



# Theory of mind: network of complex processes woven into the intersubjective experience

## Teoría de la mente: red de procesos complejos tejida en la experiencia intersubjetiva

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### Abstract

This paper aims to contribute to the reflection that expands and makes explicit the aspects of early mother-child bonding that favor the development of Theory of Mind (ToM). For this purpose, first, we start from the conceptualization of ToM and its understanding from the Theory of Theories and Simulation Theory, as they have been identified as the most important theoretical models that explain one of the most relevant differential capacities of the human species. Subsequently, it is proposed that this capacity emerges in

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the bonding context, since due to its complexity it constitutes an evolutionary advantage that favors the establishment of the social bond; for this purpose, the developments of the Attachment Theory are used. The content analysis carried out allows us to recognize that treating the child as a mental agent (intentional and with individuality) and tending to use terms of mental state in discourse, play a fundamental role in the development of children's capacity to understand other minds, so that rather than entering into the debate of internalist or externalist perspectives on the development of ToM, the value of intersubjective experience is highlighted.

## Keywords

Mentalization; Theory of mind; Attachment; Social relationships; Cognition; Emotion.

## Resumen

Este trabajo tiene por objetivo contribuir a la reflexión que amplía y explícita los aspectos de la vinculación temprana entre madre-hijo que favorecen el desarrollo de la Teoría de la Mente (ToM). Para este propósito, en primer lugar, se parte de la conceptualización de la ToM y su comprensión desde la Teoría de Teorías y la Teoría de la Simulación, en la medida en que han sido identificados como los modelos teóricos más importantes que explican una de las capacidades diferenciales más relevantes de la especie humana.

En segundo lugar, se propone mostrar que esta capacidad emerge en el contexto vincular, ya que por su complejidad se constituye en una ventaja evolutiva que propicia el establecimiento del lazo social, para ello se recurre a los desarrollos de la teoría del apego. El análisis de contenido realizado permite reconocer que tratar al niño como agente mental (intencional y con individualidad) y tender a usar términos de estado mental en el discurso desempeñan un papel fundamental en el desarrollo de la capacidad comprensiva de otras mentes por parte de los niños, por lo que más que entrar en el debate de las perspectivas internalistas o externalistas acerca del desarrollo de la ToM, se resalta el valor de la experiencia intersubjetiva.

## Palabras clave

Mentalización; Teoría de la mente; Apego; Relaciones sociales; Cognición; Emoción.

## Introduction

The term Theory of Mind (ToM), also called mentalization, has reached a vast development thanks to the neurosciences and the disciplines in charge of the study of social cognition (Zegarra-Valdivia & Chino, 2017). Initially, it was used to refer to the attribution of mental states to the self and others (Hughes, 2005; Ibañez, 2013), that is, to the association of emotions, sensations, and states (intentions, desires, beliefs) through the observation of the other's behavior, while distinguishing them from one's own (Goldman & Jordan, 2013; Keysers et al., 2013; López-Silva & Bustos, 2017; Uribe et al., 2010; Urquijo et al., 2017). Nevertheless, the research lines that resulted led to the ToM being strongly associated with children's understanding of false beliefs. This focus on states of belief and knowledge has guided subsequent research development (Fonagy et al., 1997; Hughes, 2005).

This perspective, designated as the Theory of Theory (TT), is founded upon a representational conception of the mind, which entails a theoretical reasoning mechanism to process beliefs. Consequently, this enables the identification of the apparent reality that is true for the other (first-order false belief task) or the attribution of false beliefs that second persons attribute to third persons (second-order false belief task). (Goldman & Jordan, 2013; Harris, 1992; Pineda et al., 2012). The explanations that have emerged in this regard are oriented either toward an innate conception of the ToM or a conception of its gradual development.

The first one, designated the theory of modularity, postulates that children are born with cognitive modules that are inherently suited for this function. However, they require maturation to successfully resolve the false belief task (Uribe et al., 2010). Consequently, three-year-olds exhibit a performance issue but not a conceptual one (Goldman & Jordan, 2013). From the modular theory, the mind is expressed as a set of modules genetically established that develop during the first years of life until the mind matures the different mechanisms for completing tasks (Zegarra-Valdivia & Chino, 2017).

