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# Clinically Applicable Sociolinguistic Assessment for Cognitive-Communication Disorders

## Comments

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## Viewpoint

# Clinically Applicable Sociolinguistic Assessment for Cognitive-Communication Disorders

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## ABSTRACT

**Purpose:** The third International Cognitive-Communication Disorders Conference was held in early 2022, providing an opportunity for researchers and clinicians to discuss management of cognitive-communication disorders (CCDs). Presentations that addressed social discourse initiated broader conversations about implementing sociolinguistic methods in research and clinical contexts. Given the heterogeneity of CCDs and sociocultural contexts, a person-centered approach is needed. Sociolinguistic methods are inherently relevant and salient to the individual's communication context and partners. Sociolinguistic analyses provide information about language skills, cognitive-communication skills, and social cognition. The purpose of this article is to share a model of social communication and provide descriptions of current methods that can be used by researchers and clinicians to capture the complexity of social communication, thereby advancing our knowledge and practice.

**Conclusion:** Although there is a growing literature base that supports the inclusion of sociolinguistic methods, there remains a disconnect between the literature and clinical application that current researchers and practitioners have an opportunity to address.

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The third International Cognitive-Communication Disorders Conference was held in early 2022, providing an opportunity for researchers and clinicians to discuss management of cognitive-communication disorders (CCDs). The overarching aim of speech-language pathologists (SLPs) is to improve the everyday communication skills of those with underlying cognitive disorders. However, it was noted that most communication that occurs in clinical and research settings is controlled and monologic and does not represent authentic communication experiences. The purpose of this article is to share how methods from sociolinguistics can be used to identify and assess the complex and fluid discourse that is so challenging to capture. First, we discuss the need for a sociolinguistic approach to communication, by reminding readers of the World Health

Organization International Classification of Functioning, Disability and Health's (ICF; WHO, 2001) personal and environmental factors that influence cognitively-based communication. With the lens of the WHO ICF and sociolinguistics, we provide a model of social communication that can assist researchers and clinicians in understanding these complex relationships. Second, we provide examples of sociolinguistic methods that are feasible and have been applied to research and clinical practice. Finally, we discuss the potential of future research using sociolinguistic methods that could lead to clinical practice recommendations.

## The WHO ICF and a Model of Social Communication

People with CCDs represent an extremely heterogeneous subset of the clinical population of those with communication difficulties. Many CCDs are caused by traumatic brain injuries (TBIs), which may result in a myriad of difficulties including physical, emotional, behavioral,

