

自閉スペクトラム症の青年との会話維持 ——療育者のストラテジーの検証——

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要旨

本稿では、会話分析の手法を用いて、他者とのコミュニケーションが困難と考えられる自閉スペクトラム症と診断された息子に対して、母親がいかにして会話を維持しているかを支援の観点から探求した。本研究で使用したデータは17歳の自閉スペクトラム症の日本人の青年と療育者との会話、15歳の自閉スペクトラム症のオーストラリア人の青年と療育者との会話の2種類、合計約11時間である。

分析の結果、日本人の母親とオーストラリア人の母親は質問形式の使用を繰り返し用いることで、息子とのやり取りを発展させていることが明らかになった。母親の行為は結果的に息子の発話の機会を増やし、会話を維持することに効果的であった。さらに、オーストラリア人の母親は命令文を使用したり息子の発話を繰り返したりすることで息子の発話の機会を増やし、相互行為への積極的な参加を促した。この母親の行為は教室内での相互行為において教師が学習者に対して積極的な参加を促進するために使用する教育的技法に似通っていた。本稿は、母親が息子に繰り返し質問し、その後、息子が応答するという形式が、他者との会話を維持することが困難であると考えられる自閉スペクトラム症の人の特性を改善するために利用可能であることを示している。本研究で得られた知見は、子供の発達支援センターや、特別支援学校、自閉スペクトラム症の人のための施設など、様々な場面で貢献できる可能性がある。

Abstract

This conversation analytic study explores how mothers maintain a conversation with their sons diagnosed with Autism Spectrum Disorder (ASD), who are considered to have difficulties communicating with others from the perspective of support intervention.

The data analyzed in the current study cover two sets of video re-

cordings of naturally occurring interaction, approximately 11 hours in total. The first set of recorded data was collected in Japan and consisted of interaction between a Japanese mother and her 17-year-old son diagnosed with ASD. While the second set of recorded data was collected in Australia and consisted of interaction between an Australian mother and her 15-year-old son diagnosed with ASD. The analysis revealed that the Japanese and Australian mothers expanded the sequences of interaction with their sons by repeatedly deploying questioning forms. Consequently, the mothers' practices increased their sons' opportunities to elaborate on their responses and were effective in managing, maintaining, and continuing conversations with their sons. In addition, the Australian mother employed an imperative sentence and repeated her son's utterances to boost his opportunities for expanding on his response and involving actively in the interaction. This mother's behavior was comparable to that of a teacher's pedagogical technique, which helps to facilitate active learner involvement in classroom interaction. This dataset demonstrates that the mothers' strategy of repeated questioning to their sons can be used to enhance the conversational skills of individuals diagnosed with ASD who are considered to have difficulty maintaining conversations with others. The findings of the current study may make valuable contributions in various settings, such as child development support centers, special needs schools, and facilities for people diagnosed with ASD.

Maintaining Conversation With Adolescents Diagnosed With Autism Spectrum Disorder: Exploration of Mothers' Strategies

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1. Introduction

This study examines, by employing the methodology of Conversation Analysis (CA), how mothers maintain conversation with their sons diagnosed with Autism Spectrum Disorder (ASD), who are considered to have difficulty communicating with others from the viewpoint of support intervention.

ASD is a range of mental disorders of the neurodevelopment type that begin in childhood and persist throughout adulthood. World Health Organization, 2023 reported that approximately one in 100 children has been estimated to have ASD worldwide. However, some well-controlled studies have described figures that are considerably higher: The cumulative incidence of autism in Japan is reported to be 2.75% for 5-years-olds (Sasayama, Kuge, Toibana, & Honda, 2021).

