The Case for Private Speech As a Mode of Self-Formation
What Its Absence Contributes to Understanding Autism

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Private speech is common among 3- to 7-year-olds but rare among children with autism spectrum disorders (ASDs). Thus far, this phenomenon has only been studied in narrow cognitive contexts. This article presents a case for why the phenomenon of private speech is essential for the development of self and subjectivity and for why an analysis of private speech from this standpoint will enable a better and broader understanding of difficulties in the experience of self among individuals with ASD. The article discusses the importance of the concept of the self for development and presents evidence of limited concepts of self in autism. Furthermore, it surveys theories on the development of components essential to the development of the self (e.g., self-dialogue, inner speech). Finally, the article lays out a model for how to think about private speech in a broader framework related to individuals with ASD. Key words: autism, private speech, self

BACKGROUND AND PURPOSE

Private speech is defined as “an audible conversation or speech of a child with himself which is neither addressed to another person nor received as such” (Gibrau, 2007, p. 42). It has a central role in the development of the self and self-consciousness. This phenomenon, which is widespread in the early years of life, often continues to the end of adolescence and even later. The construct of private speech is related to but distinct from that of inner speech. Inner speech is defined as speech with no sound in which the child uses a subjective, private language with a grammar that only he or she may understand. In private speech, in contrast, the language is more communicative and simulates real dialogue. Private speech is considered to be a main aspect in the development of self and subjectivity. Some individuals with autism spectrum disorders (ASDs) have inner speech but have difficulties in the use of private speech (Frawley, 2008; Whitehouse, Maybery, & Durkin, 2006).

Hermans (2001) argued that self-dialogue, which is the way in which self-awareness manifests itself at the beginning of its development, constitutes a precondition for the experience of selfhood and subjectivity. Whereas the subject is the form of an existing being, subjectivity is the content of this form. It is the condition of being a subject, the quality of possessing perspectives, experiences, feelings, beliefs, and desires, and it involves the development of the subject, as well as the conception of consciousness as a space populated by multiple forces and delineated by a boundary between inside and outside. All these aspects have been accompanied by
the development of a dialogical dimension in which the subject perceives itself as possessing a real, stable core through dialogue with a constitutive Other. This Other can be a significant other or the person representing himself or herself as other (Mohanty, 1970).

Through self-dialogue, one talks to oneself as if he or she were an unchanging, unitary entity. Although the self is constantly changing, one’s experience is that what is changing is not oneself but rather the surrounding situation. Because consciousness is a structure given to perpetual change, its perception of itself as an object existing stably in time and space beyond the transient mental states is made possible by its ability to create a regular listener. This listener could be either a significant other or the person himself; someone who hears what is said and affirms, through its very existence, that even if the text changes and is discontinuous and fragmented, the speaker is the same speaker and his or her speech has meaning (Bakhtin, 1981).

In this article, I expand on the observation that private speech is absent or reduced for many children with ASD and that private speech has predictable structural deficits when it does surface (Frawley, 2008; Whitehouse et al., 2006). This claim is based on Frawley’s (2008) review of the evidence that individuals with ASD use less or even no private speech compared with neurotypical peers (Williams, Happe, & Jarrold, 2008; Whitehouse et al., 2006). This claim is based on Frawley’s (2008) review of the evidence that individuals with ASD use less or even no private speech compared with neurotypical peers (Williams, Happe, & Jarrold, 2008; Whitehouse et al., 2006). Frawley (2008) concluded that although individuals with ASD have inner speech, they are unable to use it overtly for self-guiding during problem-solving tasks. Levels of inner speech may in fact relate closely to the severity of the disorder. Low-functioning individuals with ASD should have unexpressed inner speech and no private speech, whereas high-functioning individuals ought to have private speech, although it may be functionally defective. For example, perseverative speech does not serve the purpose of helping individuals work through complex problem-solving tasks (Frawley, 2008).

Here, I offer a view that positions private speech within a broader framework of development of the self. My central argument is that private speech is part of an array of phenomena in which one conducts a dialogue with oneself and that this dialogue has a central role in the development of self and subjectivity. This view makes it possible to understand the lesser use of private speech among individuals with ASD, not as merely one of the symptoms of autism but as a phenomenon that could be important for understanding the essence of autism. That is, limited use of private speech reflects the fundamental difficulty demonstrated by people with autism in forming a dialogue-based relationship with themselves. Yet, despite the importance of self-dialogue and its centrality for the development of the self, there has been limited study of this topic in individuals with ASD.