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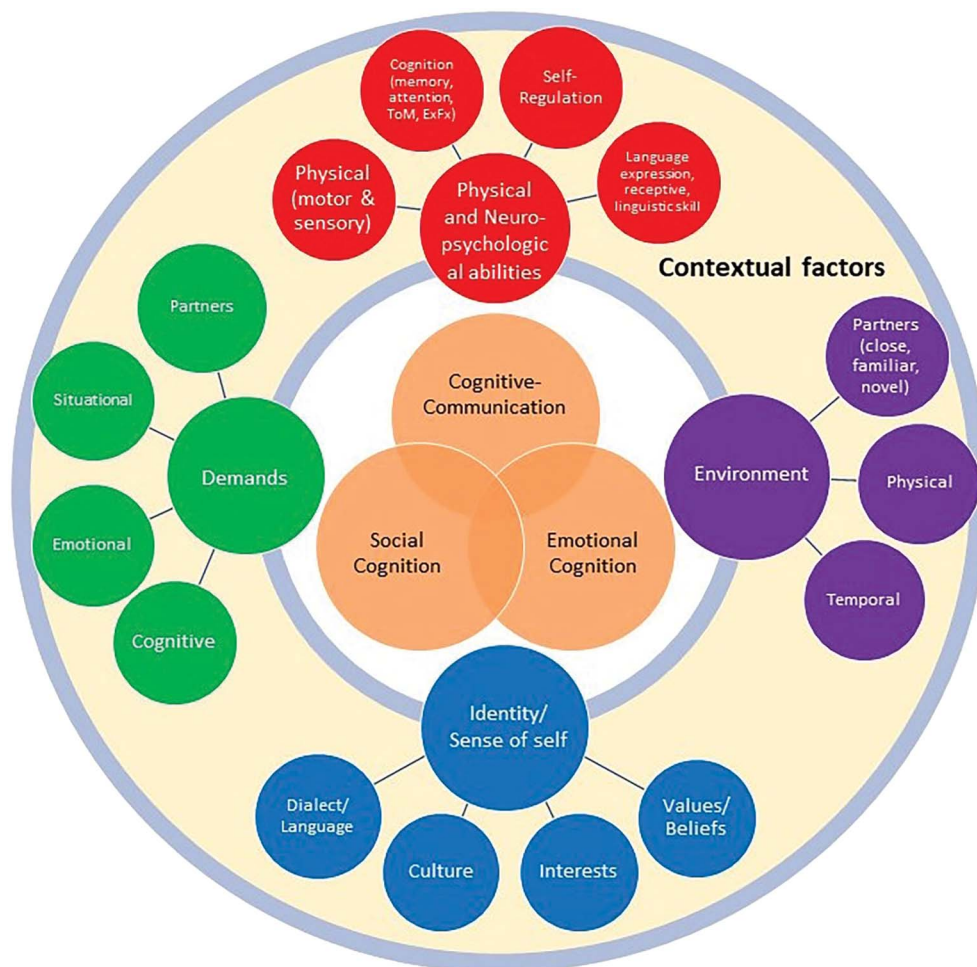
and cognitive difficulties that all impact communicative interactions (MacDonald, 2017). As a result, the communication difficulties that are experienced by individuals with TBI are unpredictable and individualistic in nature. To add another layer of complexity, the types of cognitive-communication difficulties experienced may manifest differently depending on the context or environment.

A continuing and resounding theme of this conference was the insensitivity of many of our “standardized” tests that do not capture the activities and participation that our clients experience and report. Impairment-based tests provide important information about underlying cognitive disorders but do not help us in describing or identifying how communication is disordered during fluid communication activities that are influenced by personal and environmental factors. The personalization of activities and participation is inherently heterogeneous and can be related to one’s sense of self. The demands of communication context and environment are also influenced by the impact of cognitive impairments, communication partners,

emotional responses, and so forth. Capturing these relationships in ways that are authentic, valid, and reliable has been a challenge for researchers and clinicians. However, means of capturing these are necessary and long overdue.

Sociolinguistics refers to the interaction between language and society. Sociolinguistics has been extensively discussed in relation to linguistic variations between social groups (e.g., Eckert, 2000; Labov, 1966, 1972; Trudgill, 1974). Sociolinguistic methods of assessment are those that acknowledge variation based on the context in which the interaction is embedded. Context is described in MacDonald (2017) as an overarching variable in the model of communicative competence, impacting all facets of communication. Sociolinguistic methods of assessment and intervention acknowledge this contextual variation between and within individuals, as impacted by the variety of factors described in Figure 1. Cognitive communication, social cognition, and emotional cognition all contribute to the effectiveness of social communication; they do not

**Figure 1.** Model of social communication.



necessarily equally contribute to social communication; and the “size” of the contribution and the extent of overlap vary by individual. For example, an individual may have aspects of social cognition that are impaired but have less emotional cognition impairments that affect social communication; the model for such an individual would include some overlap between social cognition and cognitive communication only. For other individuals, the opposite could be the case. Likewise, it is possible that an individual could have predominately CCDs that stem from memory, executive control, and attention impairments, with little influence from social or emotional cognition. Furthermore, the fluidity of social communication is heavily influenced by contextual factors, including physical and neuropsychological abilities (or impairments), the environment, one’s own identity/sense of self, and in-the-moment demands. Physical and neuropsychological abilities or impairments to those abilities include physical abilities (both motor and sensory), cognitive abilities (memory, attention, executive functions), self-regulation, and language (expression, comprehension, and linguistic skills). The environmental context includes partners, the physical environment, and temporal context. One’s identity and sense of self includes their values/beliefs, interests/motivations, culture, and dialect/language. Finally, in-the-moment demands include cognitive, emotional, and situational/task demands as well as partner relationships. Contextual factors heavily influence social and emotional cognition as well as cognitive communication, and this model allows for that. For example, an individual’s emotional cognition may not be a factor in benign and neutral conversations, but when conversing with a harsh and critical employer, emotional control can certainly impact the communication.