Conversely, those with a gradual development conception of the ToM posit that as children grow, they develop the same cognitive mechanisms scientists employ. Therefore, children over the age of four have achieved a false belief conceptual development, and the "naive" theories they create assist them in investigating the world around them, inferring situations, and predicting the behavior of others (Keysers et al., 2013; Meltzoff & Gopnik, 2013).

Nevertheless, the proposition of a ToM based on theoretical reasoning has been debated considerably. From this perspective, the degree of success achieved in this type of processing depends on the sophistication and complexity of the mind reader's naive theoretical constructs

(Goldman & Jordan, 2013; Meltzoff & Gopnik, 2013). This requires the development of an organized body of knowledge, which would entail using meta-representations to achieve logical inferences (Zegarra-Valdivia & Chino, 2017). Following this idea, it is noted that despite the tension between the quality of flexibility and the degree of difficulty and the speed and efficiency of mindreading (Aperli, 2013), there is a growing consensus in the cognitive sciences that ordinary people are mind readers par excellence since it is a spontaneous and ordinary process (Aperli, 2013; Fonagy, 2016; Goldman & Jordan, 2013).

Nonetheless, the condition of spontaneity does not imply that mindreading is automatic or mandatory because even though scientific evidence supports the fact that adults make inferences routinely and rapidly, the reasoning and understanding that is achieved do not depend solely on the theory that one possesses to process those inferences, but also on the availability of several motivational, environmental, and cognitive resources, such as memory and impulse control (Aperli, 2013).

The abovementioned argument allows us to consider the second argument that underlies the questioning of the TT. Specifically, it is erroneous to reduce the mindreading ability to the success in the completion of false belief tasks, given that children of three years or less fail in the performance of these tasks but are successful in their ability to negotiate in their daily social interactions, which is an essential aspect of mindreading (Dunn & Brophy, 2005; Hughes, 2005).

Thus, although the false belief task has assumed an important role in ToM research, its evaluation has not stopped there. Different works have explored other possibilities (Tirapu-Ustárriz et al., 2007), such as comprehending metaphors, jokes, irony, and deception (Zegarra-Valdivia & Chino, 2017). In this sense, the ToM is a complex and multidimensional concept encompassing a wide range of mentalist skills. It is not an all-or-nothing competence, but it is acquired through a gradual process in ontogeny.

An example of this is research with preverbal infants (children under one year of age), who use the gaze to codify the actions of agents concerning their targets, i.e., where they are directed (intentionality) since simpler and non-mentalistic interpretations are possible in terms of reading behaviors (Hobson, 1991; Pineda et al., 2012; Southgate, 2013), or in which first-person experiences allow them to attribute similar frames to others (Meltzoff & Gopnik, 2013).

However, it is important to note, first, that this sensitivity cannot yet be used to make accurate predictions about the behavior of others, and second, that their representation of an event or situation will interfere with the encoding they achieve of the other's perspective (Meltzoff & Gopnik, 2013; Southgate, 2013). Thus, their difficulty in solving false belief tasks is not due to the absence of a theory of mind but because they cannot yet adequately discriminate between two mental representations: their own and that of the other.

The ToM perspective presented in the previous paragraph is based on the simulation theory (ST), which suggests that people use their own mental mechanisms to estimate and predict the mental states of others based on a simulation of motor acts (Harris, 1992; Meltzoff & Gopnik, 2013; Goldman & Jordan, 2013; Perry & Shamay-Tsoory, 2013; Uribe et al., 2010). It is crucial to highlight that evidence indicates a correlation between measures of pretend play or role-play and performance on tasks assessing ToM (typically false belief or appearance-reality tasks) (Harris, 2005).

Similarly, the studies conducted on the human system of mirror neurons currently offer a body of knowledge suitable for explaining phenomena such as imitation and emotional contagion, which have been widely observed in preverbal infants (Hobson, 1991; Keysers et al., 2013). The human system of mirror neurons, which has been identified primarily in the frontal and parietal lobes (Keysers et al., 2013; Rizzolatti & Fabbri-Destro, 2013), is involved in the comprehension of motor acts visually observed and in the codification of the motor intention, even in the absence of visual stimuli.