THE CONCEPT OF THE SELF

The concept of the self has become a pivotal concept in psychological research and related fields. The myriad attempts to define “self,” however, reveal the difficulty in formulating a uniform definition or frame of reference for this concept, and, indeed, the way in which the concept and experience of the self are to be defined is hotly contested (Teicholz, 1999).

The various conceptions of the self may be classified into two general categories (Stern, 2004). One set regards the self as an autonomous, monadic structure, with a real core that develops spontaneously. The other regards the self as an illusion stemming from the need for stability and continuity and characterized by different, interchangeable narratives that make up one’s constellation of identifications with significant others (Bromberg, 1998; Mitchell, 1993). Basically, we can say that the main dispute is the question of the self being an objective structure or a subjective experience based on illusion.

One of the basic features common to all definitions of the self is the development of the capacity for self-awareness as a precondition
for the emergence of an experience of selfhood. Every definition of the self, whether as autonomous or as a context-bound illusion, comprises a distinction between consciousness and the reality that it represents. Meta-consciousness is the ability of consciousness to reflect on oneself as an object. This ability, which develops from the beginning of life, matures through several developmental stages, in the course of which one learns to relate to oneself at various levels, from the basic bodily dimension of the experience of self through self-identification in the mirror, to the creation of a personal narrative and the deployment of linguistic structures in which the self exists as a linguistic object.

Although it is impossible to offer a clear-cut typology of the experience of self, two levels of selfhood have been described (Ricoeur, 1988; Stern, 2004): one is a somatic level, anchored in basic sensory mechanisms such as seeing, hearing, and touch; the other is a mental level, anchored in language and representation mechanisms. At the somatic level of self, these mechanisms are based on self-touch, self-identification in the mirror, and self-vocalization. At the level of mental or narrative self, the experience of selfhood is created by consciousness addressing itself through language, establishing a speaker-listener relationship in which the listener addressed is actually the self (Sass, 1988). This dialogue constitutes, among other things, the foundation for the emergence of a self-image around which the memories and expectations making up the narrative self come together (Voloshinov, 1976).

EVIDENCE FOR LIMITATIONS IN THE CONCEPT OF SELF AMONG PEOPLE WITH AUTISM

Studies have shown that impairment in the structure or experience of self is one of the central features of people with autism (Hobson, Lee, & Hobson, 2010; Zahavi, 2010). This impairment manifests itself in many ways, including difficulty in creating a narrative in which the narrator also functions as the protagonist, as well as in creating a personal narrative in general. In her research, Novogrodsky (2013) tested the ability of children with ASD to recount a narrative in which they are the protagonists of the story and compared it with performance by typically developing children. She concluded that children with ASD have impairment in their sense of selfhood and agency.

Lind & Bowler (2009) tested the ability of children with ASD to imagine and tell a story in which they see themselves in the future. She then analyzed the themes of the stories. She concluded that children with ASD have difficulties in retrieving information from their episodic memory, which is responsible for constructing the narrative of the self. She also found that children with ASD have difficulties in posing themselves as protagonists of their own stories. Southwick et al. (2011), who studied these phenomena by measuring the time of retrieval in different tasks, found similarly that children with ASD demonstrated deficits in autobiographical and episodic memory, which are used to store and retrieve data concerning the self.

Hobson et al. (2010) studied the ability of children with ASD to use perspectival linguistic expressions and the correlation between their use of these expressions and their ability to achieve eye contact. They concluded that children with ASD use perspectival expressions less than children without ASD and that their difficulties are caused by a basic impairment in thinking of themselves as others. Farley, Lopez, and Saunders (2010) tested the ability of children with ASD to describe themselves from the point of view of another person and also found difficulties. Like Hobson et al. (2010), they concluded that children with ASD have a basic impairment in thinking of themselves as others.

Other research has shown that children with ASD have problems in the capacity for self-reflection (Toichi et al., 2002). Boucher (2012) conducted a meta-analysis of studies that tested the theory of mind (ToM) in children with ASD. Theory of mind is the ability to attribute mental states—beliefs, intents,
desires, pretending, knowledge, and so on—to oneself and others and to understand that others have beliefs, desires, and intentions that are different from one’s own. Boucher (2012) found that children with ASD have difficulties with ToM. Dritschel, Wisely, Goddard, Robinson, and Howlin (2010), who tested the ability of adolescents with ASD to differentiate what others know about them from what they know about themselves, found that adolescents with ASD believe that others know about them in the same way that they know about themselves.