According to DSM-V (American Psychiatric Association, 2013), ASD is often diagnosed in early childhood, typically by the age of 2 or 3, and the symptoms may vary. Yet there are common symptoms among

individuals diagnosed with ASD. Some common symptoms include difficulties with the use of language and communication skill, such as initiating and maintaining conversation with others. Other characteristics are atypical patterns of behaviors, focusing on details and unusual reactions to sensations (World Health Organization, 2023). These features of people diagnosed with ASD were first identified by Leo Kanner, an American psychiatrist who is considered to be one of the pioneers in the field of autism research. He published a groundbreaking paper in 1943 called, "Autistic Disturbances of Affective Contact," in which he described a group of children who displayed a striking inability to relate to other people in a typical way. This paper is often considered the first description of autism as a distinct disorder. This avenue of research has expanded to include many studies that build on and support the findings of Kanner's report. For example, Baron-Cohen (1989) described difficulties with the pragmatic aspects of language, such as understanding and using comprehensible language, taking turns in conversation, and understanding and using social cues. Wing (1996) identified social disorders, communication disorders, and imaginative disorders as characteristics of those diagnosed with ASD, the so-called autistic triad. Moreover, Lord and Magill-Evance (1995) observed a day camp of three groups of children aged 5 to 16: those who were diagnosed with ASD, those with behavior disorders, and those who are typically developing children. Results suggested that children diagnosed with ASD had less time to interact with others than typically developing children, and also had lower-quality interactions when they played with others. Similarly, Sigman and Ruskin (1999) illustrated the social development of children diagnosed with

ASD. According to the authors, in approximately 40 minutes of observation, children diagnosed with ASD did not initiate interaction to other children and rarely responded to other children in social interaction.

2. Study on Intervention Programs for Individuals Diagnosed With ASD

Over the years, many researchers have emphasized the need of intervention programs for individuals diagnosed with ASD. Chin and Bernard-Optiz (2000) investigated whether children diagnosed with ASD could be trained to develop their conversational skills and whether the training causes changes in standard tests of theory of mind. The children were trained on ways to initiate a conversation, take turns, maintain a topic, and shift a topic appropriately. Results suggested that the amount of common interest displayed by the children diagnosed with ASD during conversations with their caregivers was increased during training sessions. Weiss and Harris (2001) examined a variety of helpful procedures for teaching social skills to people diagnosed with ASD, including programs that are mediated by (a) adults, (b) peers without any disabilities, and (c) children with autism. The authors also considered the entire classroom interventions. Through direct observation, the authors discovered that both adult-mediated and peer-mediated strategies were effective means of building social responsiveness. In addition, they found that the entire classroom interventions and the use of scripts are the most interesting strategies, and these are fruitful to build social skills. Moreover, Girolametto, Sussman, and Weitzman (2007) studied how

three pairs of autistic children and their parents changed as a result of participating in an 11-week social interactive model of language intervention. After the 11-week of intervention, children's rates of communicative acts, number of engagements in social interaction, and sequences initiated by children were measured based on videotapes of parent-child interactions, questionnaires, surveys, and parent reports. As a result, all three children displayed positive outcomes in terms of vocabulary and the number of engagements in social interaction. Additionally, remarkable progress was observed in children's initiation of social interaction.

Although majority of the intervention programs were targeted at improving the social skills of children diagnosed with ASD, some studies have discussed intervention for parents. For example, some aim to improve parents' skills in dealing with their children's problematic behaviors, while others target parents' understanding of children's behavior (Kaminski, Valle, Filene, & Boyle, 2000). These intervention programs have been evaluated as effective in terms of improving children's language skills, social skill development, and behavior management (McConachie & Diggle, 2007; Patterson, Smith, & Mirenda, 2012).

This paper, while taking into consideration the importance of the studies above, analyzes family interactions from the new perspectives, specifically, Conversation Analytic perspectives, through observations of moment-by-moment social interaction.

3. Conversation Analysis (CA)

3.1. Background

Conversation analysis (CA) is a qualitative approach that focuses on the study of naturally occurring interaction. The inspiration for CA came from Erving Goffman's approach to the study of human interaction (Goffman, 1963, 1964, 1967, 1983) and Harold Garfinkel's ethnomethodology (Garfinkel, 1967). The concepts and methods of Goffman and Garfinkel provided a catalyst for the development of CA by highlighting the significance for exploring the orderliness of everyday life. These concepts and methods were carried forward into the field of CA by Harvey Sacks in his *Lectures on Conversation* from the early 1960s (Sacks, 1992).

