

The Impact of Caregiver Prompt Type on Pragmatic Responses in Children with ASD

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1. Introduction

The pragmatic use of language plays a crucial role in children's social interactions, enabling them to respond appropriately, maintain topics of discussion, and adapt effectively in their social interactions. Children with Autism Spectrum Disorder (ASD) have been noted to experience pragmatic difficulties in their use of language, such as decreased response rates, unusual turn-taking behaviors, and decreased flexibility in their social interactions with their caregivers (Tager-Flusberg, Paul, & Lord, 2005). While numerous studies have been conducted on this issue in terms of child performance, little attention has been paid to the effects of caregiver input on pragmatic use in social interactions.

Caregivers' prompts differ considerably in terms of their interactional structure and cognitive demands. For example, some prompts restrict a child's response choices, while others encourage open-ended responding. Generally, in adult communication, caregivers frequently employ a sequence of directives ("Put it here"), yes/no questions ("Is that a dog?"), and Wh- Questions ("What is he doing?"), and so on. However, these prompts not only differ in terms of their syntactic structure but also in terms of cognition.

Past studies have demonstrated that variations in caregiver input play a significant role in children's language development. Investigations of language development in normally developing children found that quantity and quality of caregiver input were related to children's developing vocabulary and participation in conversation (Huttenlocher et al., 2010; Rowe, 2012). Caregiver-mediated intervention in children with ASD also heavily depends upon prompting, as discussed earlier. However, few studies have focused on exploring various types of prompting that shape children's response patterns uniquely in children with ASD.

Notably, pragmatic engagement itself isn't a monolithic factor. A child could engage pragmatically but minimally, pragmatically but inflexibly, or superficially through repetition. Such response styles seem to represent a possible trade-off between the accuracy and pragmatic flexibility of responses,

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especially given the demands of the interaction. Investigating the impact of prompts from caregivers on the trade-off between these two factors could be critical for the development of caregiver-mediated interventions. The current study attempts to bridge this research gap by examining the relationship between three types of caregiver prompts: Directives (DIR), Yes/No Questions (QYN), and Wh- Questions (QWH), with children with ASD's pragmatic response profiles in natural caregiver-child interactions. By leveraging corpus data provided by ASDBank, this study investigates how prompt type relates to children's response probabilities for appropriate responses, echolalia responses, off-topic responses, or lack of responses. Specifically, we ask:

- Do different caregiver prompt types elicit distinct pragmatic response profiles in children with ASD?
- How do caregiver prompts shape the balance between response accuracy and pragmatic flexibility during interaction?

By situating children's responses within the structure of caregiver input, this study adopts a load-sensitive perspective on pragmatic engagement, highlighting how interactional demands shape what counts as a contingent response in ASD.

2. Background and Theoretical Motivation

2.1. Pragmatic Language in Autism

The pragmatic difficulties associated with autism spectrum disorder (ASD) have long been recognized as an important feature of the condition, impacting the child's ability to participate in reciprocal dialogue, comprehend communicative intent, and maintain topic coherence (Tager-Flusberg et al., 2005). Autistic children's responses to caregivers tend to be unresponsive or atypical, or the child uses repetition rather than generative language. In the past, these responses tend to be associated with social cognition and theory of mind. Current studies emphasize the interaction and use-based approach to pragmatic development.

From this social pragmatic perspective, pragmatic competence develops through repeated experience of structured interactions in which children learn the relationship between forms and communicative functions (Clark, 2009; Tomasello, 2003). According to this approach, the child's responses cannot be assessed in isolation from the prompts that elicit them. Rather, pragmatic competence in responding depends on the co-creation of meaning by interactants in an interactional context.

2.2. Caregiver Input and Interactional Structure

Input from the caregiver varies in several respects: syntactic complexity, semantic content, and pragmatic function. Past investigations have suggested that caregivers adapt to the child's level of development, often reducing

syntactic complexity and directing speech when communicative problems arise (Huttenlocher et al., 2010). Caregivers of individuals with ASD may exhibit significant variations in speech in an effort to keep the person engaged and to elicit responses.

Prompt types have varying demands on children's responses. Directives require children to comply or make a move, reducing inference demands. Yes/No questions restrict children's responses to two options, allowing for high response accuracy with little elaboration. Wh-questions require open-ended responses that demand children to make use of contextual information, access relevant information, and generate new information.