Nichols and Stich (2000) tested the ability of children with ASD to pretend and to imagine using games and storytelling. They found that children with ASD have difficulty in the mental representation of themselves within activities such as imagination, dreaming, and fantasy. Children with ASD also have a general difficulty in introspection and understanding of the self and their motives and actions (Baron-Cohen et al., 1994; Capps, Yirmiya, & Sigman, 1992). Williams (2010) measured the awareness of objective time and its flow for people with ASD and their ability to recognize and differentiate physical and mental states. The results indicated that various components of the narrative structure of self are impaired among people with autism, whereas the experience of bodily self is unimpaired, including the use of the somatic self-regulatory mechanisms, such as self-touch, self-identification in the mirror, and self-vocalization.

SELF-DIALOGUE AND PRIVATE SPEECH AS A SPECIAL CASE

Self-dialogue is defined as “dialogue endowed with a material, objective existence that is embodied in sound or in writing, in which the addressee is also the addressee” (Zoran, 2000, p. 3). This phenomenon encompasses private speech as well as other forms of self-dialogue. Its precursors can be observed early in life, starting with the babbling of infants while lying in the crib, followed by presleep crib talk (Nelson, 1989). Private speech and imaginary friend talk appear between the ages of 4 and 7 years (Hoff, 2005), diary writing follows, especially in adolescence (Accardo, Aboyoun, & Alford, 1996), and finally, self-talk out loud may persist throughout life (Andressen, 1980; Milord, 1972). Self-talk appears in 60%-90% of children (Ribera, 2007), and about 30% of adolescents engage in diary writing (Accardo et al., 1996). Private speech intensifies in times of difficulty or distress, and a positive correlation has been found between emotional difficulties at later ages and the continued use of private speech (Kronk, 1994; Rubin, 1976).

THEORIES ABOUT THE DEVELOPMENT OF PRIVATE SPEECH AND CONCEPTS OF SELF

Most of the research on private speech hitherto has been conducted by scholars from the field of developmental and cognitive psychology. The prevailing research paradigms were naturalistic and sociolinguistic. Research was underpinned by the assumption that private speech serves as a way of practicing social skills and as a cognitive self-regulatory procedure (Kohlberg, Yaeger, & Hjertholm, 1968). Yet, beyond this shared assumption, private speech scholars disagree over its function. This disagreement stems from a more fundamental one between Jean Piaget and Lev Vygotsky, the first scholars to conduct in-depth studies of this phenomenon. Even though many studies have been undertaken since then, the basic assumptions regarding private speech have not changed.

Jean Piaget (Kohlberg et al., 1968) claimed that private speech, which he called egocentric speech, is associated with early stages of development and is used to practice and prepare for the social and logical forms of speech that appear in later stages. In contrast to Piaget, Lev Vygotsky (1986) claimed that private speech is essentially social, used by the child to practice playing an objective role during challenging tasks that require external help. Vygotsky further proposed that private speech is used for self-monitoring in times of difficulty and that this form of
monitoring gradually turns into inner thought and disappears. Thus, private speech aids in the development of cognition and provides direction for perception and thinking, a function attested to by the fact that private speech disappears at the age of 8 years, in this view, and does not reappear.

Over the years, research has been conducted that contradicts the assumptions held by both Piaget and Vygotsky with respect to private speech and its function, as summarized by Kronk (1994). These findings include the fact that private speech persists in older ages (Duncan & Cheyne, 2002) and that it increases in times of emotional difficulties, as well as that there is no connection between thinking development and the use of private speech (Jones, 2009).

The book *Narratives From the Crib* (Nelson, 1989) presents a series of encounters between experts from different linguistic and developmental fields who undertook an analysis of tape recordings of an infant from the age of 22 to 36 months, in which she conducts conversations with herself after her parents part with her before she goes to sleep. The experts analyze her presleep speech from various perspectives: linguistic, cognitive, developmental, and psychoanalytical. The analysis focuses on presleep speech not just in the contexts of constructing a view of the world and practicing language as a representation of reality but also as an act designed to construct and organize the self in relation to the world. The self and the grammar it uses are inseparable from the function of language as describing the world. In this sense, the self is constructed *inter alia* through language as a second-order object on which language operates.