These approaches only address the visible manifestations of the movements, but not the underlying elements of the observed action, which would allow us to understand what the action is about, its purpose, how to replicate it, and which are its affective components or how they are represented (empathy, sensations such as pain, touch, disgust) (Goldman & Jordan, 2013; Keysers et al., 2013; Rizzolatti & Fabbri-Destro, 2013).

Therefore, more comprehensive proposals (Harris, 2005; Hobson, 1991; Goldman & Jordan, 2013) orienting the simulation process toward decision-making, rather than merely reflex states, focus on the imagination of the mind reader. They argue that through this process, the subject can simulate mental states highly similar to the genuine ones. The most significant risk in this perspective is the potential interference of one's desires, beliefs, and emotions (egocentric error) (Apperly, 2013; Meltzoff & Gopnik, 2013). Thus, the success relies on imagination operating as a highly efficient mechanism that allows the mind reader to create adequate simulation states and keep in mind the other person throughout the simulation exercise.

Imagination goes beyond mere hypothetical considerations to be understood as the recreation of the sensation associated with a state. In a sense, this implies representing that same state (Goldman & Jordan, 2013). This fact allows us to propose that if imagination is a natural capacity, then even preverbal infants can automatically calculate imaginary states about the people around them. From this perspective, the simulation of mental states would be less cognitively demanding.

The preceding developments reveal that it is not yet possible to present conclusive results. The research lines have taken different orientations. However, in an effort to adopt more comprehensive definitions, it has been suggested that a wide range of mental states be considered, which imply

at least perception, intention, cognition, and emotion, as well as the interaction of genetic and environmental elements (socioeconomic level, intentionality of the parents-caregivers, among others) (Hughes, 2005; López-Silva & Bustos, 2017).

Consequently, this paper aims to present a reflection that assists the dialogue between the approach of the ToM from the cognitive tradition and its implications in the intersubjective context, where the attachment theory plays a pivotal role. After a review of the literature, it became evident that although this relationship has been established (Hobson, 1991; Pinedo & Santelices, 2006; Riquelme et al., 2003; Villachan-Lyra et al., 2015; Zegarra-Valdivia & Chino, 2017), it has not been mentioned extensively or explicitly which aspects of the early mother-child attachment favor the ToM and the function this comprehension may have when addressing problematic situations in the context of family, such as is the case of child abuse.

Similarly, there is a controversial aspect, namely, that the cognitive and attachment theory developments are epistemologically incompatible. Nevertheless, following Ibañez (2013), it is found that Peter Fonagy, who developed the concept of mentalization from attachment theory, took up Pierre Marty's work regarding the concept of mentalization and gave it a different meaning with the contributions made by Simon Baron-Cohen (2013) on ToM. Thus, it can be said that there are indications to think of an interrelation between the developments of both theories in order to understand the ToM from a perspective with a tendency toward integrality, an aspect pointed out by Tirapu-Ustárriz et al. (2007).

As the authors explain, despite the existence of different models and explanations regarding the content of the ToM, there has been no successful attempt to combine them. Thus, we obtain inaccurate and partial solutions to a complex problem. Therefore, combining the different models and hypotheses seems appropriate to obtain an approximation optimized for complex cognitive processes such as the one in question (p. 485).

Such a perspective would revisit genetic predispositions concerning the role of emotions and affects in interpersonal relationships, which would aid in understanding the development of the ToM as a complex, multidimensional, and gradual concept (Zilber, 2017, p. 11).

The compilations of Baron-Cohen et al. (2013) and Astintong and Baird (2005) were reviewed to achieve these elaborations. These works present developments from the cognitive tradition; thus, through the content analysis procedure, potential points of convergence with attachment theory were identified and expanded upon in light of the propositions by Elizabeth Meins (2003) and Peter Fonagy and Campbell (2016). This approach allowed for transcending both proposals since it was recognized that the cognitive theory discusses the other in the relationship, while the conceptualizations from attachment theory are fundamental for understanding the mentalization process.