Other models have been proposed and used to describe social communication after TBI. The Academy of Neurologic Communication Disorders Traumatic Brain Injury Writing Committee et al. (2020) conducted a scoping review of three kinds of models: cognitive models, social competence models, and pragmatic models. Although each type (and model) has its strengths, no single model captures all of the factors included here. By using a Venn diagram (see Figure 1) in which size and overlap can vary, social communication can be conceptualized as individual for each client, as the contextual factors vary. In this way, the current social communication model is dynamic and fluid in which the interdependency of factors can be visualized by clinicians and clients.

## Opportunities for Implementing Sociolinguistic Methods

To date, sociolinguistic approaches to the study of, and clinical intervention for, individuals with CCD have

been limited, yet there has been a gradual increase in their use with other clinical populations (Ball, 2005; Damico & Ball, 2011). This sociolinguistic perspective foregrounds the social nature, context, and variability of communication. In this article, we describe advancements and opportunities for efficient and effective use of sociolinguistic approaches. These include (a) advances in technology that have reduced the amount of time it once took to use these methods, (b) advances in sampling within the environment that allow for ecological validity, (c) methods that include the communication partner, and (d) an overview of some additional tools.

## Time and Technology

Recent advancements in technology mean time is no longer the barrier that it once was to the use of sociolinguistic methods in treatment. A single assessment measure will not provide adequate information on all facets of social communication that are outlined in Figure 1. Thus, to gain a representative sample, contextual communication interactions must be observed and analyzed in more than one context. It is well established that SLPs should view social communication from a sociolinguistic perspective (Coelho, 2007; Steel & Togher, 2019), yet SLPs perceive that these methods are too time consuming (Morrow et al., 2020; Pavelko et al., 2016; Westerveld & Claessen, 2014). However, in recent years, with the advancement of technology, automated transcription of recorded samples is becoming more and more accurate. Software programs such as Otter (Otter.ai, 2022), which provides transcriptions for programs such as Zoom and Microsoft Teams, or Dragon (Nuance, 2022) offer much more accurate and rapid speech-to-text transcription than was previously available. Computerized discourse analysis programs that allow for the analysis of transcribed samples are available. Examples of these programs include Systematic Analysis of Language Transcripts (J. Miller & Iglesias, 2010) and Computerized Language ANalysis (MacWhinney, 2000), a freely available tool through talkbank.org. Although, at this time, these programs require specific coding that can be time consuming for unfamiliar users, there is future potential for these and similar computerized programs to greatly enhance and streamline the analysis process of discourse samples.

As technology advances, there are opportunities to also apply methods that implement digital analyses but do not require transcription of the data. The Interactional Network Tool (INT; Howell, Varley, et al., 2021) is an electronic analysis tool that, based on analysis of video data, qualifies and quantifies interactions between communication partners in a group setting. The Language ENvironment Analysis (LENA Research Foundation, Boulder, CO) system consists of a portable audio recorder and a software

analysis program that can generate quantitative information about turns and words (Wang et al., 2017). Although designed to examine language development in children, it has been applied to adult populations (Li et al., 2014). Similarly, Discursis is a software that quantifies communication behavior during conversation and provides a visualization of the data (Angus et al., 2012; Whelan et al., 2018). It has potential for examining and differentiating conversational breakdowns and repair strategies in individuals with cognitive-communication impairments (Whelan et al., 2018).