Bruner and Lucariello (1989) claimed that, with respect to crib talk, the infant’s presleep self-talk generates the experience of self by representing the self in language. They argued that the first iteration of speech is omnipotent: that is, the word represents and generates meaning. In the private speech stage, language undergoes a transition to representation. This stage requires grammatical rules in which the protagonist is the subject, as well as a grammatical structure of action. Private speech, which posits the self as the subject of the conversation, creates the structure that would later be conceptualized by episodic memory in relation to semantic memory as temporally and spatially contiguous, a structure in which the self is the protagonist. Through private speech, the self is in effect constructed as such. The dialogical structure creates a cohesive self, possessing inner intentions and motives that are achieved through the speaker-listener structure. This basic doubling structure (speaker-listener) enables the speaker to reflect on his or her motives and to understand self while exiting the temporal framework of here and now into the domain of continuous representation and timelessness.

These findings concerning the formation of the self through self-dialogue bring to mind the deficits found among children with autism in precisely these mechanisms. It has been found that children with autism have difficulties representing events through the use of third-person language with respect to themselves. There are also difficulties with perspectival abilities and with positing the self as a subject of speech and memory (Powell & Jordan, 1993), as well as a more general difficulty reflecting on one’s own mental states (Frith & Happé, 1994).

An additional analysis of private speech in the crib talk narratives was conducted by Watson (1989), who focused on private speech as a device for understanding the speaker's inner state and for affective self-regulation. Watson (1989) referred to private speech as analyzed by Vygotsky, claiming that private speech is part of a broader phenomenon of subjects speaking to themselves, with crib talk constituting a preliminary stage in this phenomenon. The organizing act undertaken through private speech is not necessarily related to task performance. Rather, this organizing is essentially affective and related to the absence of the Other (such as one’s parent) and to the need for self-control in the latter’s absence.
Nelson (1989) argued that the analysis of subject–object relations in connection with affective organization ignores the asymmetry in those relations in the early stages of life. What lies at the heart of the relation with the Other (generally the parent) is the conflict between total dependence on that person and the issue of separateness. It is the parent who pushes toward separateness, and in the absence of their parent, infants have to find a way to regulate themselves on their own. The use of private speech makes it possible initially to represent the parent in his or her absence and to form an incipient subject–object relation in which the infant is both the object upon which the act is performed and the subject performing it.

Thus, affective self-organization is formulated since the beginning of life as a dialogue. Private speech tries to reconstruct not only the content (i.e., the words used by the parent to soothe the child) but also the parent’s vocal quality, intonation, and vocabulary. According to this analysis, the central issue for understanding private speech is the separateness imposed on infants as part of their development (Watson, 1989). By creating subject–object relations without need for an Other, the structure of private speech enables self-regulation of the anxiety caused by separation from the Other. By setting up the individual as an object of routine activities previously performed by the parents, private speech renders more tolerable the time in which the Other is absent, making it possible to bridge the gap between the parent’s absence and his or her return.

PRIVATE SPEECH AND DIFFICULTY IN THE DEVELOPMENT OF THE SELF IN AUTISM

Among children with autism, it may be observed that although private speech out loud is almost nonexistent, the development of language and formal thinking (Kobayashi, 2004), as well as what is called inner speech, exists to a degree similar to that of people without autism (Williams et al., 2008). This is the case despite the fact that the development of language and thinking is ostensibly supposed to stem from private speech. The difficulty experienced by children with autism in using language manifests itself mainly in its communicative and interpersonal aspects rather than in the formal aspect of language development (Kobayashi, 2004).

Against this backdrop, my main claim is that the significance of self-dialogue in the form of private speech lies not primarily in connection with language but rather in its role in the development of subjectivity and that understanding it as such will have much to contribute to a better understanding of autism. In this section of the article, I also discuss evidence that self-dialogue mechanisms are related to the development of the mental or subjective experience of self out of the bodily experience of self. This suggests that an understanding of the way in which self-dialogue develops out of somatic self-sensory circuits will enable a better understanding of autism.