These differences suggest that the types of prompts may facilitate or hinder children's development of pragmatic skills. While structured prompts may elicit the most response, they may not be the most conducive. Conversely, open-ended prompts may facilitate generativity but may be less consistent.

2.3. Response Accuracy, Flexibility, and Pragmatic Trade-offs

Response accuracy has been commonly emphasized in the literature on ASD within the intervention paradigm; however, using response accuracy exclusively can fail to highlight important distinctions in the ways children respond to conversational partners. For example, an accurate and echoic response can differ substantially from an accurate and elaborative response in the same way that an off-topic response can differ substantially from a pragmatically inappropriate response.

Current studies on interaction and discourse have argued that compliance and pragmatic engagement should be differentiated from each other (Sterponi & Shankey, 2014). From this understanding, echoic responses and repetition are not seen as deficits but as interactional resources that have functional differences depending on context.

The current investigation extends this approach by assessing multiple response categories concurrently, thus making it possible to examine both accuracy and flexibility. By investigating these response patterns in the context of caregiver prompts, this study hopes to shed more light on the role of interactional demands in pragmatic ability in ASD.

2.4. The Present Study

The present study combines a corpus-based approach with social pragmatic theory to explore caregiver prompt types and their relationship to children with ASD's pragmatic response profiles. Rather than examining children's responses as independent events, this investigation considers caregiver input and its influence on children with ASD's interactional space.

Using spontaneous caregiver-child conversations from ASDBank, the study investigates three types of prompts commonly encountered in caregiver-child conversations: Directives, Yes/No Questions, and Wh- Questions, and their

relationship to the appropriateness of the ensuing responses made by the ASD child. This investigation into categorical and descriptive measures of ASD speech variability is a step towards a finer-grained understanding of ASD speech variability and a way to empirically inform the accuracy-flexibility trade-off.

3. Methods

3.1. Data Source

The research corpus employed in the present study was based on the ASDBank sub-corpus, a part of the larger corpus developed by the CHILDES database, described by MacWhinney in 2000. The specific corpus employed was the longitudinal corpus developed by Tager-Flusberg et al. in 1990. ASDBank is a corpus that contains naturalistic caregiver-child interactions involving child participants diagnosed with Autism Spectrum Disorder. The Tager-Flusberg subcorpus consists of longitudinal spontaneous interactions between children and their caregivers in both home and clinical settings, to observe natural communicative interactions rather than task-based interactions. All the transcripts have been orthographically transcribed with speaker tiers identifying caregiver input (*MOT) and the children's responses (*CHI). This subcorpus was chosen based on the availability of rich samples of caregiver input and the children's responses in the context of early language development in ASD.

3.2. Participants

In total, six English-speaking children with autism spectrum disorder (ASD) were included in the present study. The children were between the ages of 4;0 and 7;0 at the time of recording. All the children were reported in the corpus documentation to have been given a clinical diagnosis for autism and to have acquired English as a primary language. The children with ASD were not only different in age but also in levels of proficiency and engagement in conversation, which was characteristic of children with ASD. No further restrictions were deemed necessary for the present study, as the aim was to explore the variance in response patterns for different types of caregiver prompts in naturalistic data. In order to ensure that no single child was overrepresented in the analysis, all the analysis was conducted at the level of the individual turn in conversation, with an equal number of conversational turns analyzed for each child.

3.3. Corpus Selection & Sampling Procedure

For each child, one transcript (.cha file) was chosen on the basis of two conditions: the length of the transcripts and the level of conversational density, the latter of which was operationalized as the presence of continuous turn-taking between the child and the caregiver with few long pauses or monologues. The rationale for these conditions was to select transcripts where the child and the caregiver were interacting with each other rather than just talking. From each of

these transcripts, 30 child-caregiver conversation turns were extracted through the use of stratified sampling, resulting in 180 child-caregiver conversation turns across the six children before the cleaning of the data. The stratification of the sampling was conducted on the basis of the three different types of caregiver prompts used to elicit child speech, with the three types of prompts being Directives (DIR), Yes/No Questions (QYN), and Wh- Questions (QWH). The selection of the 30 conversation turns for each child was motivated by two conditions: the desire to have comparable numbers of conversation turns across the six children and the avoidance of overrepresenting the child-caregiver conversation turns of the more verbal child participants. After the removal of conversation turns with unclear or incomplete child speech, the total number of child-caregiver conversation turns was 153.

