Atypical Interpersonal Communication: Looking for and through a Different Lens[*]

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While studying communication, researchers and practitioners may use different theoretical approaches or models representative of the process. Dependent on the definition of communication and the use of a linear, interactional or transactional model of communication, the philosophical inclination will change, as well as the questions, hypothesis, and explanations formulated by the professional. Communication takes place in diverse contexts; this text focuses on interpersonal communication settings. Interpersonal communication may become atypical when one of the parties in the exchange communicates mainly through pre-verbal, unconventional and, sometimes, peculiar behaviours. Atypical communication is common in case of a disability or neurodevelopmental condition is present. In the present research, the Complex of Continuous Communication (CCC) is formulated as a theoretical model to analyse and explain atypical interpersonal communication as a co-creative process, emphasizing the way the communication relationship is developed within the dyads. The model is based on a thorough narrative review of relevant literature in the field to determine the components of the model, clarify the relationships among them, and explain how the communicative dynamic may grow in terms of diversity and complexity. The new model is articulated with a conscious influence from the transactional conceptualization and the dialogical perspective of communication, acknowledging the need for further experimentation in order to be validated.

Keywords: interpersonal communication, models of communication, atypical communication

Introduction

"Communication can be viewed as translation rather than transmission" (Mowlana, 2019, p. 15).

The theorisation about human communication has a longer history than the field of communication studies itself (Mowlana, 2019). Throughout time, diverse authors and researchers have investigated the topic, theorising about the process of communication, its components, effects, contexts, … from different perspectives and advocating for contrasting paradigms. The term "communication theory" refers to a body of theories that support

the understanding of the communication process (Ruler, 2018). Theories, as claimed by Littlejohn, Foss, and Oetzel (2017), are formulated in order to explain and understand phenomena, providing a conceptual framework or foundation to develop knowledge and understanding. They focus the attention on certain patterns, relationships, and variables, while ignoring others, meaning that each theory always leaves something out. Theories are abstractions and every theory is partial; therefore, every theory is incomplete (Ruler, 2018).

This essay focuses on interpersonal communication, the process of communication between at least two active individuals (Pearson, Nelson, Titsworth, & Hosek, 2017). It seeks to understand how interpersonal communication may be studied and theorized, specifically when it involves persons who communicate mainly through pre-linguistic, unconventional, or atypical communicative behaviours; most likely, due to a disability or neurodevelopmental condition. It does not seek to explain communication between neurotypical individuals nor does it approach theories centred on intrapersonal communication or explanations related to the communication between humans and nature, objects, technology, or the divine.

With the goal of proposing a theory to analyse atypical interpersonal communication, focusing on the relationship component of the process, the presented text revisits concepts and models of human communication developed over time, reflecting about theoretical perspectives that could enhance the understanding of communication exchanges involving neurotypical individuals and those with the most atypical communication profiles. The aim of the review is to culminate with the formulation of a theory that, although incomplete, embraces diversity as a natural part of interpersonal communication and provides an explanation about how the communication relationship may evolve between dissimilar partners.

What Is Human Communication?

"Communication is one of those everyday activities intertwined with all of human life so completely that we sometimes overlook its pervasiveness, importance, and complexity" (Littlejohn et al., 2017, p. 3). It is also a field of experience of the human species that has been evolving over thousands, even millions, of years, giving rise to the genetical, cultural, and anatomical transformations in this specie and allowing for the emergence of modern language and the multiplicity of linguistic systems (Mineiro, 2020).

Many attempts have been made to define communication, but reaching a perfect definition appears to be impossible and, probably, an endless effort (Littlejohn et al., 2017). While the existence of various definitions for the concept of communication should be acknowledged as natural and inevitable, this is not to be considered inconsequential; even though there is not a right or wrong perspective, the adopted viewpoint will guide theorists and researchers in different directions and towards divergent questions, emphasizing some aspects of communications in detriment of others (Andersen, 1991). Hence, researchers and intervenors should adopt the theory or model that better fits their purpose, enhancing the tendency to pose questions and formulate hypothesis that guide their work in the direction of the intended outcomes.

According to Frank Dance (1970), there are three fundamental and critical points that differentiate attempts for the conceptual definition of communication: (i) the level of abstraction of the explanation; (ii) the intentionality within the process; and (iii) the existence/absence of a judgement within the definition. Regarding the level of abstraction, it matters to say that while some definitions are broad and inclusive, describing communication as a process, others are precise and, in a way, restrictive, relating communication to specific actions. In respect to intentionality, some conceptualizations take in consideration only purposeful communication (i.e., the intentional act of sending and receiving messages), whilst others do not require intent,

and integrate unconscious and unaware communication. Lastly, regarding the dimension of judgement, there are definitions that consider a statement of success or effectiveness in the process of communication and other which are not concerned whether the outcome of communication is or is not successful. Due to the continuing debate over what characterizes communication in all its dimensions, the same author (Dance, 1970) prefers to make reference to a family of concepts that, as a collective, define communication, instead of referring to a single theory or idea.

Some say that communication occurs when one or more persons send and/or receive messages within a specific context, under the distorting influence of noise. The sent messages have some effect and provide for an opportunity for feedback from others in communication. Whether it is intrapersonal, interpersonal, small group or mass communication, the following elements are always present in acts of communication:

1. context—the setting or location where communication occurs, which determines, to a large extent, the meaning of the messages;

2. sources (or senders) and targets (or senders)—individuals involved in communication, with exchanging roles between sender and receiver of messages;

3. messages—the vehicle of meanings and intentions, assuming verbal and non-verbal forms;

4. channels—the medium through which messages are exchanged;

5. noise—anything that interferes with the message reception;

6. effects—the impact or consequence on those involved in communication (DeVito, 2016).

Adding to the above definition, it matters to refer that human communication is fundamentally about displaying, detecting, and coordinating intentions between communicating parties, within joint activities and oriented to two imperatives: the informational imperative (related to the content of the messages) and the affiliational imperative (regarding the relationship between the communicators); the gist being that depending on the relation between the individuals (affiliation), the meaning of the message (the information) may change (Bangerter & Mayor, 2013). The mind is, therefore, an essential component of human communication, the continuing process of interpreting own/others' intentions and relationships, while engaging with "the perceived environment through some kind of messages in the form of signs, symbols and thought" (Mowlana, 2019, p. 14).

To portray the various types of communication likely to be co-created, the dynamic between participants, and the diversity of messages, a visual schema is presented.

As can be understood from the image (see Figure 1), both the source and the receiver vary in terms of intentionality (from unintentional signs to intentional communication) and consciousness (from unconscious behaviours to conscious communication attempts), presenting five possible scenarios (underlined) in which communication exists: (2b) intuitive; (3b) incidental; (1c) informative; (2c) interpretative; and (3c) explicit communication. Whether or not the (2a) incidental perception from the receiver, of unconscious and unintentional behaviours from the source, can be considered as communication is questionable; nevertheless, many theorists would argue that it should be, since there is the cognitive and/or behavioural influence of the sender over the receiver. In some situations, however, it is possible that communication does not exist between individuals. Considering the postulate that communication requires the exchange (and therefore reception) of a message, even if it happens unintentionally, the non-reception of the source's unintentional (1a), intentional yet non-symbolic (2a) or intentional and symbolic (3a) behaviours, configurate situations of non-communication (Motley, 1990).

Source Behaviour
(the behaviour of the message sender)

	1. Symptomatic Behaviour (behaviours produced without conscious intent to communicate)	2. Analogic or Spontaneous Messages (intentional, althought automatic and sometimes unconcious communicative behaviours)	3. Symbolic or Rhetorical Messages (intentional, conscious and symbolic communicative behaviours)
a. Non-Reception (faillure to receive or perceive the message)	1a. Noncommunication Behaviour	2a. Nonreceived Analogic Messages	3a. Nonreceived Rhetorical Messages
b. Incidental Reception (unintentional reception of the message)	1b. Incidental Perceptions (unaware and unintentional behaviour from the source that is unintentionally interpreted by the receiver)	2b. Intuitive Communication (source intentionally but mindlessly produces non verbal behaviours that the receiver preconsciously interprets)	3b. Incidental Communication (intentional and symbolic behaviour from the source, unintentioanlly received by the receiver)
c. Attended Reception (intentional reception of the message)	1c. Informative Communication (receiver intentionally interprets unconcious and unintentional behaviours from the sender)	2c. Interpretative Communication (intentional non verbal behaviours from the source, intentionally interpreted by the receiver)	3c. Explicit Communication (intentional and symbolic message from the source, intentionally aknowledged by the receiver)

Receiver Behaviour (the behaviour of the message receiver)

Figure 1. A matrix of communication (Source: Motley, 1990).

