze; simultaneously, he presses the back of his left hand to his lips to produce popping sounds (line 20). Based on our other video data as well as information from his family, José produces these sounds when he is upset or frustrated. This action functions as a form of stimming, or self-stimulation, a common practice among autistic people that has semiotic and communicative as well as therapeutic functions (Nolan & McBride, 2015; Yergeau, 2016). Mami recognizes José’s stimming as a sign of frustration and asks “*¿Qué?*” ‘What?’ in a concerned tone (line 21). José’s frustration is thus evidently a surprise to her. Finally, in response to Mami’s expressed lack of awareness of how the situation is affecting him, José opens his eyes, looks in her direction, and gives a long sigh.

There is a vast difference between this interaction and the first example, both quantitatively and qualitatively. Example 1 takes 24 seconds, and Hermana produces 8 intonation

units comprising 28 syllables, while Example 2 takes 66 seconds, and Mami produces only 3 intonation units comprising 5 syllables. Moreover, in Example 1, Hermana provided extensive eye gaze as well as frequent, timely, and carefully designed verbal contributions. By contrast, Mami produces only two assessments at the very beginning at Example 2, as well as a brief query about José’s emotional state at the end. José’s vocal contributions and affective stances are also quite different in each interaction: In Example 1, he audibly hums and smiles as he works with Hermana to jointly solve the problem of orienting his shirt (lines 14, 16), while in Example 2 he displays irritation through a variety of embodied resources.

The analysis thus far indicates that for José, what makes the getting-dressed routine satisfying is not merely the familiar act of successfully putting on his clothes but also, crucially, the joint participation of a family member. The sociality of the routine requires his interactional partner to be actively involved: displaying interest, providing assessments, and contributing to the progressivity of the activity. When a physical object, such as a camera, is placed between the participants it creates a barrier that can disrupt the interactional aspects of the routine unless the camera operator takes extra measures. In Example 2, José frequently looks in Mami’s direction despite his inability to meet her gaze behind the camera; this repeated action may be a way of signaling interactional trouble. José also indicates that Mami’s participation is atypical by his pauses in the action. Although Examples 1 and 2 have the same outcome—José puts on his shirt in each case—they are clearly not equally satisfying to him.

Importantly, joint participation in José’s getting-dressed routine is required not for practical reasons but for relational ones. Example 2 shows that José is able to get dressed on his own, but when the sociality of the routine is removed, he displays hesitation and frustration. In fact, he does so precisely when he is most successful in carrying out the task, but without

contributions from Mami (lines 16-17, 18-19, 20). Conversely, José's orientation to Hermana as he gets dressed in Example 1 is not due to lack of practical ability; rather, it is because he expects this activity to involve joint participation. His engagement with Hermana in Example 1 as well as his persistent pursuit of sociality in Example 2 challenges clinical claims that autistic individuals lack social competence and are indifferent to or even avoidant of social interaction (see also Jaswal & Akhtar, 2019).

Full participation by the camera operator

Our final example, in which Hermana is holding and operating the camera, demonstrates that the getting-dressed routine can still be a highly interactional and social activity despite the physical mediation of the recording device. Unlike Example 2, here José does not seem bothered by the presence of the camera at all. Example 2 was recorded during the first week of data collection, while Example 3 was recorded during the second week; it is therefore possible that he became accustomed to the camera over the course of the study. However, there are also obvious differences in the social actions of José's partner in each example. First, Example 3 takes 80 seconds, during which Hermana produces 9 intonation units comprising 29 syllables; though less than in Example 1, this amount of talk is still much higher than Mami's in Example 2. Second, differences in affect are already evident in line 1 of Example 3a, in which José, seated on a chair facing Hermana, pulls up his pants, laughing as he does so. Hermana's ability to sustain the interaction both practically and relationally despite holding the camera indicates that loss of full participation is not inevitable when one participant's attention is divided (Haddington et al.,

2014); such an obstacle can be overcome when other resources are enlisted to sustain the interaction.

Example 3a (Week 2)

1 00:00:03-	Jose: @:@@@@ <José stands up, gazing at Hermana/the camera, while pulling up his pants>	
2 00:00:07-	Hermana: Good ^jo:b, okay, m::: what's next? <José smiles and gazes at Hermana/the camera, looking away briefly and then redirecting his gaze toward her>	
3 00:00:12	<José tilts his head to the left and shifts his gaze left, still smiling>	

4 00:00:13	<p>Hermana: <i>¿Tus ^zapatos?</i> ('Your shoes?')</p> <p><José redirects his gaze toward Hermana, still smiling></p>	
5 00:00:14- 00:00:15	<p>José: <i>^Hm:.</i></p> <p><José walks to his closet, smiling, with his head bent and gaze downward></p>	

Here and in Example 3b below, José's smile widens each time he passes near Hermana (lines 5, 7), suggesting that his enjoyment is directly connected to his ongoing interaction with her. (We do not have video of the earlier stages of this interaction.) José's merriment contrasts sharply with his strongly negative affective stancetaking in Example 2. And although Hermana does not audibly share in José's amusement in this example, the lighthearted tone recalls the similar playfulness of the siblings in Example 1.