Sacks developed a method for studying the social order produced through the practices of everyday talk. As a consequence of the seminal work of its founding members, Harvey Sacks, Emmanuel A. Schegloff, and Gail Jefferson, by the early 1970s, CA had begun to emerge from sociology as an independent area of study oriented toward understanding the organizational structure of talk.

3.2. Topic Management of Individuals Diagnosed With ASD

In social interaction, conversations with other people are made up of proffering a topic to initiate conversation and responding appropriately to the topic proffered. Typically developing children acquire a range of conversation skills that maintain interaction with others during their preschool years. By contrast, individuals diagnosed with ASD manifest diffi-

culties initiating conversations, shifting topics, and maintaining topics. These are major reason why individuals diagnosed with ASD have difficulty communicating with others (Koegel, Park, & Koegel, 2014). Many researchers have illustrated the problems of maintaining and developing topics. Individuals diagnosed with ASD exhibit difficulty developing topics by providing new and relevant information. Instead, they repeat topics that are previously talked about and fail to relate their utterance to previous topics (Baltaxe, 1997; Bishop & Adams, 1989; Eales, 1993; Volden, 2002).

In recent years, a significant amount of research has demonstrated the importance of examining individuals diagnosed with ASD from an interactional perspective (Dickerson, Rae, Stribling, & Dautenhahn, 2005; Local & Wooton, 1995; Maynard, 2005). Dobbinson, Perkins and Bourcher (1998) discussed a case study of a woman diagnosed with ASD, focused on her disabilities in conversation, particularly her inability to initiate and maintain conversation. Tarplee and Barrow (1999) analyzed instances of delayed echoing produced in conversations between a 3-year-old child diagnosed with ASD and his mother. They discovered that the echoes produce by the child functioned in important ways as an interactional resource to participate in the reciprocal talk with his mother. Moreover, Stribling, Rae, and Dickerson (2007) recorded and analyzed six hours of activity in the classroom of a girl diagnosed with ASD. Although she had limited language resources, the analysis revealed her interactional competence to maintain conversations with others by deploying repetition practices, which are frequently seen in the speech of those diagnosed with ASD.

4. Data

The data analyzed in the current study come from two sets of video recordings of naturally occurring interaction, approximately 11 hours in total. The first set of recorded data was collected in Japan and consists of interaction between a Japanese mother and her 17-year-old son diagnosed with ASD, whose pseudonym in this study is Ten. Ten was diagnosed with ASD with intellectual disability at the age of 3 by a psychiatrist and a community health nurse. He had the medical examination because of a noticeable language delay and recurrent communication problems that his mother recognized when compared with children of the same age. At the time of data collection, he was attending a special-needs school for children with Down's Syndrome, intellectual disabilities, and ASD. The second set of recorded data was collected in Australia and consists of interaction between an Australian mother and her 15-year-old son diagnosed with ASD, whose pseudonym here is Duke. Duke was diagnosed with ASD at the age of 4 and 5 by combination of a speech therapist, a pediatrician, and a clinical psychologist. The medical examination was brought about by his mother due to his noticeable speech delay compared to his siblings and some problematic behaviors including tantrums and screaming. At the time, the data was collected, he was attending a special-needs school for children diagnosed with ASD, Down's Syndrome, mental health disability, and intellectual disabilities, which offers specialized learning outside the standard school curriculum.

5. Analysis and Discussion

The analysis revealed that the two mothers, a Japanese mother and an Australian mother, employed several strategies to maintain conversations with their sons diagnosed with ASD. First four examples presented here come from both sets of data in which mothers repeatedly deploy questioning forms to maintain conversations with their sons. The last instance exemplified come from the Australian data in which the mother used an imperative sentence and repetition of her son's utterance to boost his opportunities for involving in the interaction.