It becomes evident that communication involves, necessarily, agents that are active in the process—senders and receivers—as well as messages being exchanged with an underlying intention. It is likewise clear that some messages are deliberately sent, while others are unconsciously shared as the interaction occurs. In the attempt of choosing a definition that better serves the goal of this research—the formulation of a model to study atypical interpersonal communication—the following will be assumed in the continuation of the text:

> We define communication as the process of using messages to generate meaning. Communication is considered a process because it is an activity, an exchange, or a set of behaviors—not an unchanging product. Communication is not an object you can hold in your hand; it is an activity in which you participate. (…) In stating that communication is a process, we mean that you cannot look at any particular communication behavior as a snapshot and fully understand what is happening. (Pearson et al., 2017, pp. 8-9)

The same authors continue with the definition, stating that people communicate with each other with the expectation of generating shared meanings through the messages that are exchanged. By understanding the messages of the other(s) and eliciting mutual meaning(s) for words, phrases, and nonverbal codes during the process, the partners in communication enter in a continuous and unfolding process of negotiating meaning with each other, trying to enter into a "shared space" or "common ground". According to the authors, adding to the beforehand mentioned elements of communication, one should contemplate the existence of:

7. feedback—the receiver's verbal and non-verbal response to the source's message;

8. code—the systematic arrangement of symbols that are used to create meaning in others' minds;

9. encoding—the act of translating ideas and thoughts into a code;

10. decoding—the process of assigning meaning to the coded thought or idea (Pearson et al., 2017).

Referring to Frank Dance's (1970) critical points discriminating conceptualizations of communication, the presented definition was thought to fulfil specific characteristics that support the theoretical exploration of atypical interpersonal communication, by:

i. demonstrating an interesting level of abstraction—communication viewed as a diachronic process, that may take place in diverse contexts;

ii. not being "prescriptive" in terms of intent of the participants—the emphasis is on the intentionality within the process, and not on the intent of individual participants;

iii. absence of judgement—focusing the idea of negotiating meanings without ever knowing how effective is the intended mutual understanding.

Even though the first task of creating and understanding of the term communication is considered to be achieved, one should note that there are many other acceptable ways of interpreting and defining the social process that is communication. As stated by Richard West and Lynn Turner (2010), "the uniqueness holds true with defining communication" (p. 5). For scholars are human and have own values, beliefs, and perspectives, various conceptualizations will always coexist and be utilized to understand this complex phenomenon.

Focusing in Interpersonal Communication

According to the literature, there are, at least, seven situations or contexts in which communication occurs:

(i) intrapersonal, the communication with oneself;

(ii) interpersonal, face-to-face communication;

(iii) small-group, communication with a group of people;

(iv) organizational, communication within and among large and extended environments;

(v) public or rhetorical, communication to a large audience;

(vi) mass/media, communication to a very large audience through mediated forms;

(vii) cultural, communication between and among members of different cultures (West & Turner, 2010).

* Due to its specificity, some add the situation of digitally mediated communication (DeVito, 2016), even if between two or just a few individuals.

The present research is concerned with interpersonal communication, defined by Pearson et al. (2017) as the process of using messages to generate meaning between at least two people, in a situation that allows mutual opportunities for both to participate.

Moving from intrapersonal communication to interpersonal communication means that there is a change from communication that occurs within the person's own mind to an exchange that involves two or more minds. Through interpersonal communication, individuals interact with other persons, learn about themselves and others, and reveal themselves to others. People participate in interpersonal communication for several different reasons (or communication purposes): to share information, to improve perceptions, to solve problems, to fulfil social needs, to resolve conflicts, or even just to have a feeling of belonging (Pearson et al., 2017). It is via interpersonal communication that communicators establish, maintain, eventually destroy, and sometimes repair personal relationships (DeVito, 2016).

From its beginnings, interpersonal communication denoted essentially face-to-face communication between persons, but a more contemporary view of interpersonal communication incorporates the technological or digitally mediated modality of communication (West & Turner, 2010), even though this may be questioned by divergent-oriented researchers. Within interpersonal communication occasions, dyadic and small-group communication are two accepted situations. As designated, dyadic communication is simple communication between two persons. Small-group communication is the process of communication within a small group of people, defined by communication experts as more than two people sharing a common purpose, goal, or mission; however, disagreement emerges in what comes to the maximum number of participants in a small group (Pearson et al., 2017).

Whether it is dyadic or in a small group, interpersonal communication is complex and many different variables and perspectives are to be considered throughout the process. In a grounded theory research, Glen

Stamp (1999) proceeded to a review of 25 years of research on the topic of human communication, identifying seven overarching constituents of interpersonal communication, namely:

1. culture—the culture the communicators live in, affecting all aspects of the communicative experience;

2. internal states—internal dimensions of each person's perceptions, cognitions and personality, driven by culture;

3. interpersonal competencies—interpersonal skills and competences, defining of what the person conceals from others, reveals to them or obtains from the relationship;

4. communication apprehension—the individual's overall willingness or fear to communicate or to do so in specific situations, affecting the ability to self-disclose, deceive or persuade others in the exchange;

5. message behaviours—tangible behaviours or codes, verbal and/or non-verbal, used to communicate;

6. interaction/relationship—the relationship that may be created and sustained by the interactional sequencing of verbal and non-verbal messages, co-creating conversations and conflicts;

7. interpersonal effect—the interpersonal effects that the dyadic interaction has over the self and the other(s).

As it is understandable, the sixth component of Stamp's thesis is the core category. Whereas all the other components pertain to the individual level, besides culture, at an overarching level, the relationship refers to the level of the interpersonal interaction itself, where the parties in communication meet and share common ground (Stamp, 1999). This category is also the core subject to develop in the present research and the focus of the proposed model of communication.

Many theoretical models have been developed throughout time to understand how communication works. By exploring literature on the topic from over the years, it is comprehensible that there are at least three different lenses in which to view how the process of human communication works:

• communication as a one-way process from sender to receiver;
• communication as a two-way process of meaning construction;
• communication as an omnidirectional diachronic process of meaning negotiation.

Ruler (2018) mentioned that early explanations of mass communication focused on communication as a one-way process, in which a sender disseminates something to one or more receivers. This perspective views communication mainly as a flow of information in which a source directs a message to an audience by revealing its meaning. The emphasis is on the stream of objective information, relating communication theory to a mathematical equation; this thesis is more convincing when thinking about information giving and persuasive communication. Adler and Proctor II (2011) related these first theories to the linear model of communication, depicted below (see Figure 2).