3.4. Coding Scheme

The caregiver utterances, referred to as MOT, were coded into one of three prompt categories based on syntactic form, interactional function, and pragmatic demands on the child, according to established methodologies for caregiver input analysis (Rowe, 2012; Huttenlocher et al., 2010).

Directives were defined as caregiver utterances that explicitly instructed the child to do a particular action or make a constrained response. Such caregiver talk was typically used in the form of imperatives (e.g., “Put it here,” “Give it to me”) or highly directive declarative sentences (e.g., “You need to sit down now”). Directives were characterized by low inferential and linguistic demands since the child was expected to comply or make a highly predictable action in response to the caregiver’s talk. Utterances were classified as Directives even when there was little verbal elaboration of the command, as long as the primary intent was to direct the child’s action.

Yes/No questions were described as polar questions that constrained the child’s response space to an affirmative or negative response. They were often indicated grammatically by the presence of auxiliary inversion, rising intonation, or question particles. QYN prompts were analyzed in terms of their interactional functions rather than their grammatical form; for example, declarative-appearing questions with pragmatic functions as information-asking questions were still coded as QYN. This type of prompt made relatively low demands on the children’s inferences but still required the child to link the caregiver’s talk to the proposition.

Wh-questions have been defined as “the open-ended interrogatives that begin with a word from the set {what, where, who, why, how} that require the child to produce information beyond a simple choice, such as ‘What is he doing?’ ‘Why did it fall?’”. Wh-questions are considered to be high in inferential and pragmatic demand as they require the use of integrated information, recall of information, and a consequent appropriate answer. Wh-questions have been coded regardless of whether a short or long answer was expected, as long as the prompt elicited open-ended information.

3.5. Child Response Categories

Each of the child's utterances (CHI) in response to the caregiver prompt was categorized into one of four mutually exclusive response types based on pragmatic criteria for the caregiver's prompt rather than on linguistic form.

The responses were classified as Appropriate when they were pragmatically contingent and thus relevant to the caregiver's prompt. This includes both verbal and non-verbal responses as long as they meet the interactional contingencies set up with the prompts. Specifically for Directives, correct non-verbal compliance with the request (such as performing the action requested) is classified as Appropriate responses as long as speech is absent. Appropriate responses are also given for Yes/No and Wh-questions as long as they meet the information-seeking function of the questions asked, regardless of their grammaticality or lexical complexity.

Off-topic responses were defined as intelligible verbal or non-verbal behaviors that are not pragmatically related to the prior prompt by the caregiver. This response type typically introduced a new topic, commented upon something unrelated to the prior response or topic, or indicated a change in the focus of attention (for example, "What is he doing?" "I like trains"). This response type would be coded as an Off-topic response only if the child produced an intelligible response that lacked pragmatic contingency to the prior response by the caregiver.

Echoic responses were defined as immediate repetitions or partial repetitions of the caregiver's utterance, without evidence of independent propositional contributions. They were considered to include exact repetition, truncated repetition, or phonological simplification of the words or parts of the utterance produced by the caregiver. Echoic responses were coded without considering grammaticality or semantic interpretability of the response, as long as the response predominantly involved repetition, not necessarily engaging with the content or meaning of the prompt.

No Response was coded if there was no discernible verbal or non-verbal response from the child within a particular interactional window following a prompt from a caregiver.

4. Results

4.1. Overview of Response Distributions by Prompt Type

A total of 153 caregiver-child turns were included in this study after cleaning the dataset. Caregivers' turns were classified into three types of prompts, namely, Directives (DIR), Yes/No Questions (QYN), and Wh-Questions (QWH), while children's responses were classified into four categories, namely, Appropriate (A), Off-topic (OT), Echoic (E), and No Response (NR).

As shown in Table 1, the raw distribution of child response types is represented across the three types of caregiver prompts. Overall, the most common caregiver turn types were Directives. Across the different types of

caregiver prompts, Appropriate child responses were the most common child response types. The distribution of the other child response types differed substantially across the different types of caregiver prompts.

Table 1. Response counts by prompt type

PromptType	A	OT	E	NR
DIR	34	18	19	3
QWH	30	12	2	0
QYN	25	8	1	1

More specifically, the Directives elicited a significant number of Echoic responses in addition to the appropriate ones. On the other hand, the Yes/No Questions elicited a high concentration of appropriate responses with few Echoic or No Responses. Furthermore, the Wh-Questions showed a more differentiated pattern in terms of the responses elicited. Specifically, the Wh-Questions elicited not only appropriate responses but also showed a relatively high concentration of Off-Topic responses.