5.1. Deploying Repeated Questioning Forms

As noted earlier, individuals diagnosed with ASD recurrently manifest difficulty sustaining conversations with others. In Extract (1) below, a Japanese mother (M) maintains a conversation with her autistic son, Ten (T), by posing questions. The parts of the interaction that are of central interest to the analysis here are highlighted in bold.

(1) [Cat Park 00: 00]

01 M: *kyou wa: >Ten-chan< Nenkindou san de nani yatta no?*

today TOP Name TL Name TL at what did Q

“What did you do at Nenrindou san today?”

02 T: *ganbatta.=*

worked hard

“I worked hard.”

mother has interpreted his answer as not being an appropriate reply to her question. As shown in this extract, Ten shows difficulties in answering Wh-questions. A considerable number of studies have reported that children with ASD struggle to respond to Wh-questions (e.g., Daar, Negrelli, & Dixon, 2015; Goodwin, Fein, & Naigles, 2012; Secan, Egel, & Tilley, 1989). Instead of answering Wh-question, Ten, in line 4, utters, “*wasurechatta*.= (I forgot.)” In line 5, the mother attempts to close the sequence by repeating Ten’s utterance, “*wasurechatta*::: (You forget.)” and concludes her turn with laughter and completes the sequence with emission of, “*fu*::: *n* (Hmmm)”.

In this extract, the sequence is constructed with the mother’s questions and the son’s answers. When the son cannot answer a question, the mother pursues a response by posing a follow-up question. By doing so, the mother maintains the conversation with her son even when her son displays problems continuing interaction.

The next extract illustrates how the Japanese mother sustains conversation with her son in spite of his displayed difficulty answering Wh-questions.

(2) [taijyuu sokutei]

01 M: *Ten-chan kyou taijyuu hakatta no*::

Name-TL today weight measure: PST Q

“Ten-chan, did you check your weight?”

02 T: *taijyuu* (.) *hakatta*:

weight measure: PST

“I checked my weight.”

- 03 M: *nan kiro datta ka oboeteru:?=*
 what kilogram COP: PST Q remember
 “Do you remember how much your weight was?”
- 04 T: *=oboeteru.*
 remember
 “I remember.”
- 05 M: *nan kiro?*
 what kilogram
 “How much did you weigh?”
- 06 (2.0)
- 07 M: *nan kiro datta?*
 what kilogram COP: PST
 “How much did you weigh?”
- 08 T: (.)
- 09 M: *nan kiro datta?*
 what kilogram COP: PST
 “How much did you weigh?”
- 10 T: *a-a-a-u=*
- 11 M: ° ↑ n° *nan kiro dat [ta?]*
 huh what kilogram COP: PST
 “How much did you weigh?”
- 12 T: *[taijyuu] hakatta=*
 weight measure: PST
 “I weighed myself.”
- 13 M: =>*taijyuu hakatta* < *nan kiro datta ka oboeteru?*
 weight measure: PST what kilogram COP: PST Q remember

“Do you remember how much you weighed?”

14 T: *otousan kaette kuru?*

dad come. home

“Is Dad coming home?”

15 M: *wasurechatta?*

forget: PST

“Have you forgotten?”

16 T: *wasurechatta.*

forget: PST

“I forget.”

17 M: *so [kka,]*

that Q

“I see.”