Following a linear model of communication, the sender (person creating the message) encodes (codifies thoughts into symbols) a message (the information being transmitted), sending it through a channel (medium through which the message is sent) to a receiver (person attending to the message). This entity decodes the information (makes sense of the message), while competing with noise (distractions that disrupt transmission) (Adler & Proctor II, 2011). In later versions of the linear thesis, authors have added feedback to this "mechanism", considering that all purposeful behaviours require feedback to be adjustable, have a particular effect or increase the effectiveness of the linear process (Ruler, 2018). The existent noise interferes with the success of communication, impacting the way messages are sent and received and potentially creating failure in the process (Turner & West, 2010).
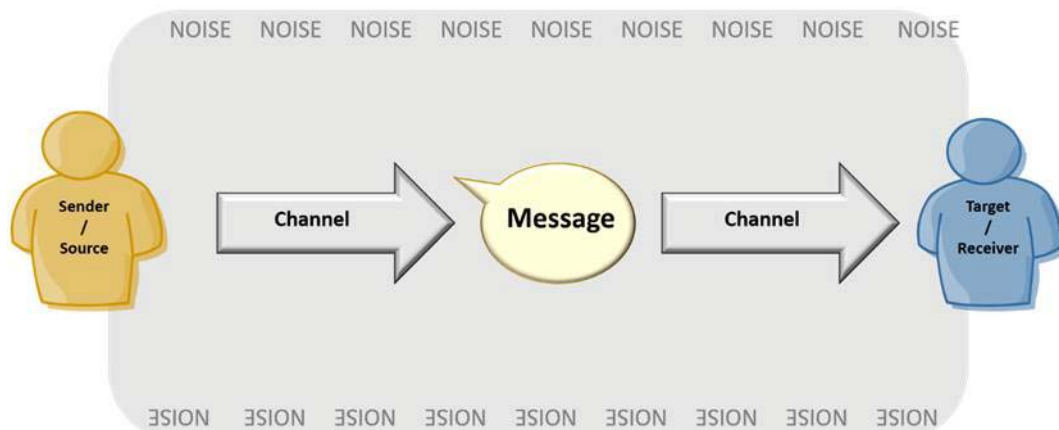
Figure 2. Linear model of communication (Source: Adler & Proctor II, 2011).

In the category of the linear models of communication, one can include conceptual frameworks, such as the Aristotle's Model of Communication, probably the more ancient and the most common model to explain this activity. In this model, the sender is the key element and sends the information or message to the receiver(s) with the intent of influencing and leading them to respond or act accordingly. The Aristotle's Model of Communication is the golden rule to excel in situations where the sender is active and the recipient is passive, such as public speaking, lecturing, or advertising, as it reinforces the importance of the communication occasion and the necessity to design and transmit a convincing and impressive content (Petersons & Khalimzoda, 2016).

One other model that understands communication as a linear process is Harold Lasswell's (1948) Model of Communication, imposing the questions:

- Who says what?
- Through which channel?
- With what effect?

With this interrogatives, Lasswell highpoints the role of the communicator in producing a message and sending it to an audience, via a specific channel. Lasswell's model innovated the thinking about communication by giving relevance to the effect or impact of the communication acts.

Shannon and Weaver's (1949) Mathematical Model of Communication may also be positioned in the linear model's category, concentrating on information theory and explaining how the encoding, transmission, reception, and decoding of messages operate. The model clearly introduces the possibility of existing external noise (e.g., static on a radio broadcast) which may disrupt or cloud the messages. Over time, the notion of noise in communication has been expanded, with more recent theories—Interactional and transactional—considering the existence of semantic noise (linguistic influence on message reception), physical noise (bodily influence on message reception), psychological noise (cognitive influences on message reception) and physiological noise (biological influences on message reception), besides the commonly known channel noise (unintended distortion in the channel) (West & Turner, 2010).

David Berlo (1960) adopted a different approach when theorizing about communication and, rather than attempting to identify the components of communication, he described key factors to control, since they have a potential effect over how communication works. These variables, for each of the components of communication, are:

- sender: communication skills, knowledge, attitude, social system, and culture;
- message: elements, content, structure, code, and treatment;
- channel: senses of hearing, seeing, tasting, smelling, etc;
- receiver: communication skills, knowledge, attitude, social system, and culture.

According to Berlo's (1960) source-channel-message-receiver (SCMR) pattern, perfect communication would occur if sender and receiver have a common expertise in communication and the same attitude, knowledge, social system and culture, accentuating that common understanding is an important part of communication and that meaning is more in the message users, than in the message by itself.

Perspectives related to the linear model of communication have been criticized for the motive of not considering the interactive landscape of communication, the active nature of the receiver (e.g., in being willing to share the meaning originally expressed by the sender) or even the effect of larger variables from the context, such as the relational aspects between the participants. More recent approaches to the concept view it fundamentally as a two-way interactive activity that is participatory at all levels. This implies a paradigmatic transformation from the sender/receiver dynamics into an actor orientation, in which all participants may be active and take initiatives, suggesting that meanings are not only shared by one side, but created and exchanged by all the parties involved. If looking through the two-way lens of communication, interaction is crucial and may have different meanings: it may refer to (i) feedback processes between actors, as well as to (ii) how the actors relate to other meanings in developing their own meanings (Ruler, 2018).

Following a two-way interactive process ideology, conceptual approaches are included in an interactional model of communication category, represented by the presented picture (see Figure 3).
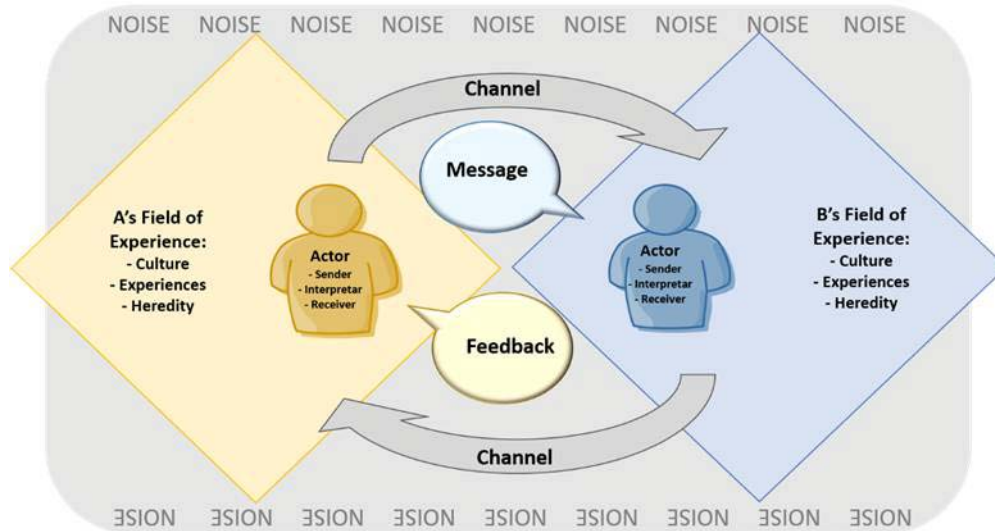

Figure 3. Interactional model of communication (Source: West & Turner, 2010).

Theories framed within the interactional model of communication value how actors engage in conversations and converge, turning toward each other, in sharing meaning (Ruler, 2018). They understand communication as an ongoing flow in two directions: from sender to receiver and from receiver to sender. A person can perform the role of either sender or receiver in the interaction, yet not both roles simultaneously. Another essential element of interactional model's theories is feedback (the response to a message), which may be verbal or nonverbal, intentional or unintentional, and takes place after a message is received; according to

this model, feedback cannot happen during the message itself. One additional feature of the interactional model is the actors' field of experience, with the meaning of how the person's culture, experiences, and heredity influence the ability to communicate with another. As well as divergent fields of experience, noise is another entity present in the interactional architype that may inhibit the effectiveness of communication (West & Turner, 2010).

An example of interactional theories about communication is the Westley and Maclean Theory of Communication, which embraces the importance of feedback in communication. Feedback can occur instantaneously or with a time delay, depending on the context of communication. In frames of this model, feedback consists of the interpretation that the receiver makes from the sender's original message; it allows communicators to gradually adapt their messages and improve communication. The Westley and Maclean model adds the existence of a gate-keeper or mediator between the sender and the receiver (more common within a mass of individuals) and emphasizes the important role of environmental and cultural factors in influencing the sender, the mediator and the receiver in communication; indicating that how we communicate may be influenced by who we are, what our background is, and what perspective we are approaching issues from (Bucur & Ban, 2019).

Another sample of an Interactional perspective is the Osgood Model of Communication, according to which the communication process is, somehow, circular. The process of communication is equal and reciprocal between the actors in communication, both occupying sender (encoder) and receiver (decoder) positions in an alternating and dynamic way. Feedback is continuous and allows for clarification of the messages during the interaction (Oyero, 2010).