Hermana's participation as camera operator also differs markedly from Mami's. In line 1, José initiates an action/assessment sequence and solicits her feedback, which she provides in line 2. She then prompts the next step in the routine with a question, "What's next?" (line 2). José tilts his head and shifts his gaze toward his closet, and when she asks a more specific question, "*¿Tus ^zapatos?*" ('Your shoes?') in line 4, José indicates his assent vocally and immediately goes to the closet (line 5). Hermana's questions are not quite directives but move in a stepwise

fashion toward greater specificity, thus maintaining the progressivity of the activity while acknowledging José as a full partner in negotiating the next step. José immediately and actively responds to each question, indicating his knowledge of the routine, yet he refrains from performing each step until it has been interactionally agreed upon.

The central role of sociality in maintaining progressivity is also evident in Example 3b, as José gets his shoes and begins to put them on. Here Hermana does not make any verbal contributions, and he becomes distracted; however, she quickly re-engages and gets the activity back on track.

Example 3b

<p>6 00:00:16-</p> <p>00:00:33</p>	<p><José goes to his closet, bends over and picks up his shoes, then stands up and pauses, looking inside his closet, then returns, gazing at Hermana/the camera></p>	
<p>7 00:00:34-</p> <p>00:00:37</p>	<p><José taps the desk as he walks back; he shifts his gaze and smiles as he walks past Hermana/the camera></p>	

8 00:00:38- 00:00:40	<José sits down and gazes at Hermana/the camera>	
9 00:00:41- 00:00:44	<José puts on his right shoe>	
10 00:00:45- 00:00:47	<José turns to look at the family dog walking past>	
11 00:00:47- 00:00:57	<José scratches his ankle>	

12 00:00:58	<Hermana sniffles; José raises his gaze slightly>	
13 00:00:59- 00:01:01	<José looks at his finger, then bites his nail while raising his gaze toward Hermana/the camera> Hermana: You oka:y?	
14 00:01:02- 00:01:04	<José bends and begins to put on his left shoe, gazing down> José: Mhm.	

José carries out a number of actions without soliciting or receiving any evident assessment from Hermana (lines 6-9). After putting on his right shoe, however, he becomes distracted by the family dog and his own itchy ankle (lines 10-11). Nevertheless, he remains closely attuned to Hermana and lifts his head when she sniffs, as if expecting her to speak (line 12). Hermana is equally attuned to José: As soon as he raises his gaze fully toward her, she checks on his well-being (“You oka:y?”; line 13). In response, José replies, “Mhm” and resumes putting on his shoes (line 14).

In the final part of Example 3, the siblings continue to collaborate while maintaining mutual engagement.

Example 3c

15 00:01:05- 00:01:06	<José puts his left foot on the floor with the shoe partially on and briefly raises his gaze to Hermana/the camera>	
16 00:01:07- 00:01:15	<José looks down at his left shoe, reaches down and removes it, and adjusts the tongue>	
17 00:01:16- 00:01:23	<José puts the shoe back on, sits up, and gazes at Hermana/the camera>	
18 00:01:24- 00:01:25	<p>Hermana: Okay José. Good ^job.</p> <p><José continues to gaze at Hermana/the camera></p>	

19 00:01:26- 00:01:27	<p>Hermana: Ciérrale ahí tu closet. (‘Close your closet’.)</p> <p><José shifts gaze to his left and begins to stand up></p>	
20 00:01:28	<p><José smiles slightly and walks toward the closet></p> <p>José: Hm hm.</p>	
21 00:01:29- 00:01:32	<p><José closes the closet door most of the way, then turns and gazes at Hermana/the camera while holding the doorknob></p> <p>José: Hm hm.</p> <p><José firmly closes the closet door></p>	

In the first part of Example 3c, the participants engage in an action/assessment sequence.

In lines 15 through 17, José puts on his left shoe; although a problem arises (line 16), he resolves the difficulty himself and then gazes at Hermana to invite her assessment (line 17), which she provides (line 18). This sequence is followed by a directive/response sequence; however, as in Example 3a, José has already anticipated the next step in the routine. When Hermana tells him to close the closet door (line 19), after she has produced only one word (*Ciérrale* ‘Close’) he shifts

his gaze toward the closet and begins to stand. Hermana's contributions, then, are crucial not for practical reasons but for relational ones.