The Mother’s turn opens with a question asking Ten if he weighed himself on that day, “*Ten-chan kyou taijyuu hakatta no.:* (Ten-chan, did you check your weight today?).” Ten responds with repetition of the mother’s utterance, “*taijyuu hakatta.:* (I checked my weight.)” in line 2. Although his answer is a partial repetition, Ten does not use the question marker “*no*”. Therefore, his answer can be considered as an appropriate response to the mother’s question. The mother then asks Ten’s exact weight, “*nankiro dattaka oboeteru.?* (Do you remember how much your weight was?).” In line 4, latching with his mother’s production, Ten answers with repetition of the final predicate component “*oboeteru*. (I remember.)”, while changing the upward intonation to final intonation. The Mother pursues Ten’s response in line 5, “*nankiro?* (How much did you

weigh?)” As seen in the silence in line 6, Ten has difficulties answering Wh-questions. The mother again asks his weight, “*nankiro datta?* (How much did you weigh?)” In line 8, Ten appears to attempt a response, but it is inaudible. She continues to ask Ten, “*nankiro datta?* (How much did you weigh?)”, in line 9, and Ten again endeavors to respond to her question but fails to answer. The mother yet again poses the question in line 11, “*nankiro datta?* (How much did you weight?)”. In line 12, in overlap with the final part of the mother’s utterance, Ten repeats his own answer from line 2. Latching with Ten’s production, the mother repeats his answer and inquires as to whether he remembers his weight. Therefore, in the next turn, Ten’s answer regarding his weight is held to be conditionally relevant. However, instead of answering his mother’s question, Ten abruptly shifts a topic by uttering, “*otousan kaette kuru?* (Is Dad coming home?)”. Having failed repeatedly to induce an answer from Ten, the mother provides an account for the absence of response, “*wasurechatta?* (Did you forget?)” (line 15). In the next line, Ten repeats the mother, “*wasurechatta.* (I forget.)”, and she then accepts Ten’s response.

In this extract, the mother pursues his response by repeatedly deploying questioning forms. Consequently, it enables the mother to sustain conversations with her son.

The following extract shows how the interaction is maintained by the Australian mother’s repeated questions, which is similar to the Japanese mother-son interaction illustrated above. Here, an Australian mother (M) begins conversation with a question asking her son, Duke (D).

(3) [swimming 2: 18]

01 M: **so:: have you got u:: m swimming (.) tomorrow?**

02 D: ye:: ah.

03 M: **and what period is swimming.**

04 D: session <two::>

05 M: session two:: (.) >°alright° < (.) **so have you got everything**

06 **ready for tomorrow?**

07 D: mmhm.

08 M: **pardon?**

09 D: ye:: ah.

10 M: yea:: ah (.) **where is it?**

11 D: in my room?

12 M: ok..

The mother initiates a conversation with the discourse marker “so” and an itemized news inquiry, “so:: have you got u:: m swimming (.) tomorrow?” Bolden (2009) examined the usage of “so” for prefacing sequence-initiating actions, highlighted the function of the preface “so,” as being used for the purpose of acquiring an interlocutor’s attention, especially in proffering questions. In response, Duke simply utters, “ye:: ah.” The mother, in line 3, inserts “and”, which indicates a continuation of the conversation (Schiffrin, 1987), and asks Duke, “what period is swimming.” This is a question that induces more detail in terms of the information provided. Duke explicitly answers the mother’s question by saying, “session <two::>” with the “two” uttered more slowly than usual. In line 5, the mother repeats Duke’s utterance and then receipts it with,

“session two:: (.) >°alright°<”. After a brief silence, the mother continues to deploy more questions, “so have you got everything ready for tomorrow?” Duke only produces, “mmhm.” The mother, in line 8, initiates repair with a common term for requesting clarification, “pardon?” Duke completes the repair by amending “mmhm.” to “ye:: ah.” The mother seems to confirm Duke’s repair and then maintains the sequence with him by marshaling more question, “yea:: ah (.) where is it?” Duke responds to the mother, “in my room.” In line 12, the mother accepts Duke’s response by saying, “ok:.” With the mother’s acceptance, “ok:.”, this sequence is completed. In this extract, the Australian mother also employs repeated questioning as a resource for maintaining a conversation with her son with ASD.

In the following, as with Extract (3), the analysis is focused on the way in which the mother sustains conversation with her son.