The use of computers in training social communication is an emerging approach. The work-related communication training approach (WoRC) is a computer-based role-play treatment, which engages users in practicing use of 10 strategic politeness markers that are common in workplace speech acts (Meulenbroek & Cherney, 2021). Politeness markers, or context-specific “words that work” (e.g., should, could, would), are integral to social communication and are underused by individuals with CCD. The WoRC software uses speech-to-text technology to transcribe and score how many politeness markers the person uses and generates feedback for unscripted role plays. Because this technology can be programmed to identify use of specific words, it is cost effective and adaptable to individual needs as well.

There are a variety of tools that can be used to supplement this and support observation of interaction without transcription (see Table 1). These tools, for example, the Pragmatic Rating Scale (Iwashita & Sohlberg, 2019), serve as a checklist-style resource to allow the clinician to rate an interaction, in the moment. Some of these tools also allow for a rating of the

communication partner, for example, the adapted Kagan scales (Togher et al., 2010).

Finally, it should be noted that the time taken to apply sociolinguistic methods in assessment and intervention for the complex heterogeneous population of individuals with CCD is time well spent. For example, assessment of impairment level skills only (e.g., memory, attention, receptive language) will not provide information about language in context and ignores the environmental influences, the demands of the interaction, and the personal characteristics the individual brings to the exchange. Without accounting for these variables, as outlined in Figure 1, a comprehensive picture of communication skills cannot be obtained.

## Sampling and Environment

Several decisions must be made about how to sample discourse. These relate to intent, feasibility, and environmental factors. Begin by considering intent. Is it to examine linguistic functions? If so, narrative retells, descriptive discourse (e.g., picture descriptions), and monologic discourse sampling may be appropriate choices. Cannizzaro and Coelho (2013) argue that narrative discourse represents an ecologically valid measure of goal-directed executive functions. On the other hand, in seeking to understand how an individual interacts with other individuals, conversational discourse sampling is indicated. Conversational discourse can be elicited through ethnographic interviews or conversations with a novel or familiar communication partner. Of course, many of our decisions about discourse sampling are influenced by other factors, such as feasibility. Snow and Douglas

**Table 1.** Select rating tools.

Rating tool	Reference and where to find it
Clinician rating tools for social communication	
Pragmatic Rating Scale	Iwashita & Sohlberg (2019)
Adapted Kagan scales	Togher et al. (2010)
Communication Performance Scale	Ehrlich & Sipes (1985)
Conversational Rating Scale	Ehrlich & Barry (1989)
Behaviourally Referenced Rating System of Intermediate Social Skills–Revised	Farrell et al. (1985), described Available in Keegan et al. (2023)
Profile of Pragmatic Impairment in Communication	Linscott et al. (2018)
Global Impression scales	Bond & Godfrey (1997)
Pragmatic protocol	Prutting & Kirchner (1983)
Assessing pragmatic abilities framework	Roth & Spekman (1984)
Pragmatically oriented discourse analysis	Damico (1991)
Pragmatic Communication Skills Rating Scale	Available in Cherney et al. (1998) Halper et al. (1996) Available in Cherney et al. (1998)
Client/other rating scales of social communication	
La Trobe Communication Questionnaire	Douglas et al. (2007)
Sydney Psychosocial Reintegration Scale Version 2	Tate (2011)
Discourse Inventory and Monitoring Resource	Elbourn et al. (2019)
PROMIS and Neuro-QOL Measures of Social Health	<a href="https://www.healthmeasures.net/">https://www.healthmeasures.net/</a>