4.2. Association Between Caregiver Prompt Type and Child Response Category

In order to test whether caregiver prompt type is systematically related to child response category, the chi-square test of independence was used. Results showed that there was indeed a significant relationship between prompt type and child response category, $\chi^2(6, N = 153) = 30.38, p < .001$. Due to the fact that some cells in the contingency table had very small frequencies for the Echoic and No Response categories for some prompt types, an additional confirmatory test was conducted using the Fisher's exact test to verify whether the relationship between prompt type and child response category was significant or not, and the test indeed revealed that the relationship was significant ($p < .001$).

Figure 1 illustrates the proportional distribution of each category of responses to each type of caregiver prompt. As seen in Figure 1, Yes/No Questions elicited the greatest proportion of Appropriate responses (~85-90%), with little involvement of Echoic and No Response categories. Directives elicited a significant proportion of Appropriate responses (~45-50%), but also a relatively larger proportion of Echoic responses. Wh-Questions have a unique pattern of a smaller proportion of Appropriate responses (~65-70%) and a relatively larger proportion of Off-topic responses than seen with other types of caregiver prompts.

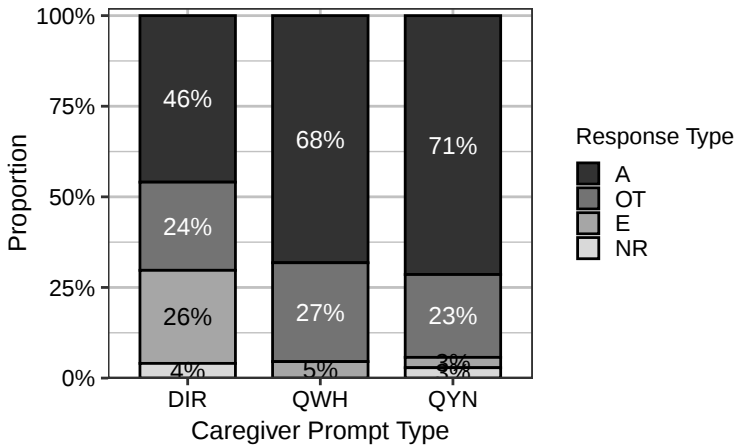


Figure 1. Proportional Response Profiles by Prompt Type

This proportional difference suggests that there are systematic effects of the type of caregiver prompts on children’s responses in a naturalistic interactional situation.

4.3. Response Profiles Within Each Prompt Type

4.3.1. Directives

The Directives elicited child responses that were mainly categorized into Appropriate and Echoic. About half of the child responses to Directives were coded into Appropriate, implying that the child responded appropriately to the caregiver’s instructions. There were significant numbers of child responses coded into Echoic. Those responses that were not relevant to the previous speaker’s turn were fewer in the Directives condition, and the category of No Response was also relatively infrequent. This pattern of responses suggests that the Directives were successful in encouraging responses but within fairly circumscribed strategies for responding. The prevalence of Echoic responses also points to the relatively low inferential demand of the Directives.

4.3.2. Yes/No Questions

The highest degree of concentrated response profiles for the three types of prompts was found for the Yes/No questions. In the case of the Yes/No questions, the vast majority of the children’s responses fell into the category of Appropriate, and the proportions exceeded 85 percent. Echoic and No Response categories were infrequent, while the category of Off-topic was scarce. This suggests that Yes/No questions heavily restrict the response set, which is beneficial for high levels of response accuracy and pragmatic contingency. The children were generally able to relate the caregiver prompt to a definite judgment and thus had a high probability of providing relevant responses.

However, the restricted response set of Yes/No questions limited children's ability to elaborate and interact flexibly.

4.3.3. Wh- Questions

In addition, Wh- Questions elicited a more varied response profile in comparison to Directives and Yes/No Questions. While a majority of Wh- Questions were classified as Appropriate, this figure was, however, less in comparison to Yes/No Questions. Wh- Questions were also found to elicit a significantly larger proportion of Off-topic responses, indicating a greater range of children's responses to this question type.

Echoic responses were not common after Wh- Questions, implying that children were not likely to utilize this method when responding to open-ended prompts. No Response was still rare. It implies that more demands and pressures in responding to Wh- Questions may provide more chances to utilize flexible responses while increasing the risk of being disengaged from the caregiver's topic.