(4) [Duke 2019: 3: 34]

01 M: **is that gonna be my mother’s day present;**

02 D: ↑ hm:: m (.) ↑ maybe.

03 M: maybe?

04 D: °I’ve no idea.° =

05 M: =#no::: # that would be lovely. that would be a great present.

06 D: oh w’l I would like (.) to <paint it> to make it more better.

07 M: **would you:::;**

08 D: ((nod nod)) hmm.=

09 M: =**what color would you paint it.**

10 D: I’ll just say black.

11 M: oh: ↑ ::

12 D: black o: r (.) blue:.

13 M: >ok< **what if you were making it for me::**

14 **what color would you paint it.**

15 D: green.

16 M: green **why green.**

17 D: be: z it's your favorite ↑ color=

18 M: = ↑ oh you remember ha [hahahahahaha]

19 D: [heeheeheehee]

20 M: oh:: good on you darling hee. hhh

Prior this segment, the mother and Duke were talking about the wooden picture frame he was making at school. The mother asks if the picture frame is her Mother's Day present "is that gonna be my Mother's Day present;" Yet, this utterance is not only asking for information but is also hearable as a request for the photo frame as a Mother's Day present. In line 2, by uttering, "↑ hm:: m", Duke delays his response. After a micro pause, he says, "↑ maybe." Then the mother laughingly repeats Duke's utterance with rising intonation, which serves as a pursuit of answer to her request. In line, 4, Duke produces an ambiguous answer in a quiet voice, "°I've no idea.°" Duke's facial expression, body movement, and tone of voice exhibit an attempt to avoid the topic of a Mother's Day present. In line 5, the mother immediately responds with, "#no::: # " in a creaky voice, and again suggests the frame as a possible Mother's Day present, "that would be lovely. that would be a great present." Duke produces two hesitation tokens, "oh w'l". Research has shown that "Oh" is often

employed to express reluctance (Heritage, 1998) and “well” may be followed by a negative response (Heritage, 2015). Instead of continuing with the ongoing topic, Duke starts talking about painting the picture frame by uttering, “I would like (.) to <paint it> to make it more better.” In line 7, the mother says, “would you: ɔ” to align with Duke’s topic shift. In response, Duke nods twice and utters, “hmm.” Expanding the topic of painting the photo frame, the mother promptly asks Duke, “=what color would you paint it.” Duke, in line 10, succinctly responds to the mother, “I’ll just say black.” The mother says, “oh: ↑ ::” as if she is surprised at Duke’s answer of “black”. In line 12, Duke revises his answer and says, “black o: r (.) blue:.” In lines 13 and 14, the mother quickly says, “>ok< and then asks Duke what color he would paint the photo frame if it were for her present,” “what if you were making it for me: :: what color would you paint it.” At this point, the mother returns to the previous topic, Mother’s Day present. Duke answers, “green.” The mother repeats what Duke said, “green”, and asks Duke, “why green.” In response, Duke thrusts his face forward and utters, “be: z it’s your favorite ↑ color” as if the reason for painting the frame green were self-explanatory. In line 18, the mother immediately utters, “= ↑ oh”, expressing surprise, and she laughingly adds, “you remember”. Overlapping the mother’s laughter, Duke laughs as well. Realizing that Duke has remembered her favorite color, the mother praises him for it, “oh: :: good on you darling hee. hh”.

As seen in this extract, the mother was able to sustain interaction with her son by repeatedly asking him questions and bringing up the previous topic again, and she also successfully encouraged him to participate in the conversation.

Thus far in this section, I have presented cases in which a Japanese mother and an Australian mother utilized repeated questioning as a strategy to maintain a conversation with their sons diagnosed with ASD.

5.2. Imperative Sentence

In this sub-section, I will introduce a further strategy that the Australian mother employs: Imperative sentences to preserve interaction with her son.