(2000) identified barriers to discourse assessment, including sampling and approaches to analysis. A lack of norm-referencing and severity interpretations further reduce clinical use (Elbourn et al., 2017). Clinicians must consider access to communication partners, time for sampling, transcription, and analyses, as well as access to authentic contexts (e.g., clinical environment or community/home). Cherney et al. (1998) describe types of discourse, along with procedures for sampling, transcribing, and analyzing discourse in their seminal text on discourse analysis in adults. A revised version of this text is forthcoming (Coelho et al., 2023). Figure 2 highlights the continuum of sampling decisions and implications. Another consideration is consolidating the process of sampling and reviewing conversational interactions within a video self-modeling approach (Douglas et al., 2014, 2019; Hoepner & Olson, 2018; Hoepner et al., 2021). In this approach, individuals with CCDs and their partners can record interactions in authentic home and community environments, bring them to sessions, and review the quality of discourse directly without the need for transcription or full analysis. The clinician needs to understand discourse behaviors well in order to prompt review of positive and problematic discourse behaviors on the part of both interactants.

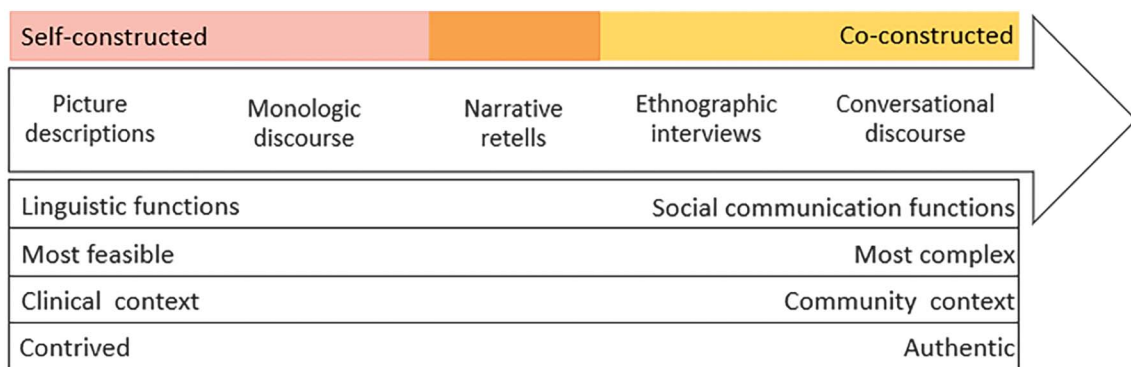
In traditional interviews, questions are predetermined by the interviewer, creating a clear power differential and a less authentic exchange between the interactants. Ethnographic interviews are intended to help the interviewers better understand the social contexts in which the interviewee exists, yielding control of the direction of conversations to the interviewee (Westby, 1990). In this way, the interviewer is more sensitive to sociocultural factors and creates a context for sharing them. Westby (1990) identifies three crucial facets of the interview process: developing rapport, using descriptive questions (i.e., elicit talk about daily lives), and careful wording of questions (i.e., open-ended, use presupposition/prior knowledge

to go deeper, one question at a time, use prefatory statements to explain purpose of/transition to your forthcoming questions, and maintain control by remaining focused on what you want to learn). Ethnographic interviewing ultimately leads to co-constructed conversations.

Motivational interviews (MIs) are a similar format for learning about our clients and their families. MI follows a multistep, person-centered process that includes engaging (i.e., learning about the individual and establishing therapeutic alliance), focusing (i.e., following the person's lead regarding areas that they are interested in addressing), evoking (i.e., eliciting their potential solutions and ideas about addressing those topics/areas of concern), and planning (i.e., putting together a concrete plan with tangible steps toward goal achievement; W. R. Miller & Rollnick, 2012). The intent of this sequence is to ensure self-determination (Ryan & Deci, 2000). MI microskills (using open-ended questions, affirming their feelings/ideas, reflecting, and succinctly summarizing their ideas/potential solutions) are employed as a way to ensure the person's autonomy and competence to make their own decisions. MI has been used for eliciting self-assessment and goal setting for individuals with TBIs (Hoepner & Olson, 2018; Hoepner et al., 2021). It has also been combined with semistructured interviews (Kennedy, 2017) and surveys (Kennedy & Krause, 2011; O'Brien et al., 2018) to encourage elaboration and thus examine understanding and the level of specificity when using compensatory strategies.