4.4. Engagement Indicators and Trade-offs Across Prompt Types

To better understand the differences in pragmatic engagement that exist across the three types of prompts, response diversity and non-surface response rate were explored as descriptive metrics. The former was measured in terms of Shannon entropy, defined as the entropy of the response categories that were obtained across the three types of prompts. As may be seen in Figure 2, Directives had the highest entropy value (1.18), suggesting that this type of prompt had obtained all three types of responses: Appropriate, Echoic, and Off-topic. Wh-questions had an entropy value of 0.76, while Yes/No questions had an even higher value (0.78), comparable to that of Wh-questions.

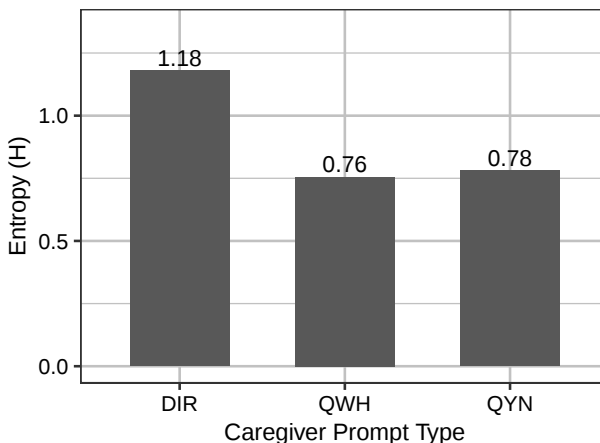


Figure 2. Response Diversity by Prompt Type

Besides diversity, another non-surface response rate was also calculated as a percentage of those that were not Echoic or No Response. This measures how well children responded non-surface-wise. As shown in Figure 3, it was observed that while Wh- Questions and Yes/No questions evinced high non-surface response rates of around 95% and 94%, respectively, Directives evinced a much lower non-surface response rate of around 70%.

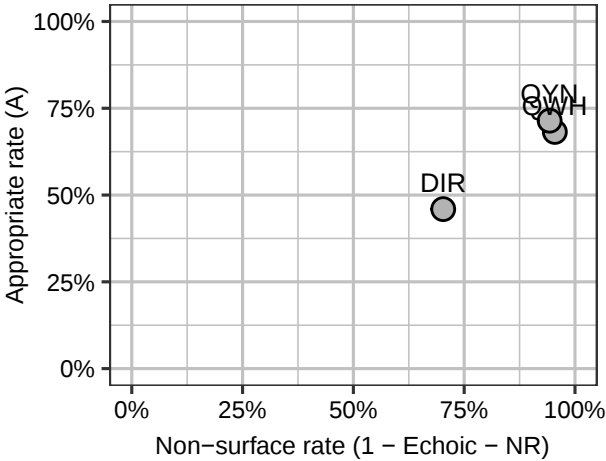


Figure 3. Engagement Indicators by Prompt Type

4.5. Summary of Results

Across each analysis, caregiver prompt type was systematically linked to children’s pragmatic response profiles. Yes/No Questions were linked to the highest proportion of appropriate responses, indicating strong contingency within this constrained response space. Directives were linked to increased rates of echoic responding, indicating surface-level compliance. Finally, Wh-Questions were linked to the most varied response profiles, characterized by both appropriate and off-topic responding. Collectively, these findings provide strong evidence that caregiver prompt type and child responses to that prompt type play an important role in children with ASD and that this relationship has strong links to the interpretive claims made in the Discussion section.

5. Discussion

5.1. Prompt Structure and Pragmatic Engagement in ASD

A key finding is that caregiver prompt type has a systematic impact on children’s pragmatic engagement even in spontaneous interactions. Yes/No Questions elicited the highest proportion of Appropriate responses. This finding is consistent with the literature showing that a prompt with a constrained

response space reduces cognitive and linguistic processing demands and thus enhances the likelihood of contingent responding (Rowe, 2012).

Significantly enough, high response accuracy in this case doesn't guarantee high pragmatic engagement. Yes/No Questions reduce requirements for reasoning or linguistic creativity to a bare minimum to allow for accurate response production. Therefore, while Yes/No Questions facilitate maintenance of response rates, they also possibly limit possibilities for flexible or volitional response. Again, this difference serves to highlight the need to distinguish between response accuracy and response engagement in the study of pragmatic development in ASD.