As Example 3 demonstrates, sociality is not simply a matter of talk. Both Examples 2 and 3 involve extended periods of silence, but the talk that does occur is very different in each case. At the beginning of Example 3, Hermana offers praise to José when he successfully completes a step in the getting-dressed routine (line 2), and she does so again at the end of the example (line 18); the formulaic expression she uses in each case, "Good job," both acknowledges that José has advanced the progressivity of the activity and creates a transition to the next step. By contrast, in Example 2, Mami did not offer any encouragement, which slowed down the routine significantly as José repeatedly hesitated and unsuccessfully solicited assessments.

José's own verbal contributions in Example 3 are also noteworthy. Perhaps because of the lack of eye gaze as a resource, here José is more vocal than in the previous two examples. At several points, he signals verbal confirmation of the next step in the activity (lines 5, 20, 21), and he also produces a verbal response to a direct question from Hermana (line 14). In each of these instances, José is not simply vocalizing at random but instead producing talk carefully fitted to the interactional context; although his utterances are phonologically similar, each has a different prosodic form and interactional function. It is clear that his repertoire of utterances, though limited, allows him to communicate effectively with an engaged partner (Goodwin, 2004).

While José understands the getting-dressed routine as a social activity, not all his family members share his view. We know from ethnographic interviews with José's family that his mother's primary goal is for him to achieve independence, whereas his sister appreciates his current abilities and is mainly focused on his continued growth and learning. Thus, whereas Mami emphasizes José's autonomy over social connection in the getting-dressed routine,

Hermana is more collaborative and emotionally engaged. At the same time, Hermana's higher degree of social engagement also has consequences for the task at hand: José completes his components of the routine more efficiently when his actions are part of an interaction. In other words, when sociality accompanies an embodied "self-care" routine such as getting dressed, this situation both facilitates the execution of the practical task and also produces interactional competence, as participants work together to ratify each other as interactionally competent social actors. These findings have significant implications for how family members and clinicians can best support the well-being of autistic children and youth who do not use speech.

Conclusion

A recent survey article calls for an expansion of autism research in three directions, all of which our work aims to do: "(1) deepening our understanding of autistic communication beyond the verbal; (2) discerning autistic ways of emotional relatedness with the world of others; and (3) designing [or, in our case, identifying] contexts of sociality that reflect more inclusive models of cultural and neurological diversity" (Sterponi & Chen 2020: 282). Building on the principles of the neurodiversity movement, we have argued, in line with these and other scholars, that ethnographic interactional analysis is a powerful tool for shedding light on autistic people's communicative abilities. Using this methodology, we have demonstrated that interactional competence is not an individual trait but a social achievement that relies on the joint production of sequential action. Our analysis has further suggested that embodied routines like the one examined here are crucial in the lives of autistic young people, just as they have previously been shown to be for nonautistic young people, due to their role in constituting intimacy and sociality through family interaction. Indeed, such routines may be especially important for autistic

children and youth who do not use speech, providing a rich context for joint problem solving, practical accomplishment, and emotional connection.

While ethnographic interactional research recognizes embodied interactional practices as part of the range of human communicative diversity, traditional studies continue to devalue such abilities. For people whose communicative practices are doubly marginalized—those who are autistic and also do not use speech—deficit-based research is pervasive in its scope and dangerous in its effects. Even scholars who theorize interaction as a human universal have characterized autistic persons as outliers with social-interactional deficits (e.g., Levinson, 2006) and thus, by implication, as not fully human (cf. Goodley, 2003). Although some actions of autistic young people carrying out daily routines may appear to be “off-task” and therefore “inefficient” from a clinical, interventionist perspective, from an interactional perspective many supposedly problematic behaviors are better understood as emergent semiotic resources that facilitate rather than hinder interaction (Damico & Nelson, 2005). In short, for both practical and relational reasons, efficient action is not necessarily effective action, and daily routines can involve not only the progression and completion of an activity but also the emotionally rich sociality that may arise along the way. The success of such routines, then, extends well beyond the execution of mundane self-care tasks, instead going to the very heart of what it means to be human.

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Note

1 Transcription conventions:

- . falling intonation
- , level intonation
- ? rising intonation
- _ segment produced with increased volume
- : lengthened segment
- ^ raised pitch
- = latching, i.e., no pause between intonation units
- prosodically connected vocalization
- @ laughter pulse