This argument rests above all on a conception of selfhood and subjectivity as a structure of self-perception and a conception of self-awareness as possessing a dialogical structure (Voloshinov, 1976). It may be said in general that the experience of self is conditional upon one’s capacity for self-reflection (Sass, 1988), which manifests itself through language (Mead, 1934) and depends on the establishment of an inner discourse (Larrian, 2012). Central to the formation of an experience of self is the establishment of this discourse, through which one’s self-narrative is established as a story whose author is also its protagonist. Other conditions include an objective and subjective conception of time, an ability to distinguish between inner and outer experiences, and an experience of the self as an agent of action (Ricoeur, 1988).

In recent years, an increasing number of studies from various perspectives—developmental, neurocognitive, and philosophical (Zahavi, 2010)—have used empirical research and case studies to explore the relationship between autism and self-reflection and self-awareness. These studies have found
that, among many people with autism, these abilities are impaired or absent. For example, Baron-Cohen et al. (1994) used neuroimaging to test the ability of children with ASD to name mental states and to reflect about themselves. They concluded that children with ASD have difficulties in reflective functions, as well as an impaired or even absent ability to be aware of their own mental states.

As discussed previously, additional findings related to this deficit have to do with difficulty in imagination and in actions in which the self constitutes the object of mental activity, such as the formation of personal narrative, the use of third person, and perspectival expressions with reference to the self, difficulty in ToM, which is also related to the ability to produce perspective and self-representation (Wellman, Cross, & Watson, 2001; Zahavi, 2010), difficulty in understanding oneself and others, and problems with metonymical and metaphorical thinking and with symbolic activity (Rundblad & Annaz, 2010). In fact, because the conscious experience of self is based on the fact that consciousness turns toward itself as self-consciousness (Dritschel et al., 2010), it follows that, in the absence of self-dialogue, it may be impossible to speak of selfhood or an experience of self.

Neurobiological evidence also has been associated with the difficulties of people with autism engaging in reflective activity and creating the perspectival structure in which the self observes itself as an entity. This evidence is provided by research findings about a brain system made up of areas in the medial temporal lobe and medial prefrontal cortex (Buckner, Andrew-Hanna, & Schacter, 2008). This system is considered to be responsible for the experience of consciousness across time and for turning consciousness toward the self. The findings show that this system is underactive among people with autism compared with the normal population, which may reflect observed deficits among people with autism in the ability to turn their consciousness and attention toward the self as an object of consciousness.

The essence of the case being made in this article is that the difficulties of people with ASD with turning consciousness toward the self may be the source of their difficulty in creating self-dialogue. This difficulty may give rise to a complex interactive causal system because the self and subjectivity do not merely manifest themselves through self-dialogue; rather, they actually emerge and develop through it (Modell, 1984; Nelson, 1989). This results in a form of circular causality in which neither construct (concept of self or dialogue with self) can develop without the other. It is important that researchers begin both to study this relationship and to investigate assessment and intervention strategies associated with it. Whereas studies about the relation with the Other are at the heart of the literature on ASD and its diagnosis, almost no research has been conducted on the self-dialogue of people with autism or their relation with themselves as a distinct object of inquiry.

Discussions of the relation between self-dialogue and the experience of separateness and the capacity for self-regulation in the absence of the Other (generally one’s parents) are congruent with Tustin’s (1981) analysis of the autistic experience and its development. Tustin based her arguments on the distinction between normal sensory regulation and that which characterizes autism. In this theoretical discussion, Tustin offered an important and interesting distinction between “ego” and “self.” Tustin contended that initially the ego’s activity is neuromental. That is, in a normal developmental process, the gradually expanding engagement with the outside world enables the early ego to undergo processes of maturation and development, parallel to the development of bodily skills and abilities. In children with autism, however, the development of the ego stops at the elemental bodily stage, characterized by an excess of concrete sensory reactions. Tustin, based on her clinical work, pointed to the fact that individuals with autism lack a sense of self and an individual identity.
In earlier research, Frank, Allen, Stien, and Myers (1975) compared children with schizophrenia and autism with typically developing children and found that children without autism whose speech had been played back to them at a later time initially experienced anxiety but were eventually able to connect the inner to the outer talk. In contrast, children with an impaired experience of self, when hearing their own speech under similar conditions, experienced their speech in a confused manner, with difficulty in connecting the inner and the outer (i.e., the act of producing the speech and the experience of hearing it). Furthermore, they subsequently experienced continued disorientation and anxiety.