Collecting representative conversational samples requires some training regarding expectations and approach. One cannot simply tell two people to have a conversation. Supports such as topic starters are often useful, and selecting a representative, authentic sample within the conversation is also important, as the beginning of conversations can be somewhat stilted and unnatural. The middle 6 min of a 12-min sample is thought to be representative of the broader sample (Boles et al., 1993). It is also helpful to complete

**Figure 2.** Continuum of sampling approaches and implications.



member checking to ensure that the participants feel like the conversation (at least the portion you intend to examine) is representative of typical interactions. The decision whether to video- or audio-record conversations is often determined by practical issues; however, video recording should be considered if analysis of gestures and other nonverbal communication is relevant (Coelho, 1998). Video-recorded or even audio-recorded conversations are subject to the Hawthorne effect to an extent, which can change one's interactions by simply knowing they are being recorded. Yet, the more authentic the environment, the more representative the sample will be (Coelho, 1998). Consider having your client and their everyday partners record a conversation at home to use for your analysis. Hoepner et al. (2021) identified procedures for recording interactions, including a script to guide video-recorded interactions at home.

## Communication Partners

Viewing communication as a two-way process of giving and receiving requires that the interaction needs to be viewed as a whole, that is, as an interactionally negotiated achievement (McTear & King, 1991). However, seminal investigations describing the communication of people with TBI focused on monologic discourse tasks (McDonald & Pearce, 1995; Snow et al., 1999; Steel & Togher, 2019) or reported only on the person with TBI's contributions to jointly constructed tasks (Galski et al., 1998), where the communication partner was an SLP or a research assistant (e.g., Bond & Godfrey, 1997; Mentis & Prutting, 1991). In reality, people with TBI communicate with a wide range of communication partners including their family members, friends, and work colleagues; community workers; and other members of the public. The way in which a partner communicates with the person with TBI can offer a positive supportive environment or can pose barriers to participation during the conversation (Togher et al., 1997). It is therefore important to measure the contributions of both the person with TBI and their partner to the interaction. One method to capture these contributions is a sociolinguistic analysis called exchange structure analysis (ESA; Berry, 1981), and this is described further in the Tools section below. Conversations should comprise a balance of opportunities, so that each person has the floor 50% of the time and can both ask for and give information equally. However, after TBI, this conversational equity can be lost due to a combination of the cognitive-communication sequelae associated with the TBI (e.g., poor turn-taking, verbosity, difficulty generating topics, impaired judgment regarding the social situation) and the responses by communication partners, which can compound the communication difficulty. ESA has revealed that people with TBI had less opportunity to give information and were more likely to be questioned regarding the accuracy of their contributions

compared to their uninjured siblings. This occurred during conversations with mothers, therapists, police officers, and call center operators (Togher et al., 1997).

Prior to this report, scant attention had been paid to evaluating the interactions of people with TBI beyond the clinic or research environment. With the development of communication training programs for families, friends, and carers (Rietdijk et al., 2020; Togher et al., 2013), there have been advances in outcome measure development including the use of rating scales of interactional/transactional skill of the person with TBI and conversational support strategies used by their partner (Togher et al., 2010). Although not a sensitive measure of change, ESA can elucidate conversational imbalances and enable discourse profiling (e.g., impoverished vs. excessive profiles; Sim et al., 2013). Video self-modeling is one example where home and community environments have been accounted for (Hoepner & Olson, 2018; Hoepner et al., 2021). In this intervention, dyads record interactions within their home and community environments, reviewing them collaboratively with their clinician in sessions. The clinician pauses the video to prompt reflection on positive and problematic interactional behaviors of both interactants. In this way, both members of the dyad address conversational discourse behaviors jointly with the support of a clinician who is trained in recognizing discourse behaviors. Previous investigations have identified improvements in awareness of discourse behaviors by the person with a CCD and their partner. These include increases in positive discourse behaviors and reductions in problematic behaviors (Douglas et al., 2014, 2019; Hoepner & Olson, 2018; Hoepner et al., 2021).