There still is a third approach to communication: the perspective of communication as an omnidirectional diachronic process of meaning negotiation. Through this lens, interaction plays a key role in communication and the process is viewed as multidirectional development of meaning co-creation over time. Interaction is interpreted as the social acts of those engaged in a relationship with the communicative process itself and not so only focused on the relationship between communicators (Ruler, 2018). A visual representation of the transactional model of communication is presented in Figure 4.
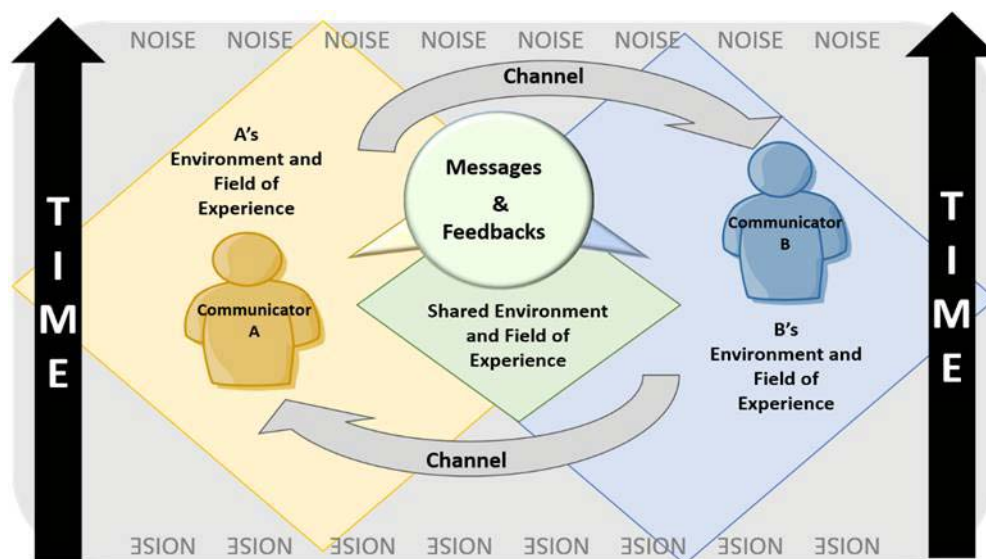

Figure 4. Interactional model of communication (Source: Adler & Proctor II, 2011; West & Turner, 2010).

In the transactional model of communication, the word communicator is used instead of sender or receiver, meaning that participants send and receive messages simultaneously and not in a unidirectional or back-and-forth modality (Adler & Proctor II, 2011). To say that communication is transactional means that the process is cooperative and that all participants are mutually responsible for the effect and the effectiveness of the interaction. Not only do the communicators influence each other, it is assumed that messages are sequential and interdependent, with the existence of influence of one message over the others. Messages build upon the previous messages, as they are simultaneously sent and received (Turner & Wes, 2010).

In agreement with the interactional model of communication, the transactional theory considers the context not only as the physical location of the exchange, but also to the personal experiences and cultural background brought to the conversation (Adler & Proctor II, 2011). In the transactional model, communicators occupy different fields of experience, but even though they have diverse backgrounds, overlap occurs. As people communicate over time, their separate fields of experience merge demonstrate an active movement or effort in the direction of mutual understanding and co-construction of shared meaning (Turner & Wes, 2010). Nevertheless, this model recognises the presence of noise, disturbing shared understanding, and a broad notion of this concept embraces the existence of different types of distorting variables in the exchange (Adler & Proctor II, 2011). Misunderstandings are, however, more than the interference of noise in the message/feedback chain of events. For communication to take place, individuals must build shared meaning and, in order for that to occur, it is necessary to understand and incorporate where the other in the relationship is coming from; misunderstandings often will rise when the partners have difficulty in doing so (Turner & West, 2010).

One last feature of the transactional model needs to be highlighted: transactional communication is considered to be diachronic. Instead of focusing on the transmission of messages/feedbacks, in a linear or circular way, the transactional paradigm brings the attention to growing interaction between communicators, developing over time and resulting in an ongoing meaning co-creation (Ruler, 2018). The relevance of time is anchored in Dance's Helical Model of Communication (Dance 1967; Hasan, 2012), which builds on circular models but emphasizes the notion of diachronism, explaining that communicators improve their messages over time and become more knowledgeable with each cycle of communication. Every time one communicates, the subject expands his/her abilities and the circles of communication grow, similarly to the geometry of a helix, with increasingly wider and wider circles. The spiralizing movement illustrates that each communication experience will be different from the previous, even if it happens between the same communicators; communication does not repeat itself perfectly. The helical model suggests that communication is a permanently forward movement, yet always dependent upon past communicative events, in a continuous meaning co-creation with unpredictable outcomes.

In an attempt to facilitate the reflection, Table 1 summarizes the main contrasting ideas between the three explored models to conceptualize communication.

On the verge of concluding this section, it matters to remind that models offer important insights and are extremely useful to interpret and understand how human communication functions at different levels. Needless to say, it should be assumed that no one model captures all the important details of the interpersonal communication processes taking place in real-life contexts. It is impossible to isolate a single discrete communication act from the events that precede and follow it, maintaining a faithful understanding of the conveyed meaning. As described by Adler and Proctor II (2011), "a model is a 'snapshot,' while communication more closely resembles a 'motion picture'" (p. 12).

Table 1

Key Ideas About the Linear, Interactional and Transactional Models of Communication

	Linear model	Interactional model	Transactional model
Participants	Sender (source) and receiver (target)	Actors	Communicators
Activity	Sender is active Receiver is passive	Both are active, alternating	Both are active, simultaneously
Relationship	Action: Sender over receiver	Interaction: Sender over the receiver (message) Receiver over sender (feedback)	Transaction: Communicators engage continuously via message/feedback
Message/Meaning	Sent: From Sender to Receiver	Shared: Between Sender and Receiver	Co-created: Negotiation among Communicators
Noise	Narrow concept: channel	Wide concept: channel, semantic, physical, psychological, and physiological	Wide concept: channel, semantic, physical, psychological, and physiological
Feedback	Inexistent Note: added in later versions of the model, as a way to confirm and increase the efficacy of the transmission	Existent: After message reception Confirmation and improvement	Existent: Simultaneous and interdependent in the message/feedback exchange
Field of experience	Irrelevant	Existent: Influencing Separated	Existent: Influencing Separated, yet overlapping in time
Time	Anachronic	Anachronic	Diachronic
Miscommunication	Breakdown in message sending/reception Distorting influence of noise	Breakdown in message/feedback sending/reception Distorting influence of noise Discrepancy between fields of experience	Breakdown in shared meaning co-creation Distorting influence of noise Difficulties incorporating other's field of experience
Theories and models	Aristotle's Model of Communication Lasswell's Model of Communication Shannon and Weaver's Mathematical Model of Communication Berlo's SCMR Model	Westley and Maclean Theory of Communication Osgood Model of Communication	Dance's Helical Model of Communication

It was previously expressed that theories allow us to frame our thinking process, yet every theory always leaves something out. Interestingly to note, there is a dramatic paradigm change when looking at the process of communication with a monologism or dialogism theoretical inspiration, worth to reflect about in the following section of this text.

From Linear and Monological Explanations to Transactional and Dialogical Interpretations

Dialogism, as a theoretical approach to communication, assumes the primary premise that "humans live in the world of others and that their existence, thought and language are thoroughly interdependent with the existence, thought and language of others" (Markova, Linell, Grossen, & Orvig, 2007, p. 1). It may be described as "a theory of the meaningful world, seen as consisting of cognitions (…), communicative processes and meaningful actions, all of which anchored in both a sociocultural and a physical world" (Linell, 2009, p. 28). Under these assumptions, Dialogism, as a family of theories, opposes to extreme individualism or the idea

of the autonomous individual, underlining self-other interdependences among human as communicating and sense-making beings (Linell, 2017).

One can define and understand Dialogism in contrast with its counter-theory: Monologism. The constituent theories of Monologism are the following:

• information processing model of cognition—individual and independent cognitive processing of information;

• linear model of communication—communication as a transference of information between source and audience;

• code model of language—the idea that language consists on a static system of signs with fixed meaning; and

• assumption that contexts are external to cognition, language, and communication (Linell, 2009).