According to these arguments, the development of the experience of self is from the very beginning of life bound up with mechanisms responsible for creating a sensory stimulus in which one is both the actor and that on which the action operates (Rochat, 2003). This somatosensory exchange establishes a stimulus–response circuit, which, in turn, serves as a template for the formation of the experience of selfhood. Roughly speaking, Stern (2004) proposed that the self is composed of two layers, one serving as the basis for the other. The first layer is what is called the bodily self, which includes the experiencing of self as body by way of a relation to the body as both the object of a given action and the subject performing and sensing it. The bodily self evolves out of a complex relation within a person in whom the body is not experienced simply as the object of the action performed by the self but as an object that is also a subject (Bermúdez, Marcel, & Eilan, 1998). This initial relation to the body, in which the self doing the action is also experiencing the action, constitutes among other things the foundation for the experience of self and subjectivity (Gallagher & Zahavi, 2010). When more adaptive mechanisms such as self-dialogue are unavailable, people with autism may resort to self-sensory mechanisms, such as echolalia, self-mutilation, self-touch, and rubbing the body against hard objects. In such cases, these elements may represent alternative mechanisms for forming the basis for the creation of the experience of self, as well as for bounding what is “me” from what is “not me” and inside from outside.

Regressive devices based on self-sensation, such as self-mutilation (Boucher, 2012), excessive masturbation, looking obsessively in the mirror, and so on (Bradlow & Coen, 1984), appear to represent attempts at self-regulation and self-soothing through mechanisms that enable a bounding and containment of the self. With respect to such phenomena, which can be observed in other psychiatric populations, psychoanalyst Thomas Ogden (1989) coined the term contiguous-autistic position, referring to the mechanisms in which the person uses basic bodily functions such as touch or breath for self-regulation. According to Ogden, phenomena such as echolalia and neologism belong to the autistic-contiguous position, in which the self, for fear of disintegration, regulates itself through the sensory inputs it creates.

Anzieu (1985) similarly described the development of the self as based on one’s early sensory stimulation, which is gradually converted from a collection of disparate, noncontiguous experiences into a cohesive structure of self. In his conceptualization, the formation of the self by way of a transition from the somatic to the psychic draws a contiguous trajectory from the self created on the basis of initially meaningless auditory stimuli coming from other people, to language created by oneself, to a self that is constructed through language and meaning. According to this account, sensation precedes representation and becomes the foundation on which the entire representation system is established. The somatic sense of self bounded by its own voice, as opposed to the voice of another, lays the groundwork for an early distinction between oneself and others. According to this view, the somatic function precedes the psychic function and serves as the building block for it. In Anzieu’s view, the sonorous envelope is composed of the voices produced interactively by both the environment and the infant.
Functioning as a kind of mirror, the mother reflects back to the infant the sounds that he or she produces by reacting to those sounds. But the infant’s crying and other vocal reactions not only signal his or her emotional state to the mother but also serve as a sensory organizer through which the self is formed as a distinct entity. This is a second-order activity that enables the emergence of a space on which the self is constructed in the gap between the ego producing the action and the self that receives it. Accordingly, acts performed both in the presence and in the absence of another person, such as shouting, crying, echolalia, and private speech, may be seen as attempts at self-regulation and support of the self, even though they appear in forms that suggest regressive use of the early devices that served the formation of the self at the beginning of life.

The various sensory channels I mentioned form the basis for the emergence of the bodily self. This self differs from the conscious experience of self, which manifests itself through language and memory, as represented in both private and social speech, in that it has to do more with the somatic experience of “being me.” Some studies suggest that the experience of bodily self among people with autism is unimpaired. For example, most children with ASD identify themselves in the mirror in a manner similar to normal children (Dunphy-Lelii & Wellman, 2012; Reddy, Williams, Costantini, & Lan, 2010), develop formal language skills normally, and are aware of their physiological self in a proper manner. In distress, children with autism also make use of the somatic mechanisms mentioned earlier, such as self-mutilation (Furniss, Biswas, Bezila, & Jones, 2011) and echolalia (Prizant & Duchan, 1981), for soothing and self-regulation, suggesting that their development has been stalled at the experience of the bodily self.