Examining the communication characteristics of participants with TBI interacting in a dyad using sociolinguistic analysis has recently been expanded to include the dynamics of group interactions. Best practice guidelines indicate that group treatment should be used where possible to treat cognitive-communication disability following TBI (Togher et al., 2014), necessitating the development of new tools to examine group interaction dynamics. The INT (Howell, Varley, et al., 2021) described in the section on technology is a tool that can describe group interaction patterns based on social network analysis. The INT revealed that a pilot peer-led social communication skills group for adults with CCD resulted in a more balanced distribution of initiations and responses over time for those in the intervention group, suggesting a positive change in an individual's capacity to adapt to the contributions of others in the group (Howell, Beeke, et al., 2021). Given the common occurrence of group interactions in daily life, this new tool offers a novel way to assess how people with TBI are contributing to social exchanges with friends, family, and, potentially, workplace interactions. Communication partners play a large role in the interactions of those with



cognitive-communication difficulties. Interlocutor relationships, power dynamics, training, culture, and identity all contribute to how an interaction may play out. These variables should be taken into account when examining communication in the context of the individual's partners.

## Tools

Clinician-oriented observation scales were described in the section on Time and Technology and presented in Table 1. These are useful and brief tools that may augment the sociolinguistic assessment process. Similarly, self- and other-report scales can also facilitate the sociolinguistic assessment process for individuals with cognitive-communication difficulties, as they highlight the client and/or caregiver perspectives on interaction. The La Trobe Communication Questionnaire (Douglas et al., 2000, 2007), the Sydney Psychosocial Reintegration Scale Version 2 (Tate, 2011), and the Discourse Inventory and Monitoring Resource (Elbourn et al., 2019) are commonly used scales that can provide the clinician with valuable information about the individuals' perspective on their own communication in the contexts of interest. Nevertheless, analysis of language in context is important for a complete sociolinguistic picture of the client, and the following section outlines some tools for examining contextualized communication.

Clinical discourse analysis is a tool that allows for examination of conversation without transcription. Originally developed to examine developmental language skills (Damico, 1991), it is based on Grice's conversational maxims and examines the conversational difficulties outlined in Table 1 (from Hoepner et al., 2018) by counting these skills (see Table 2) in the context of interest. Thus, this quantifies violations of these maxims. This analysis method has been effectively applied to the population of individuals with acquired CCDs (e.g., Snow et al., 1997, 1998; Snow & Douglas, 2000).

Conversation analysis (CA) is a sociolinguistic method for examining turn-taking in conversation to identify how people engage in social interaction to achieve

meaningful, everyday activities (Sacks et al., 1974). It examines how those involved in the interaction make sense of the other's conduct as the interaction unfolds in sequence, moment by moment. CA has been used to examine the communication of individuals with particular attention to specific behaviors, for example, topic bias, repetition (Friedland & Miller, 1999), singing (Azios & Archer, 2018), or question asking (Mann et al., 2015).

Systemic functional linguistics (SFL; Matthiessen & Halliday, 2014) is a theory of language use that is socially and contextually oriented. Analysis tools arising from this theory are increasingly used to examine the language of individuals with cognitive-communication difficulties. The following paragraphs outline how some of the methods within SFL (ESA, topic, transitivity, appraisal, and modality analyses) can be used to examine communication, and these are illustrated in the Supplemental Material S1.