Opposingly, Dialogism, as a theoretical branch, advocates for the premises of:

• interactionism—communication and cognition always involve the interaction with other persons, systems, dimensions of one´s self, implying interdependency beyond simple cause and effect relations;

• communication constructivism—meaning is accomplished in and through active communicative and linguistic processes of sense-making and knowledge is mostly communicatively constructed;

• contextualism—interactions are interdependent with contexts, including in the verbal and non-verbal behaviours, situations, activities, individuals' background, cultural knowledge, and the relationship between communicators;

• double dialogicality—interactions and discourse take place at an interpersonal level of meaning co-creation, as well as at the level of socio-cultural practices, communities and institutions of belonging (Linell, 2000).

Rethinking different models of communication having the Monologism/Dialogism dichotomy in mind, one can infer that the linear and interactional models of communication better fit a monological interpretation of reality, while the transactional model of communication takes Dialogism as theoretical scenery. One can additionally deduct that a dialogical and transactional approach will, most likely, better capture the complexity of real-life interpersonal communication exchanges.

In order to be dialogically analysed, communication should be acknowledged in the form of communicative projects, defined by Linell (2009) as "other-oriented and jointly accomplished communicative actions, typically but not necessarily carried out in external interpersonal interaction" (p. 178). Typically, these projects assume the form of two or more partners interacting over sequences of interacts (as an alternative to independently produced individual speech acts), in an effort to establish a communicative fact, something that is mutually understood. In his Dialogical Notebook, the author (Linell, 2014) argues that it is impossible to effectively understand communication when the speaker's speech acts are analysed in isolation from its sequential context, for the reason that the interactions are dialogical in nature. These communicative units are issued "in the service of a more comprehensive "project" that the speaker shares (…) with the other(s)" (p. 16) and each will be powerfully influenced by others' prior utterances (Linell, 2014). Usually, communicative projects are linked and subordinated to overarching projects or activities, which may be basically non-communicative in nature, although they influence the meaning of the interacts and incorporate the meaning(s) of the project (Linell, 2009).

Following Markova and Linell, referred to in Linell (2009), the minimal communicative interaction consists of three steps:

> If speaker A utters something and thereby indicates a targeted understanding, then B must indicate his understanding of this by some responsive action, typically another utterance, and then A has to show her reaction to B's response by yet another action. (p. 183)

Accepting this three-step prototype does not mean that all the steps need to be overtly expressed. Some may actually occur as part of the participants' internal dialogues. It demands, however, that communicative interactions sequences involve, not necessarily in this order:

i) initiatives (introduction of new content into the dialogue);

ii) responsivity (display of understanding with respect to prior communicative units);

iii) projection (anticipation of possible next contributions);

iv) reciprocity (interdependency between contributions to the dialogue) (Linell, 2009).

In a dialogical mindset, difficulties in the process of communication, or miscommunication, are "collectively and reciprocally generated"; frequently the "unfinished" product of "the intricate interaction of participants' interpretations" of others' intentions within different fields of experience (Linell, 2009, p. 228). Miscommunication involves the mismatch of the participants' purposes and situational interpretation—not only the produced utterances—challenging mutual understanding and imposing an obstacle to shared meaning. Nevertheless, miscommunication raises the opportunity to deepen the dialogue and progress to further levels of meaning negotiation and sharing (Linell, 2009).

Under the light of Dialogism, both communication and miscommunication are generated by all parties involved in the exchange, peacefully coexisting and, in a way, completing each other. Under the light Dialogism, a transactional, diachronic and constructive paradigm is demanded to understand interpersonal communication in all its complexity. Is it really possible to comprehend the multifaceted process of communication between individuals having Monologism as the standard?

Looking at Atypical Interpersonal Communication

Having defined the concept of communication and explored different models and theoretical perspectives to reflect upon this phenomenon, looking at it specifically in the interpersonal context, it matters to clarify the notion of atypical when it comes to communication exchanges.

When difficulties in interpersonal communication are present due to a disability, developmental disorder, or health condition, Goldbart and Caton (2010) referred to the people with difficulties as experiencing complex communication needs, denoting that some people may "need significant support from their communication partners for their messages to be understood, and whose messages may not always be intentional" (Goldbart & Caton, 2010, p. 4). Other authors, such as Forster (2008), will argue that this group reveals diverse, unique, and, sometimes, peculiar ways of interacting and communicating, not always readable or intelligible for the communication partners. Nind and Hewett (2001) asserted that many terms and expressions have been used over time to refer to this heterogeneous group of individuals where interpersonal communication appears to be a significant problem: pre-verbal people, pre-linguistic, "hard to reach", with profound intellectual and multiples disabilities, autistic … Nonetheless, they recognize that this population generally has in common poorly developed communicative and social skills, frequently accompanied by sensory, intellectual, and

behavioural challenges. Additionally, they are likely to have highly complex and individualised support needs, related to the individuals' health status and functioning (Goldbart & Caton, 2010).

While there is a not a significant *corpus* of research on this topic, the existing literature indicates that this group of people communicates about the same topics as everyone else (e.g., feelings, needs, likes, and dislikes), although they may require, from the communication partner, flexibility when thinking about modalities of communication (Goldbart & Caton, 2010). Unfortunately, research indicates that some of these people may only get a few minutes of everyday interpersonal interactions, being at risk of isolation due to the atypical communication profile related to their disability or developmental condition. In fact, these people may be missing out on interpersonal communication because they: (i) struggle with initiating the interactions or sustaining the exchanges; (ii) have difficulties making sense of the surrounding environment; and/or (iii) demonstrate very unique interaction styles (Forster, 2008).

It matters to look at the person's with disability or neurodevelopment challenges in order to understand the individual's social functioning and communication profile, considering a multidimensional and dynamic group of aspects (e.g., emotional coping, peer interaction). According to Winners, Crooke, and Madrigal (2011; 2015), the communicators may range from the socially adequate communicative partners—the neurotypical social communicator—to those which tend to be inattentive and internally distracted, often focused on sensory input or internal thoughts and unaware of the social demands of the partner in the social interaction—the significantly challenged social communicator. Dowden as cited in Blackstone & Berg, 2012) distinguished three groups of communicators, concerning functional communication performance:

(i) emerging communicators, people who do not have means of symbolic expression;

(ii) context-dependent communicators, individuals that are able communicate some messages, in some contexts, to some partners;

(iii) independent communicators, subjects with the ability to express any message, to any partner, in any context.

Presuming competence represents a commitment in the direction of inclusion and towards expecting every individual to have an active agency in communicative exchanges and to fully participate in their life contexts, even though a disability and relevant consequences may be present (Biklen & Burke, 2006). This is why an understanding of complex communication profile as the one suggested by Dias (2015, pp. 12-13) may better serve the intention of understanding and enhancing of interpersonal atypical communication:

> Reminded that communication is a socially co-created phenomenon and with the belief that everyone has important messages to share, the author of this research presumes competence from communication partners on both sides of the exchange. Bearing in mind that communication is dialogical, it is preferred to admit communication differences as Diversity, as an alternative to Difficulty, Disability or Disorder. Considering communication as a fundamental Human Right, the researcher acknowledges that communication may not always be easy. However, it is certainly possible and desirable under de "right" circumstances and with the "right" partner. Embracing the complexities of communication (as richness, fertility, value), this research suggests for the use expression "Complex Communication Profiles" to refer to the population with whom communication processes are, frequently, unconventional, unpredictable and/or incomprehensible.

It becomes evident that there are some consensual ideas regarding the population with whom atypical interpersonal communication may be established:

• It is a heterogeneous group of individuals that shows varying levels of communication and social skills, with whom diverse labels have been used as designation (Nind & Hewett, 2001);

- These persons could be considered as demonstrating complex communication profiles, difficult to read and interpret by their partners in communication (Dias, 2015).
- This group of people may be at risk of fewer opportunities for interaction and communication (Forster, 2008).