On the other hand, Wh- Questions had more differentiated response patterns, including a larger percentage of "Off-topic" responses. Rather than seeing this as a matter of pragmatic failure, it may be that the more inferences demanded by "open-ended questions" contributed to a range of responses by children with ASD, as they are more likely to engage in a more diversified manner in response to the demands of Wh- Questions. This pattern suggests that Wh- Questions impose a higher cognitive load on children's executive functions, specifically requiring the simultaneous integration of social perspective-taking and linguistic retrieval. The increase in "Off-topic" responses should thus be framed not as a social failure, but as a processing byproduct of the child attempting to navigate a more complex inferential space.

5.2. Reconsidering Echoic Responses and Surface-Level Compliance

Another significant feature that emerges in the data is the higher rate of Echoic responses following Directives. While Directives were often followed by Compliance, some of this Compliance took the form of Repetition or Imitation. Again, in deficit terms, this Echoic response could be seen as an indication of poor pragmatic skills, but in interactional terms.

They may be employed as resources in the child's contribution to the conversation by assisting the child in engaging in the conversation when the generative demands surpass the child's capabilities. Furthermore, the occurrence of repetition in the child's responses to the Directives may be a reflection of the child's alignment with the intentions of the caregiver. The occurrence of the child's echoic responses to the low-demand prompts suggests the child's recognition of the structures in the interaction.

This result further underscores the need to consider responses in terms of the questions they are responding to. What might be seen as a limited response in a vacuum might be appropriate in a very restricted context. Thus, it may be argued that pragmatic ability in individuals with ASD should be seen as context-dependent rather than deficient in a more global manner. By employing echoic responses to Directives, children with ASD may be utilizing a low-effort alignment strategy to maintain the social loop. This aligns with the concept of "Interactional Scaffolding," where the rigid structure of a Directive serves as a temporary linguistic crutch, allowing the child to fulfill the turn-taking requirement without the immediate need for complex semantic mapping.

5.3. Accuracy-Flexibility Trade-offs as a Function of Interactional Demand

Collectively, the response patterns to the various types of prompts suggest a more general trade-off in accuracy versus pragmatic flexibility. Yes/No Questions prioritize accuracy at the expense of flexibility, Wh- Questions offer flexibility in exchange for more variability, and Directives promote participation at the expense of surface-level compliance.

The present results imply that pragmatic engagement in ASD is not static, as it is dynamically influenced by the demands imposed by caregiver input. This has significant theoretical, methodological, and practical implications for understanding how children in the autism spectrum disorder range process language in real-time, as it has important consequences for how they understand the world around them.

This focus on load-sensitive pragmatic engagement is in accord with recent theories of language acquisition that emphasize the importance of experience in interaction in the development of communicative competence (Tomasello, 2003; Clark, 2009). Under this approach, the responses of the child can be seen as depending not just on their internal capabilities, but on the structure of the interactional environment in which those capabilities are deployed.

Significantly, the identified trade-off should not be taken to mean that one form of prompt is necessarily better than the others across the board. Rather, the findings suggest that different forms of prompts might be used for different interactional goals. For example, the use of constrained prompts might be useful for maintaining response and turn-taking behaviors, while open-ended prompts might facilitate more inferential engagement and communicative flexibility. A nuanced understanding of the way these different forms of prompts actually function is important for understanding the pragmatics of ASD.

5.4. Implications for Theory and Intervention

The current study has some implications, both for theoretical accounts of pragmatic development and for interventionist approaches that use caregivers as mediators. First, from a theoretical point of view, the current study challenges deficit approaches to difficulties with pragmatics in autism spectrum disorders, showing that there are systematic differences in response patterns as a function of interactional demand. It has also been shown that difficulties with pragmatics might not be due to a general inability to use pragmatics, but due to a mismatch between the structure of prompts and processing needs.

From an applied perspective, this demonstrates that caregiver support may be maximized through the strategic deployment of prompt variability, in lieu of an isolated interactional approach. Yes/No Questions seem to prove to be an especially potent approach to maintaining and enhancing engagedness and responsivity, while Wh- Questions may be used to promote more advanced inferential and flexible language ability. Directives may similarly play a supportive role when used appropriately to promote participation.

However, rather than viewing pragmatic development in terms of the process leading up to some optimal response style, the findings highlight the importance of finding an appropriate balance between accuracy and flexibility in interaction, perhaps particularly in intervention settings that target communicative success as well as generative skills. Interventions should therefore move beyond a binary “correct/incorrect” evaluation of responses and adopt a Dynamic Systems perspective. In this view, communicative success is an emergent property of the caregiver-child dyad, where the caregiver’s “input tuning” directly modulates the child’s pragmatic “output flexibility.”