ESA taps into the language we use, as based around exchange of information and goods and services (Berry, 1981; Halliday, 1994) and realized by the speech functions of statements (giving information), questions (demanding information), offers (giving service), and commands (demanding service). Berry (1981) developed this system to examine who in the interaction has the information (or goods and services) and how this is conveyed. According to Berry, when involved in an exchange, one is either (a) requesting or providing information or (b) requesting or providing action. Exchange analysis has two types of moves: synoptic moves and dynamic moves. When analyzing conversational exchanges, the abbreviations K1 and K2 are used to refer to the exchange of information and A1 and A2 are used to refer to the exchange of action. Exchanges can be initiated by either interlocutor. Therefore, SLPs and their clients can be both primary (K1) and secondary (K2) knowers and actors (A1 and A2) in different exchanges. Being in the K1 role is important, as it signals the person has the floor, and is associated with powerful speaking positions such as being an expert, teacher, doctor, or lawyer, who are all in the K1 role often in their professional lives (Poynton, 1985). The secondary knower role (K2) is also important as it offers the person an

**Table 2.** Clinical discourse analysis: observed difficulties' checklist items.

Quantity	Quality	Manner	Relation
Failure to provide significant information to listeners	Message accuracy	Poor topic maintenance	Linguistic nonfluency
Use of nonspecific vocabulary		Inappropriate response	Revision
Informational redundancy		Failure to ask relevant questions	Delays before responding
Need for repetition		Situational inappropriateness	Failure to structure discourse
		Inappropriate speech style	Turn-taking difficulty
			Gaze inefficiency
			Inappropriate intonational context

*Note.* Based on Damico (1991) and Hoepner et al. (2018).

opportunity to request information. Information exchange is not always smooth, due to mishearing, misinterpretation, or disagreements. Therefore, dynamic moves are used to facilitate the negotiation of meaning (by clarification or checking) or by giving feedback on the information conveyed (e.g., by confirmation or using backchanneling comments such as “mm” and “ahah”). Dynamic moves are also used to challenge or disagree with a comment or to provide justification for an opinion (Berry, 1981). Thus, ESA allows the clinician to identify the roles that individuals are assuming in conversational contexts and how they and their communication partners are contributing to the interaction.

Topic analysis, as described by Mentis and Prutting (1991), serves to identify patterns in topic management that may highlight strengths and difficulties in communication (e.g., Bedrosian, 1993; Mentis & Prutting, 1991). This analysis of topic introduction, topic maintenance, changes, and disruptions can provide insight into conversational exchanges in a variety of contexts. Transitivity analysis, which examines the processes within the clause, allows for the examination of how individuals construe and present their experiences (Keegan & Müller, 2022; Keegan et al., 2022). Processes are classified, based on the verb use, as material, behavioral, mental, verbal, relational, or existential. This analysis provides information on the perspective of the individual and may inform the clinician about their cognitive skills and abilities. For example, mental verb use can convey information about theory of mind skills (Byom & Turkstra, 2012, 2017). Appraisal analysis has been used to examine how individuals communicate their perspectives and opinions (Hoepner & Keegan, 2022; Keegan & Müller, 2022). Appraisal may be used to signify engagement with the interlocutor (e.g., “well, isn’t that great my dear”), to grade/quantify information (e.g., “that is so much worse”), or to evaluate people (judgment), things (appreciation), or feelings (affect). Modality analysis is the examination of discourse that is not polarized and uncertain by identifying words that convey probability, potential, usuality, inclination, and obligation. Modality analyses have been used to examine politeness markers (Meulenbroek & Cherney, 2021), humor (Keegan et al., 2021), and identity (Keegan et al., 2022).

## Conclusions and Future Directions

To summarize, this article has addressed the opportunities that are available to clinicians and researchers in applying sociolinguistic methods. Technological advancements, as well as advances in sampling and communication partner inclusion, have provided an array of tools that may be applied to develop a holistic picture of an

individual’s social communication skills and difficulties in the contexts of interest. The social communication model presented (see Figure 1) highlights the variables that should be considered when working with clients to develop collaborative, person-centered goals. Although challenges remain, it is clear that further research and advancements are necessary in this area of sociolinguistic study to further streamline this process. Nevertheless, the tools and techniques outlined here can and should be applied now to truly understand the contextual, social, environmental, and personal influences at play and facilitate the optimal functional impact on the social communication of individuals with cognitive-communication difficulties.

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