Nevertheless, it is important to remind that the competence of the other part in the exchange, the communication partners, is equally important to promote opportunities and to ensure the success of communicative exchanges with the persons with atypical communication profiles (Sigafoos, Arthur-Kelly, & Butterfield, 2006a). Rather than emphasizing only one side of the process, Blackstone and Berg (2012, p. 8) assert that "communication partners are crucial to any interaction", being of great importance in assisting "people who have difficulty producing intelligible speech because of developmental, progressive or acquired disabilities". It may be "the skill level, sensitivity, patience and honesty of communication partners" that "can make a profound difference in the success (or failure) of interactions for people with complex communication needs" (Blackstone & Berg, 2012, p. 10). One can actually deduce that communication support needs may be present and someone in the exchange may present as an atypical communicator, even though interpersonal communication may very well be successful, depending on the dyad co-constructing communication. One can conclude, as well, that the perceptions and beliefs about communication from the partners may enhance or hinder the way the communicative process actually evolves.

Concerned with the quality of the exchange, especially when one of them demonstrates an atypical communication profile (for the reason of having congenital deafblindness or an impairment with similar effect), Anne Nafstad and Inger Rødbroe (1999) emphasized the importance of co-creating communication, giving relevance to the role of the neurotypical partner. The ideology of co-creating interpersonal relationships is strongly influenced by the concept of quality of life and the notions of variation, empathy, intersubjectivity, explorative conversations, and negotiating interpersonal dialogues. Nafstad and Rødbroe (1999) explained that with a co-creating communication attitude, the interaction is more conditioned by the suggestions of the partner with a disability, raising the opportunity to get to know that person, how he/she prefers to think and interact, the preferred mode to co-create shared meanings and vocabulary … Nafstad (2015) went further, introducing the idea of communication as cure and stating that "communication as viewed in terms of dialogical theory can help professional carers overcome the mainstream idea that it takes conventional linguistic skills to overcome the pain of the isolation" (p. 37). In fact, this mainstream idea is related to the "difficulty in recognizing and accepting plurality, variation and difference in relation to persons with handicaps" when trying to communicate (Nafstad, 2015, p. 37); in other words, the assumption that all forms of communication are valid in the transactional, diachronic and co-constructive process of interpersonal communication.

Should Nafstad's notion of "cure" be applied first and foremost to the neurotypical communication partners? Should they be able to be more flexible, in particular with regard to what should be considered as language and human communication? Should a dialogical conceptualization of the communicative process be adopted, in order for it to be genuinely co-creative? With questions like these, the authors are guided in the search for a model of interpersonal communication that may be useful to interpret and enhance communication between typical and atypical communicators. One that embraces complexity, uniqueness or manifold is an asset within interpersonal communication.

The Complex of Continuous Communication

Many interpersonal communication textbooks explain interpersonal communication making use of the linear, interactional, and transactional models. These models, as highlighted in Glen Stamp's research, are not systematically derived from data, even though they were empirically developed. Referring to Stamp's (1999), 17 different categories and seven components derived from an extensive literature review, the proposed model focuses specifically in the communicative relationship component, the one that represents the core of the communicative exchange.

In the grounded theory developed by Dias (2015), with the research goal of co-creating a theory about the development and enhancement of communication exchanges with atypical communicators, nine categories were identified as part of the interpersonal relationships establish in the dyads. These nine elements are, as following:

1. sensations—sensory information that allows both partners to be sensory aware of and interested in the other, according to the processing skills and preferences of each partner;

2. emotions—manifested or expressed by the partners, in a co-regulatory process that strengthens the relationship and may support emotional comfort within the exchange;

3. attention—the cognitive awareness of the other that conduces to shared *foci* of attention, meaning that each individual is cognitively aware of the other and of the state of joint attention;

4. active participation—participating with other individuals in different types of activities, while sharing and interacting, conveying specific meanings to each act within the context of the communication project;

5. spontaneity—the ability from both partners to use (potential) communicative behaviours (forms) as communicative initiatives and responses to the other;

6. balance—the occupation, by both parties, of expression, reception and thinking communicative positions, with a balanced turn-taking dynamic in terms of timing (when to initiate and respond), pacing (how fast to initiate and respond) and length of the turns (how long to initiate and respond);

7. coherence—consistency in the use of communicative behaviours (forms) to express own communicative intentions (functions) and to acknowledge the partner's intentions;

8. proximity—achieved when the more competent communication partner is capable of adjusting the actions and reactions to meet the less developed partner in terms of communicative and linguistic performance, not only at the linguistic level, but also in terms of non-verbal behaviours, such as physical approach (e.g., positioning, distance, orientation), multi-sensory information (e.g., touch to get other's attention, use of sounds and vocalization) and interactive skills (e.g., rhythm of the interaction, over interpretation);

9. narratives—with all the other eight categories "in place", partners may become involved in meaning negotiation processes using symbols and representations of contexts shared in different moments of time and space, many of the times with a basic temporal structure, co-creating narratives gradually more detached from the immediate context, and giving place to more symbolic behaviours, hence contributing for the co-construction of a linguistic code.

According to the author of the grounded theory (Dias, 2015), the nine presented categories were organized in four overarching components:

Following the above-mentioned thesis, there is a linear relation between categories within the components and between the components themselves, in a growing complexity dynamic starting from a basic state of sharing of sensations, emotions and attention, to a symbolic negotiation of meaning and co-creation of

narratives/conversations related to other moments in time and space, here denominated as "languaging" (Dias, 2015). The proposed model, entitled as Complex of Continuous Communication (CCC) and later presented in Figure 5, revisits and considers the same nine categories presented in Dias (2015) grounded theory, for its specificity in terms of referring to atypical communication processes. The findings from Dias (2015) were also found to be useful because its knowledge (and terminology) was co-created with communication partners, making it more likely to be intelligible and easily shareable with diverse caregivers.

Table 2

Components and Categories of Complex Communication Processes According to Dias (2015)

Components		Categories	
Sharing	↓	Sensations → Emotions → Attention	
Interacting	↓	Active Participation	
Communicating	↓	Spontaneity → Balance → Coherence of Intentions	
"Languaging"		Proximity → Narratives	

The new model rescues, however, the omnidirectionality notion from the transactional model of communication (Adler & Proctor II, 2011; West & Turner, 2010) arguing that the relationship between categories (the nine variables previously considered) is characterized by mutual influences between the categories within each component, rather than a linear influence between them. Amid components (Sharing, Interacting, Communicating, and "Languaging"), however, the suggested model encompasses a developing dynamic organized in four levels of complexity, incorporating the diachronic concept from the transactional theory (Ruler, 2018); meaning that communication is unrepeatable and will continuously evolve with the added experience of communicators in time. To illustrate this idea, a helical shape is used to establish the relationship between levels of communication, honouring Frank Dance's (1967) contribution with his conceptual model.

The idea of communication complexity developing over time is not new and has already been explored in the work of diverse researchers and theorists. While constructing the Communication Complexity Scale, Brady et al. (2012) aimed at creating an instrument that would reflect growing degrees of coordination between communication partners and referents and increasingly sophisticated forms of communication, starting from the absence of response from the partner or mild changes in his/her behaviours to triadic eye gaze and the exchange of potentially communicative behaviours or even words between participants. The same authors emphasize that the ability to recognize and describe these early communication behaviours across different populations may enlighten the understanding of communication development in individuals with the more severe disabilities, reiterating the interest of a model that encloses the dynamic growth of communication among partners.