## Networked relations of overlapping levels and concepts

In examining the ToM conceptualizations, it is common to find that it is divided into two levels (Goldman & Jordan, 2013). However, within the possible classifications, that of Tirapu-Ustárroz et al. (2007) merits consideration. This approach proposes dividing the ToM concept into different complexity levels, such as facial emotion recognition, first- and second-order beliefs, metaphoric communications and strange stories (irony, deception, and white lie), blunders, emotional expression through the gaze, and empathy and moral judgment.

Next, the traditions that divide it into two levels will be referenced. It becomes evident that, regardless of whether they are denominated as socio-perceptual skills and formal propositional knowledge (Hughes, 2005), social perceptual and social cognitive components (Goldman & Jordan, 2013), or affective and cognitive substrates (López-Silva & Bustos, 2017), it is possible to identify relationships and confluences around the definitions proposed by the authors for each level.

Consequently, at the levels involving socio-perceptual skills, the social perceptual component and the affective substrate are associated with low-level mindreading, which, according to experimental evidence, are relatively faster, automatic, and inflexible (Goldman & Jordan, 2013), since they refer to the inherited biological endowment (Dunn & Brophy, 2005; Montgomery, 2005). In this manner, they are related to primary morphological structures (sensory and motor) that trigger an emotion or behavior related to observation and, thus, to imitation (Keysers et al., 2013).

According to Lecannelier (2016), this behavior (imitation) appears to be how infants establish communication and emotional connections with others. Thus, it is considered the foundation upon which the ToM is structured, which actively contributes to the formation of the attachment bond with the primary caregiver and, subsequently, to the establishment of intersubjective relationships within a broader social network.

This perspective aligns with the theoretical proposal of innate intersubjectivity by Trevarthen (2016, as quoted in Zilber, 2017), who states that early emotional and affective experiences between infants and their caregivers allow them to intuitively and intentionally imitate the emotions they perceive from their caregivers. In turn, it leads to the developing of primary, secondary, and tertiary intersubjectivity processes (Zilber, 2017).

Similarly, Bordoni (2018) argues that parents use imitation to establish bodily dialogues or conversations with infants, demonstrating that this behavior is bidirectional and serves the purpose of interaction. It is pertinent to highlight these characteristics, as they are vital for personal

development and social and cultural functions, which refers to the source of the understanding of other minds based on *like-me* experiences (Bordoni, 2018, p. 128) and the recognition of the intentionality and individuality of the other.

Meanwhile, levels involving formal propositional knowledge, the social cognitive component, and the cognitive substrate refer to the cognitive maturation typical of development where the context in which individuals spend their first years of life and interact with others play an essential role (Fonagy et al., 1997). These levels are related to high-level mindreading, which is characterized by being relatively slow, reflexive, and controlled (Dunn & Brophy, 2005; 2005; Goldman & Jordan, 2013; Montgomery, 2005), since it is related to reasoning. Therefore, there is a transition from replicating perceived emotions and motor behaviors to their interpretation or recreation within the context of relationships. This process demonstrates the involvement of other cognitive processes, such as learning, language, and thinking (Astington & Baird, 2005; Goldman & Jordan, 2013; Jacques & Zelazo, 2005; Meltzoff & Gopnik, 2013; Montgomery, 2005).

This division of the ToM illustrates certain specialization in the functions of each level and indicates that this skill does not emerge or unfold at a specific age (Fonagy et al., 1997). Instead, it is a process that commences during the early months of life due to its biological component. As the developmental process continues, relational, contextual, and cognitive aspects are engaged, facilitating new connections and reconfiguring existing ones (Goldman & Jordan, 2013; Hughes, 2005; Rodríguez Sutil, 2016). In other words, it can be said that the ToM is a dynamic process that revisits itself following the experiences of the individual.

Thus, it can be argued that the two levels of the ToM, along with the other involved processes such as mindfulness, perspective-taking, sensitivity, and empathy (Luyten et al., 2020; Maldonado & Barajas, 2018), overlap and influence each other, as it is possible only in theory, not in practice, to think of a hermetic process. These processes are interrelated in a multidimensional manner throughout the cognitive and relational maturation of the infant, which favors mindreading (Fonagy et al., 1997).

Upon revisiting the proposals put forth by Goldman and Jordan (2013), it becomes evident that the two levels comprising the ToM exhibit a more or less similar functioning. This ability comprises sub-levels that engage in high-level and low-level processes, which facilitate dialogic functioning. Consequently, some situations are better explained by the perceptual component than



the social cognitive component, and vice versa. This will depend on whether a theory exists for each emotion or whether the behaviors observed in the other facilitate an appropriate inference process.