(5) [wood works 3: 35]

01 M: hhh (.) so:: are you looking forward to: Tuesday¿

02 D: ((nod nod nod nod nod))

03 M: **tell me what you do on Tuesday.**

04 D: wood works.

05 M: **wood works.**

06 D: [I build] stuff out of wood and right now

07 M: [wo::: w]

08 D: I'm making a <photo> frame.

09 M: wonderful.

The mother's turn opens with an itemized news inquiry asking Duke if he is looking forward to Tuesday, ".hhh (.) so:: are you looking forward to: Tuesday¿" Duke only nods three times. The mother, in line 3, utilizes an imperative sentence, "tell me what you do on Tuesday." Responding, line 3, Duke utters, "wood works." The mother repeats exactly what Duke uttered, "wood works." In lines 6 and 8, Duke consequently elabo-

rates his plans for what he will do on Tuesday, "I build stuff out of wood and right now I'm making a <photo> frame." The mother evaluates Duke's arrangements for his school project with a positive assessment, "wonderful." The mother's actions of using an imperative sentence and repeating Duke's utterance appear to lead to his elaboration of his responses and facilitate his active involvement in the interaction with her. The mother's actions described above seem to reflect strategies that achieve maintenance of conversation with her son with ASD and, similar to a classroom teacher's techniques that facilitate learner active involvement in a classroom (Walsh, 2011), they are useful strategies for involving her son in the exchange of turns.

6. Conclusion

This study examined the mothers' strategies for maintaining a conversation with their sons diagnosed with ASD. Both a Japanese mother and an Australian mother expanded the sequences of actions with their sons by repeatedly deploying questioning. The mothers' practices consequently increased their sons opportunities to elaborate their responses and were effective for managing, maintaining, and sustaining conversations with their sons. The final instance exemplified come from the Australian data in which the mother utilized an imperative sentence and repetition of her son's utterance to facilitate his elaboration of turns and his active involvement in the interaction. This mother's behavior was comparable to a teacher's pedagogical technique that helps to facilitate learner active involvement in classroom interaction.

Previous studies have demonstrated, in contrast to typically developing children who acquire a variety of conversation skills in their preschool, individuals diagnosed with ASD display difficulty in maintaining conversations with others (Koegel, Park, & Koegel, 2014). The current dataset demonstrates that the mothers' repeated questioning of their sons and the use of imperative sentences can be used to improve the characteristics of individuals diagnosed with ASD who are considered to have difficulty maintaining conversations with others.

Since the current study focused on only two sets of conversations between mothers and sons, it may not fully grasp the various strategies for having conversations with those diagnosed with ASD. In future studies, it may be productive to investigate a larger number of interactions between parents and their children diagnosed with ASD, possibly from various age groups and various cultural backgrounds. By doing so, it will be possible to provide useful insight for various settings, such as child development support centers, special needs schools, and facility for people diagnosed with ASD.

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APPENDICES

Appendix A: Transcription Conventions

[]	overlapping talk
=	latched utterances
(0.0)	timed pause (in seconds)
(.)	a short pause
co: lon	extension of the sound or syllable
co:: lon	a more prolonged stretch
.	fall in intonation (final)
,	continuing intonation (non-final)
?	rising intonation (final)
¿	a rise stronger than comma but weaker than a question marker
<u>underline</u>	emphasis
↑	sharp rise
↓	sharp fall
° °	passage of talk that is quieter than surrounding talk
< >	passage of talk that is slower than surrounding talk
> <	passage of talk that is faster than surrounding talk
hh	audible exhalation
.hh	audible inhalation

(hh)	audible laughter within a word
-	cut-off of the ongoing talk
(())	comment by the transcriber
()	problematic hearing that the transcriber is not certain about
“ ”	translation of Japanese utterances

Appendix B: Abbreviations Used in Interlinear Gloss

IP	Interactional particle (e.g., ne, yo, no)
Nom	Nominative (e.g., ga)
ACC	Accusative (e.g., o)
Gen	Gentive (e.g., no)
Top	Topic marker (e.g., wa)
SUB	Subject marker
PST	Past
TL	Name
TAG	Tag-like expressions
NEG	Marks negation