As depicted in the following illustration (see Figure 5), nine important variables are represented in the Complex of Continuous Communication Model, interacting with each other across four gradually more complex levels of the interpersonal exchange. A first level of inexistent interaction or communication is present, representing the isolation state experienced by individuals with atypical communication profiles, when the circumstances do not favour the co-creation of interaction/communication projects. As explicit by the helical shape connecting all the interaction/communication categories and complexity levels, the interpersonal exchange may grow continuously, as the involved partners develop their expertise in the interaction/communication with each other. The meaning of each variable and relationship are identified and described, respectively, as follows.
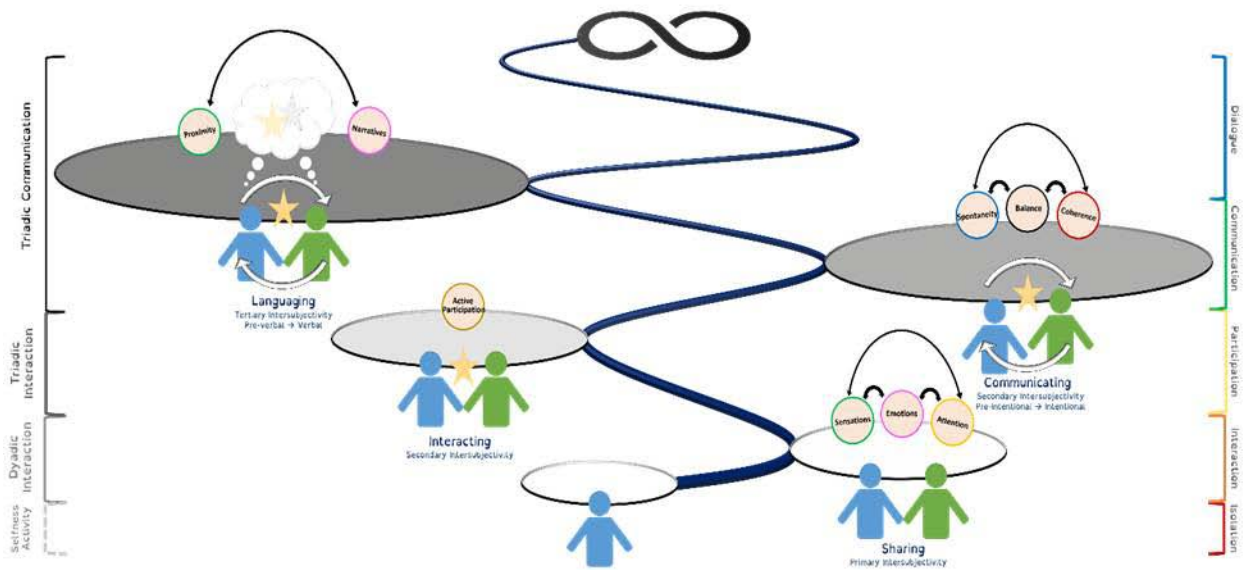
Figure 5. Representation of the Complex of Continuous Communication.

Level 1: Isolation

In this first stage, the partner with an atypical communication profile is not engaged in an interaction with anyone else. As explained before, these circumstances may occur because the individual has difficulty initiating or maintaining the interaction or demonstrates a very unique interaction style (Forster, 2008). It may also happen because the individual tends to or shows preference for being involved in what is designated in the model as "selfness" activity, frequently related to being distracted by specific sensory *stimuli* (e.g., sensory craving for specific stimuli, such as movement or visual stimulation), internal states (e.g., internally distracted by some unpleasant or pleasurable sensation, such as pain or sleep) or individual thoughts (e.g., recalling a past experience) (Winners et al., 2011; 2015).

While this state of isolation may appear to be entertaining and even comfortable for the person, interacting is an essential piece of social belonging and it is important that communication partners make the decision of decreasing the relational distance and creating space within each other's minds. As explained by Forster (2020), doing so with another speaking person (or typical communicator) may be simple and familiar, but the same approach to a person with a severe disability may be less intuitive, more difficult and complicated by "ethics, emotions, past experience and contemplations of the judgement or imagined judgement held by others" (Forster, 2020, p.133). Frequently, the decision of the neurotypical partner is to retreat, perpetuating the state of isolation.

Level 2: Interaction

Social interaction can be defined as "the process in which two individuals mutually influence each other's acts" (Janssen & Rødbroe, 2007, p. 57). This is the kind of shared activity that characterizes the second level of complexity in the interpersonal exchange within the presented model, marked by a sharing state of sensations (sensory information that becomes relevant and captures both of the partners attention) and emotions (co-regulatory process of exchange of emotions, many of the times via non-verbal signs, strengthening the relationship and supporting the interaction), conducing the communicators to share the same focus of attention, while aware of the other. At this stage, partners' interactive utterances can be designated as potential

communicative acts, existing behaviours within the individuals' repertoire that might, in the present moment or in the future, function as forms of communication (Sigafoos, Arthur-Kelly, Butterfield, & Foreman, 2006b).

Within this level of communication complexity, a dyadic interaction is established, consisting of a shared partnership between the individuals in communication that does not include elements other the two participants (Damen, Janssen, Huisman, Ruijssenaars, & Schuengel, 2014; Janssen & Rødbroe, 2007). This allows for primary intersubjectivity to emerge, characterized by a basic pattern of emotional exchange and shared attention between partners, without involvement of external elements into the dyad (Trevarten & Hubley, 1978, as cited in Rødbroe & Souriau, 1999). Gradually, these primary, yet fundamental, interactions may grow in diversity of shared sensations and emotions, behaviour repertoire and duration of the *foci* of joint attention, evolving in terms of complexity and giving rise to communication; this is designated in the model, similarly to Dave Hewett's ideology (2011), the process of spiralizing.

Level 3: Participation

As described by Linell (2009), communication projects generally take place and are connected to overarching activities that may or may not be communicative in their nature. These activities serve as context for the interaction and embed the participants' utterances (communicative or potential communicative behaviours) with meaning, influencing the significance of the whole project. When the fundamental level of sharing is accomplished by the partners, the joint participation in activities will allow for interaction to evolve into the level of participation, giving place to triadic interactions; the kind of engagement that characterizes the level of participation in the model.

Triadic interaction involves both partners and a third element external to the dyad, which can be an object, a shared topic, a joint activity … (Janssen & Rødbroe, 2007). At this stage, secondary intersubjectivity is co-created, meaning that partners sustain person-to-person interaction and, at the same time, are able to direct their attention to an item that is external to the dyad. At first, this item is very closely connected to the communication project or shared activity, but gradually the communicators will be able to share their communicative attention around more distant or abstract entities (Rødbroe & Souriau, 1999).

As mentioned before, this level of participation is closely related to the interactive process, sharing sensations, emotions and attention, while participating in meaningful activities, implanting the individuals' behaviours with context-dependent information. Regarding the significance aspect of the activities, it matters to express that more than anything else, their relevance has to do with being a natural part of the daily life of the individuals. This idea relates to Amaral et al.'s (2006) holistic approach when working with people with communication difficulties—due to multiple disability and visual impairment—for whom the participation in natural activities in the categories of: (i) daily life activities; (ii) domestic life activities; (iii) social/cultural activities; (iv) work activities; and (v) leisure activities, is the way to promote inclusion in the physical and social environment. While sharing and interacting within joint activities, the behaviours with communicative potential may actually become communicative forms with intent, giving new heights to the interaction and spiralizing into communication.

Level 4: Communication

Interactive exchanges may evolve within meaningful activities and partners start to exchange behaviours that are actually communicative in their nature; at this level, in the presented model, the dyad enters into communication.

As partners show spontaneity—the ability to self-initiate communicative exchanges (Sigafoos et al., 2006a)—both are able to introduce new materials into de "conversation" (Linell, 2009) and symmetry in the communicative relationship may develop. When all parties in communication are able to show initiatives and responses – the display of understanding and attitude in respect to prior utterances (Linell, 2009)—turn taking may take place in a synchronic way, which is, in this model, denominated as balance. In this situation, all partners are able to take and keep their turns, give the turn to another communicator or leave their turn and interrupt the exchange (Janssen & Rødbroe, 2007). In a balanced interaction, partners will be aware that their turn should resemble the other's in terms of length (i.e., duration) and match the partner's participation in relation to the timing (i.e., when to take, give or leave a turn) and pacing (i.e., speed or tempo) of the turns.

At the stage of communication, the partners are still interacting at the level of secondary intersubjectivity, for the reason that the dyad is able to interact, focusing on each other, and on the shared activity. They are now, however, at the level of communication, in the sense that the there is a specific form of interaction in which meaning is transmitted, perceived and interpreted by the use of signals (Janssen & Rødbroe, 2007); signals may here be understood as communication forms that fulfil communicative functions. The expression "triadic communication" is, therefore, used in the model to label the complexity of communication between participants.