Thus, the individual's self-knowledge and social participation will be mediated by the development of their mentalizing ability in the context of their interactions. This evidences the importance of a process that is individual but that emerges and is modified through relationships, which ultimately implies a perspective of mindreading that occurs in the search for mind interconnection.

## Intersubjective context

The elements presented thus far evidence an ongoing debate regarding the process of developing a theory of mind in children. However, following Meins' (2003) work, the representational perspective of reality inherent to the TT, which is based on the processing demands, has been unable to account for the difficulties encountered by four-year-old children in tasks that involve not only false beliefs but also emotions.

From this perspective, this aspect has favored the propositions of the ST insofar as the understanding of what a person may believe, desire, or do in a given situation is based on an assumed analogy between oneself and the other. In other words, it involves the capacity to imagine how one would act in another person's position, thereby underscoring the significance of the intersubjective experience (Lecannelier, 2016; Meins, 2003).

Adopting the proposal of the ST, it is accurate to assert that the ToM is constructed within an intersubjective field where cognitive and emotional components facilitate the bidirectional, and even multidirectional circulation, of the meanings attributed by the caregiver-child dyad to themselves, others, and the context, given that it is not only about *knowing* the mental state of oneself or the other but also about how this knowledge is *used* (Boesch, 2018). For instance, how the caregiver interacts with the child and responds to their emotions. In this regard, increasing scientific evidence indicates the early emergence of the ToM in children (Meltzoff & Gopnik, 2013; Southgate, 2013). Therefore, it is necessary to examine the environments in which children participate and the roles played by the individuals within these environments.

Several studies have indicated a positive correlation between the performance of the ToM and the relationship of the child with older brothers (Dunn & Brophy, 2005; Ruffman et al., 1998), as well as the contact with adults and elderly persons beyond the family unit (Lewis et al., 1996). Similarly, some findings suggest that favorable socioeconomic conditions (Cutting & Dunn, 1999;

Holmes et al., 1996) and achievements in the educational level of the mothers (Cutting & Dunn, 1999; Meins & Fernyhough, 1999) are aspects that facilitate mind comprehension in children. This correlation has been supported by the argument that these contexts encourage children to encounter diverse perspectives on the world, which makes it easier for them to understand that reality is diverse (Meins, 2003).

In consequence, although the relationship with the primary caregiver, typically the mother, has been extensively studied, the attachment relationship is not exclusive to one figure. Nevertheless, the evidence available on the mother-child relationship has led to the strengthening of research in ToM and attachment, understanding attachment as the bond that transcends mere contact and provides security and support to explore the environment. This favors the establishment of mutual proximity in the self-other dyad (Bowlby, 1986; Feeney & Noller, 2001). Thus, maternal sensitivity and attachment security have been fundamental study variables, as the significance of a caregiver who is open to the emotional experience, capable of engaging affectively and reflectively with both themselves and the child, has been duly recognized.

Furthermore, Meins and Fernyhough (1999) argued that the reason for the link between attachment and ToM lies in the differences related to the ToM processes of the mothers. Therefore, the mind-mindedness of the mothers, understood as the ability to make accurate comments on their children's mental states, is a more reliable indicator of attachment security than sensitivity (Meins et al., 2001). Moreover, mind-mindedness, the recognition of the child as a mental agent (intentional and with individuality), and the tendency to use terms of the mental state in speech play a fundamental role in developing the children's ability to understand other minds (Meins, 2003).

Thus, it is clear that the core of the ToM is in the mental models of the self, the other, and the bond that have been formed from interactions and responses of the primary caregiver to the child throughout their development. This condition leads individuals, in general, to expect that the interactions and responses to their needs will be similar to those obtained from their caregivers. Such expectations indicate a functioning consistent with such formations and tends to be maintained over time (Boesch, 2018; Feeney & Noller, 2001).

The reference above allows us to introduce one of the central concepts in attachment theory, namely, internal working models as cognitive maps, scripts, or representations individuals have of themselves and their environment (Marrone, 2009). An essential aspect of the working models is that they mirror the responses obtained to the care demands and the subjective experience of being accepted or not by the attachment figures.