In contrast to the normal formation of the experience of bodily self, the capacity for self-representation and the experience of mental self have been found to be impaired among people with autism (Baron-Cohen et al., 1994; Zahavi, 2010). What constitutes the foundation for the development of the mental self are mechanisms in which the self is both the one deploying the representation and the content of what is represented. This doubling of self is the basis of mental activities such as dreaming, fantasy, personal narrative, and autobiographical and episodic memory; in such cases, consciousness posits the self as its object.

MODEL FOR PLACING PRIVATE SPEECH IN A BROADER FRAMEWORK RELATED TO INDIVIDUALS WITH ASD

My thesis is that the difficulties experienced by people with autism in conceptualizing the self through language may be attributed to the near or complete absence of self-dialogue as a structure of representation and symbolization. Such difficulties are also related to difficulties with representations of self and other people and with access to the structure of consciousness of oneself and of others. As Nichols and Stich (2000) also argued, this absence may, in turn, be part of a more fundamental difficulty with representation, symbolization, and imagination.

The two dimensions of the self—the physical and the mental—are not only mutually complementary but also mutually antagonistic. According to Lakoff and Johnson’s (1999) theory, words and language activate somatic representation systems that position the self in the present space and time, but at the same time, they enable a representation of the self beyond the present space and time.

Language may be described as comprising two complementary encoding systems (Fonagy & Target, 2007). One is a system based on meaning and social convention, and its central dimension is the symbolizing function, which is the content of the word and its relation to the world it represents; that is, meaning-giving. The second encoding system is somatic, based on the feeling of the word that is composed of vocal and material elements through which the word evokes an emotion and creates an essentially somatic space; that is, makes the body present.
The transition from babbling and echolalia to mechanisms of language and meaning includes within it the material element of these mechanisms, namely, speaking out loud to oneself. This enables the development of the mental dimension based on the bodily dimension that precedes it. Among individuals with autism, there is much use of echolalia and somatic self-regulatory mechanisms (Dunphy-Lelii & Wellman, 2012; Furniss et al., 2011; Rivard & Forget, 2012) but the transition to self-dialogue does not appear to occur. Even after the acquisition of language, children with autism continue to use regulatory mechanisms based more on bodily experience than private speech.

On the basis of this conception of the development of selfhood from the initial somatic, prereflective self to a conscious, language-based self, the difficulty in demonstrating the conscious self shown by people with autism (see review earlier in this article) suggests that self-dialogue plays a key role in the transition from the somatic foundation to meaningful representation. The use of language in self-dialogue diverges from the formal functions of language. In private speech, structure is no less important than the uttered content, for it allows the formation of a representation system through which a perspectival structure is created wherein the self incorporates elements of the Other. This structure is based on systems that are simultaneously affective and formal (Powell & Jordan, 1993).

Accordingly, the impairments in private speech and self-dialogue among individuals with autism are to be understood in the context of the formation of self and selfhood. This understanding makes it possible to conceptualize several phenomena mentioned earlier that characterize individuals with autism, such as problems with episodic and autobiographical memory (Lind & Bowler, 2010). Such phenomena include difficulties with reflexivity and self-awareness, with self-naming and creating a self-narrative, and with constructing perspectival structures for understanding self and Other (Farley et al., 2010), as well as the gap between the apparently normal somatic experience of self and the impaired mental self. I submit that all of these impairments belong to the same fundamental problem of formation of the self through self-dialogue.

CONCLUSION

On the basis of the aforementioned arguments, a conclusion is warranted that the absence or deficit of private speech among individuals with ASD, which has thus far been studied in narrow cognitive contexts, is in fact a phenomenon related essentially to the formation of the experience of self and to the autonomy of the subject through self-dialogue. Emerging out of basic sensory circuits of touch and of sound production and identification in which the infant both performs the action and senses it, what appears to be missing for children with ASD is the stage of development of cognitive structures and linguistic templates that typically follows through which one’s self-experience, self-image, and, ultimately, self-dialogue develop.

Despite the general acceptance of the centrality of self-dialogue in the development of the experience of self and subjectivity among typically developing children, there has hardly been any research on this phenomenon and its various aspects among individuals with ASD. Investigation in this area needs to begin with more research on the degree to which private speech can be observed among individuals at various developmental points and severity levels along the autism spectrum. The research then needs to examine associations of the somatosensory and linguistic developmental pathways that may underlie these mechanisms. It seems that studying this phenomenon among people with ASD may have much to contribute to the understanding and treatment of this disorder.
Private Speech As a Mode of Self-Formation in Autism