5.5. Limitations and Future Directions

There are also some limitations of this study to take into consideration. To begin with, the sample size of this study is quite small. Further studies with a larger sample size using a model of turn instead of individuals might provide clear-cut results. This study might provide clear-cut results because of its design of examining prompt-response associations in a very fine-grained manner.

Secondly, the children in the dataset spoke English. Children from other languages may show how language influences the interplay between language structures or cultural interactional patterns and the types of prompts provided by the caregiver. For instance, languages may vary in the formation of questions. These languages may influence the balance between accuracy and flexibility found in the children.

Additionally, future studies may want to explore how caregivers’ use of prompts varies dynamically in response to children’s behavior over time, rather than simply analyzing them as static types of prompts. This may help to further elucidate how a slow evolution in the structure of prompts from Yes/No Questions to Wh- Questions contributes to children’s development of more versatile pragmatic skills. In short, further research in these areas would continue to help us understand more about the micro-level processes underlying children’s pragmatic development in ASD.

6. Conclusion

The present study explores the relationship between different types of caregiver prompts and the profile of children’s response behaviors in terms of pragmatics for children with ASD during natural caregiver-child interaction. Corpus-based findings using the ASDBank tool show that response profiles differ across Directives, Yes/No Questions, and Wh-Questions in terms of response accuracy and variability.

Across studies, prompts with high levels of constraints, such as Yes/No Questions, are consistently linked to high levels of appropriate responding; Directives often showed evidence of both Echoic and Surface-Level Compliance. By contrast, response profiles for Wh- Questions revealed more variability in response types, including both appropriate and Off-Topic responses. This set of

studies collectively supports the dynamic nature of pragmatic engagement in ASD as a function of caregiver input type.

This work, which considers the contextual aspect of the child's responses, also underscores the need to take into account how the responses were elicited. Pragmatic difficulty might not always be a matter of a lack of pragmatic competence but might also involve a lack of match between demands and capacity. With a social-pragmatic and usage-based perspective on language, a caregiver prompt is seen as a scaffold that specifies the space of possible responses.

On a more macro-level, the present study contributes to a growing body of literature that continues to highlight the importance of interactional structure in pragmatic development. In addition to informing a more nuanced understanding of communication in ASD, it has the potential to lay the foundation for future studies that explore adaptive strategies in communication development more broadly.

References

- Clark, Eve V. 2009. *First Language Acquisition* (2nd ed.). Cambridge: Cambridge University Press.
- Huttenlocher, Janellen, Heidi Waterfall, Marina Vasilyeva, Jack Vevea, and Larry V. Hedges. 2010. Sources of variability in children's language growth. *Cognitive Psychology* 61(4): 343–365.
- MacWhinney, Brian. 2000. *The CHILDES Project: Tools for Analyzing Talk* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Paul, Rhea, Ami Augustyn, Ami Klin, and Fred R. Volkmar. 2008. Perception and production of prosody by speakers with autism spectrum disorders. *Journal of Autism and Developmental Disorders* 35(2): 205–220.
- Rowe, Meredith L. 2012. A longitudinal investigation of the role of quantity and quality of child-directed speech in vocabulary development. *Child Development* 83(5): 1762–1774.
- Sterponi, Laura, and Jennifer Shankey. 2014. Rethinking echolalia: Repetition as interactional resource in the communication of a child with autism. *Journal of Child Language* 41(2): 275–304.
- Tager-Flusberg, Helen, Susan Calkins, Theresa Nolin, Terrie Bamberger, Michael Anderson, and Alice Chadwick-Dias. 1990. A longitudinal study of language acquisition in autistic and Down syndrome children. *Journal of Autism and Developmental Disorders* 20: 1–21.
- Tager-Flusberg, Helen, Rhea Paul, and Catherine Lord. 2005. Language and communication in autism. In Fred R. Volkmar, Rhea Paul, Ami Klin, and Donald J. Cohen (Eds.), *Handbook of Autism and Pervasive Developmental Disorders* (Vol. 1, pp. 335–364). Hoboken, NJ: Wiley.
- Tomasello, Michael. 2003. *Constructing a Language: A Usage-based Theory of Language Acquisition*. Cambridge, MA: Harvard University Press.

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