From Fonagy's (2016) perspective, the ability to understand others is interdependent on the response obtained to one's own mental states, that is, whether they were adequately understood by the caregivers. Therefore, the effects derived from dysfunctional attachment relationships, such as problems in regulating affect, are mediated by the limitations in developing a solid mentalization ability (Fonagy, 2016). This allows us to go back to the previous proposal about the dynamic condition of the ToM development as a process that revisits itself according to a person's relational network.

According to Feeney and Noller (2001), the stability or variability of an individual's attachment style depends on the significant relationships and the contextual factors in which they are established. Therefore, the relationships are connected to long-term continuity, while the factors are related to short-term instability. This indicates that the socioeconomic variable, for example, has a less significant impact on both the functioning of the relationship (or attachment style of the relationship) and on the attachment style of an individual. As Meins (2003) states, a secure base is a stronger indicator than attachment behavior since a secure base favors interactive (social) exploration, while attachment behavior is more likely to occur in the face of a stressful event.

Moreover, establishing an attachment relationship and using the caregiver as a secure base will depend on the compatibility of both systems to interact efficiently, from which derives the evolution of their exchanges (Meins, 2003). Therefore, the caregiver's system is comprised of the aptitude for motherhood, mental health, Intelligence Quotient (IQ), and social class, among others. These components affect the quality of the communication and maternal tutoring or scaffolding. For example, a depressed mother may speak less, and when she does, her language will be more oriented toward criticism, control, and self-focus. This can clearly affect the child's cognitive ability to complete a task for which they are prepared or nearly prepared (Meins, 2003).

On the child's side, their system is initially comprised of their temperament and, subsequently, of the strength and resiliency of the ego. The ego strength relates to persistent effort in the face of failure, to not fail or give up, and the ego resiliency relates to flexibility, persistence, and resourcefulness in the face of problems. Regardless of whether the temperament is active, difficult, or slow-to-warm<sup>1</sup>, the crucial element is its interrelation with the base characteristics of the caregiver. In other words, how these influence interactions and the caregiver's response to the child. Moreover, the temperamental characteristics affect the caregiver's state, and the caregiver makes specific attributions to the child based on the temperament (Meins, 2003).

Regarding the concepts of ego strength and resiliency, no conclusive theoretical and empirical research allows us to understand how they are developed or if they are innate. However, this last idea would be unlikely, given its roots in a relational epistemological tradition. Nevertheless, it has been suggested that secure attachment is associated with these characteristics to the extent

<sup>1</sup> "Slow child" (characterized by low energy, a tendency to withdraw and high predictability), "difficult child" (tendency to withdraw, low predictability, slow adaptability, and intense tantrums when frustrated), and "active child" (tendency to accept new experiences, high predictability, fast adaptability, positiveness in mood, and moderately upset when frustrated) (Ramos et al., 2009, p. 70).

that it encourages the child to find stability and cohesion for the psychological self (Fonagy et al., 1994) in the relationship with the caregiver when faced with adverse situations, rather than generating defensive reactions (e.g., avoidance, resistance, and disorganization). This is because past experiences characterized by having a stable, constant, and consistent caregiver become a reference point for coping with current adverse situations, so they are not perceived as traumatic events (Meins, 2003). More recent proposals, such as those by van IJzendoorn et al. (2019) and Yoon et al. (2019), highlight the significance of considering resiliency as a key indicator of individual differences in terms of ego strength in adverse situations.

In addition, allusion has been made to the interaction with peers, with whom a relationship different from the one with the primary caregiver can be established. In this sense, it could be considered an opportunity to propose other ways of establishing meaningful relationships (Dunn & Brophy, 2005; Meins, 2003). In any case, viewing the other as a resource, that is, evoking the record of the attachment history and thus benefiting from the positive influences of the environment, is considered by Luyten et al. (2020) as the virtuous circle of epistemic trust that captures the essence of resiliency. It enables using this record as a resource for self-regulation or co-regulation in challenging or adverse situations.