As individuals are engaged in communicating, different potential communicative behaviours—or actually communicative behaviours—will be exchanged, as the meaning negotiation around a specific topic (e.g., an activity, object or theme) evolves. Some behaviours are potentially communicative in the sense that they are not, yet, intentional; the behaviour is under the individual's control, but it is not used to intentionally communicate a message. At this stage, the person does not realize that he/she can use these behaviours to control the other person's activity (Rowland, 2013). With consistent communicative experiences, however, it is likely that the person will start to use specific behaviours (communicative forms) to communicate intentionally and convey specific messages (e.g., communication functions, such as asking for attention, asking for an object, asking for help, requesting more of something, making choices, commenting …) (Rowland, 2013; Sigafoos et al., 2006b). As the persons starts to use specific communicative forms to fulfil precise communicative functions with coherence, the process grows from pre-intentional to intentional communication, even if pre-verbal and unconventional communication forms are still being dominant in the repertoire.

Level 5: Dialogue

When partners are actively involved in triadic communication, intentionally exchanging behaviours that convey meaning, a dialogue starts to develop. From a communication perspective, "a dialogue represents a form of discourse that emphasizes listening and inquiry, with the aims of fostering mutual respect and understanding", allowing communicators to "become aware of the different ways that individuals interpret and give meaning to similar experiences" (Broom, 2009, as cited in Littlejohn & Foss, 2009, p. 301). Dialoguing, in this model, is viewed as a dynamic, transactional process, focusing on the quality of the relationship between participants and on the co-construction of meaning.

Immerse in the dialogue, the partners share their feelings and thoughts and may actually distance the "conversation" from the "here and now" concrete moment to co-create simple narratives to recall and express past, future or even imagined experiences. Narratives are characterized by a basic temporal structure of clear beginning, climax and ending that may be shared using non-verbal and/or verbal forms (Janssen & Rødbroe, 2007). As partners start to communicate about absent entities—activities, individuals, events, objects, etc.,

tertiary intersubjectivity appears. This level of intersubjectivity exists when communication becomes more abstract and parties start to use symbols—words, gestures, pictures, etc.—to communicate about absent entities, making assumptions about intersubjectively shared meanings for the used symbols (Linell, 2009). By using symbols, partners start to use language in action or, as explicit in the dialogical theory, start to "languaging".

A dialogical model of communication must assign primacy to actions (i.e., activities or projects) therefore the term "languaging" refers to the linguistic activity in the context of real-life communication and thinking (Linell, 2009). In communication-situated language, the symbols that are used (i.e., words, gestures…) integrate a multimodal array of semiotic resources. A dialogical conceptualization of language implies that:

i) Lexical Items have open meaning potentials—relevant meanings and concepts take place through the interaction between linguistic resources and the communication context;

ii) Utterances are sequences of behaviours—streams of movements, gestures, actions, words, rather than structures of abstract behaviours.

Approaching language under a dialogical understanding clarifies that "languaging" consists of the primary activities of cognition and communication in and through linguistic resources (Linell, 2009); the communicators enact utterances in a shared space or communication project, supporting each other in making themselves understood and reaching higher levels of communication and language expertise. In order to do so, proximity between partners is essential in a sense that the more skilful partner is able to provide the other a clear interactive format, which serves as a scaffold on which the other feels stimulated to actively participate in the exchange (Janssen & Rødbroe, 2007). By doing so, all parties develop their sharing, interaction, communication, and "languaging" competence, creating the opportunity for communication to continuously grow in its diversity and complexity.

Conclusions

The Complex of Continuous Communication (CCC) described in the present article is the first version of a model under development with the aim of serving as referential to interpret and explain the relationship component of interpersonal communication between neurotypical communicators and those with the more atypical communication profiles. Individuals may present themselves as atypical communicators, meaning that the way they engage and participate in communicative exchanges may be pre-verbal, less conventional or even idiosyncratic, consequent to a disability or neurodevelopmental condition. This poses challenges not only for the individual himself, but also and to the same extent, to their communication partners, who may struggle to interpret their communicative behaviours and to actively engage them in the communicative partnership.

Embracing diversity in the interpersonal communication process as richness and fertility, rather than as disorder or disability, was the starting point for the researcher to embark on a journey to formulate a theoretical framework to analyse and interpret atypical interpersonal communication. As asserted by Simmons and Watson (2014), the dominant conceptual approaches used to understand persons with the most complex disability are, frequently, overtly simplistic, reductive, and objectifying, overlooking the complexity and dynamism of the life world of this population. Advocating for this viewpoint and challenging paradigms, such as the Linear Model, the interactional model or the monological conceptualization of communication, the CCC represents a theory that may guide professionals and caregivers in gaining a deeper understanding of atypical communication processes and how to develop them. In a way, the CCC may resemble a map, but as Mowlana (2019) stated: "here, the function of the map is to open up spaces rather than coordinate space" (p. 3). Meaning that the CCC

may support its users not only to describe a process, but mainly to focus the attention on relevant aspects of communication, to understand specific concepts and relationship patterns, to ask questions that increase self-knowledge and the knowledge of the communication partner …

"Human beings are more than mathematical equations" (Mowlana, 2019, p. 2) and no rudimentary theory or simplistic model will ever capture to real essence of interpersonal communication.

As a model, the CCC presents itself as a schematic framework, complemented with its verbal description. The graphical representation of the model serves the visual presentation of the positions, directions and relationships between the identified components of the developing relationship in atypical interpersonal communication; some of which are more easily depicted with pictures, than made explicit by words. The verbal component of the model, nevertheless, is based upon conscious theoretical concepts from relevant literature in the field, explaining in clear language the core aspects of the model. This dual nature, as asserted by Gerbner (1956), enriches a model and benefits its efficacy in fulfilling the functions of showing its various components and how these relate to one another, helping the reader in identifying new hypotheses and perspectives about communication, and reasoning about the importance of specific components in an exchange relatively to others.

As a theory, the CCC incorporates some of the important dimensions of a theoretical approach worthy of that name, explicitly:

i) Underlying philosophical assumptions—the transactional model of communication, Dialogism and the acknowledgement of diversity;

ii) Concepts or building blocks of the explanation—sensations, emotions, attention, participation, etc.;

iii) Descriptions of the dynamic connections established by the theory—the communicative relationship growing from the state of Isolation to Dialoguing.

The CCC lacks principles or guidelines for action, the fourth relevant dimension of a solid theory in agreement to Littlejohn et al. (2017). Even so, according to the same authors, most scholars would argue that having the first three dimensions would be sufficient to consider it as a theory.

Interpersonal relationships may be defined as associations between two or more individuals that have interacted for an extended period of time, developed consistent patterns of interaction and, eventually, became interdependent (Pearson et al., 2017). There are at least three basic interpersonal needs that are satisfied through interaction with significant others (Schutz, 1976, as cited in Littlejohn et al., 2017): (i) the need for inclusion; (ii) the need for affection toward another person; and (iii) the need to have influence over others, ourselves and the environment. Considering the importance of communication in the development of interpersonal relationships and the documented challenges faced by individuals with atypical profiles and their partners, the need for a model of communication that enhances the understanding of atypical communication processes became obvious. Most of the mainstream models of communication approach the whole process, with spin of theories focusing on the commonly known elements of communication (i.e., communicator, channel, message, feedback, etc.). Seldomly, the attention is drawn to aspects of diversity related to disability or atypical communicative behaviours with impact in the communication partnership, one of the reasons that led to the decision of creating a model that would highlight how the communicative relationship may be established and develop, even under atypical circumstances.

Positioned as a foundation for the understanding and further investigation of the components and relationships involved in atypical interpersonal communication, many research questions and investigation subjects may spin off from the CCC Model:

i) To what extent does the CCC Model explain the process of interaction and communication with individuals with various types of disability or neurodevelopment conditions?

ii) What functions may the model accomplish in the academical, clinical, and pedagogical practice in the field of communication disorders or difficulties?

iii) How will professionals and caregivers supporting individuals with atypical communication profiles receive the CCC Model and find it intelligible and useful in their daily lives?

Finally, it matters to express that the CCC Model, as a frame of reference, presents the fundamental limitation of not having been tested in real-life scenarios or complemented with the critical point of view of experts in the field. It is anticipated, in the future development of this thesis, to include other perspectives and to co-develop the theoretical model, as well as to test its application in the clinical and pedagogical intervention with persons with atypical communication profiles.

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