In this regard, the key factor is not the experience itself but the ability to use the amalgamation of one's own and social learnings (the belief that one can trust others and the information they provide, the attachment security, and the development of the mentalization ability) to benefit the self and facilitate the generation of new intersubjective pathways and creative alternatives or solutions in the face of adverse situations (Luyten et al., 2020).

The discussion in this section responds to the objective outlined initially as it describes the aspects of the mother-child attachment that favor the ToM. Such a description does not intend to argue that attachment is the only or main explanation for mentalizing ability. As previously mentioned, this ability implies complex processes. Thus, it is not adequate to understand it from one theoretical model, as it would be reductionist.

The following is a brief review for greater clarity:

- 1) Naming the child's intentionality and individuality with phrases such as "Mom, I'm hungry" while the mother is preparing the child to eat reveals that the mother pretends the child is manifesting "being hungry" (intention), but there is "I" (individuality).
- 2) Understanding the child's needs, which is not fully achieved because mothers resort to trial-error. They ask the infants: "Are you cold?", "Are you hungry?", "Is your diaper dirty?" in order to take the appropriate action and soothe the infant's crying, addressing several possibilities if the crying continues despite their efforts.

- 3) Responding to the child's needs. For example, a caregiver who is preparing to feed the child and who is upset or complaining about the impending activity while holding the child in their arms may cause the child to become an adult who expects aggressive reactions from others, thereby creating relationships prone to conflict.

Thus, both the appropriate response and the manner of responding promote the development of the ToM. The child is recognized as a subject, and various internal states are attributed to them, such as cold, heat, and hunger. Moreover, the one who provokes a particular action from the other possesses some tools for recognizing individuality, hypothesizing about the possible internal states of others, and acting in coherence with them to establish relationships.

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## Conclusions

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In consequence, it is evident that mentalization is an ability that emerges in a relationship with an other who essentially treats the child as an individual with thoughts, feelings, and intentions, i.e., with a differentiated mind. However, it could also be said that mentalization is a process that takes place within a mentalizing environment as it is an ability that revisits relationships. Individuals move from a passive position, of being understood and treated by others as mental agents, to an active position, of understanding and treating others as mental agents. The individual's social circle expands from the primary caregiver to peers and adults in the family and other contexts. In these relationships, individuals clearly use mindfulness, perspective-taking, sensitivity, and empathy creatively (Luyten et al., 2020) to identify, understand, and respond to their own and the other's needs.

The shift from passive to active mentalization emphasizes that the attachment relationship is critical not only for the interaction between the primary caregiver and the child, but also for the child's acquisition of relevant social and cultural knowledge. The child will apply this knowledge in other contexts as they gradually trust and accept it as true. The ToM essentially becomes an ability with evolutionary advantages that facilitates the participation and the formation of social bonds (Luyten et al., 2020).

Now, a problematic aspect arising from this matter concerns the fact that achieving the development of effective mentalization depends on the balance between the various processes and systems involved in mentalization. This balance includes affective and cognitive components and the "embodied affective features that ground mentalizing in an affectively felt reality" (Luyten

et al., 2020,p.96). In this way, it is possible that the problems of the primary caregivers' own mentalizing processes hinder not only the development of children's mentalization but also their balance and effectiveness (Berthelot et al., 2015; Bérubé et al., 2020).

This perspective is embedded in the relational logics of individuals, revealing that mentalization, or the failure to process it, is one of the issues at the core of conflicts related to human bonding, not only at the individual level but also at the social level. Based on the above, the practical utility of this reflection can be seen in the context of research on child maltreatment. In this case, the interest is not simply in mentalization, attachment, or their connection but in the possibilities that such a connection offers for understanding and intervening in relational environments, such as the mother-child environment, especially in maltreatment environments. It is crucial to recognize that developments in the ToM, for example, have occurred in contexts where understanding disorders such as autism spectrum disorder has been central (Pérez-Virgil et al., 2021).

However, it is important to consider that this is not the only possible framework of understanding, hence the consideration of "ways of responding" and the caregiver's system and its composition, since their oral productivity toward their child will depend on them (communicative frequency, communicative message, and purpose), which are aspects to be considered when working around child maltreatment.

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## Authors note

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## Conflict of interest

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The authors declare that there is no conflict of interest with the institution or any type of commercial association.



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