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## REVIEW ARTICLE

# Applying Margaret Mahler's Separation-Individuation Theory to Understand Autism Spectrum Disorder: A Developmental Perspective

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Article DOI: <https://doi.org/10.64663/aet.8>

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**Cite as:** Lu, Qunxi (2025). Applying Margaret Mahler's Separation-Individuation Theory to Understand Autism Spectrum Disorder: A Developmental Perspective. *The Asian Educational Therapist*, 3(3), 23-32.

## ABSTRACT

This article explores the application of Margaret Mahler's Theory of Separation-Individuation (TS-I) as a psychoanalytic and developmental framework for understanding Autism Spectrum Disorder (ASD). While not a diagnostic tool, the Mahlerian TS-I offers valuable insights into early emotional and relational development, particularly in relation to the emergence of self-identity and attachment. By aligning the stages of the Mahlerian TS-I with developmental characteristics and challenges commonly observed in autistic children, the paper highlights how disruptions in early caregiver-child dynamics (e.g., joint attention, emotional attunement, and secure attachment) may correlate with autistic traits. Drawing on Chia's (2025) Core Experience Domains (CEDs) and Sarovic's (2021) Psychogenetic Triad, this paper situates the Mahlerian theory within contemporary models that emphasize neurodiversity, sensory processing, and relational engagement. While the Mahlerian TS-I can inform relationship-based educational interventions aimed at enhancing emotional attunement, shared play, and self-development, its conceptual limitations, including outdated developmental assumptions and insufficient attention to neurobiological factors, warrant a cautious and supplementary use. Ultimately, the Mahlerian TS-I can enrich case formulation and therapeutic understanding when integrated with modern, evidence-based, and neurodiversity-affirming practices.

**Keywords:** Autism Spectrum Disorder, Early Childhood Development, Educational Therapy, Emotional Attunement, Theory of Separation-Individuation (TS-I)

## 1. INTRODUCTION

The Theory of Separation-Individuation (TS-I) postulated by Margaret Mahler (b.1897-d.1985), an Austrian-American psychiatrist, psychoanalyst and paediatrician, provides an invaluable psychoanalytic framework to help educational therapists understand the early childhood development,

especially when it concerns about how a child gradually develops a sense of self and differentiates from the mother. Interestingly, when the Mahlerian TS-I is applied to autism spectrum disorder (ASD), it offers insights into the potential disruptions in early relational and developmental processes that may correlate with the onset or expression of autistic traits. Hence, the aim of this paper is to apply Mahlerian TS-I to the current understanding of ASD, in order to highlight how disruptions in early relational and developmental processes may correlate with autistic traits, and to explore the clinical implications of the Mahlerian model for educational therapy and early intervention.

Briefly, the Mahlerian TS-I conceptualizes a child’s psychological birth<sup>1</sup> as a process of separation (S) from the primary caregiver (primarily, the mother), to be followed up with the formation of a distinct sense of self (see Bahn, 2021, for detail) to the eventual establishment of individuation (I). This gradual S-I process takes place in three main developmental stages, from infancy (from birth to 1 month old) through toddlerhood (from 12 to 36 months old) to the emerging early childhood (Mahler, Pine, & Bergman, 1975) (see Figure 1).

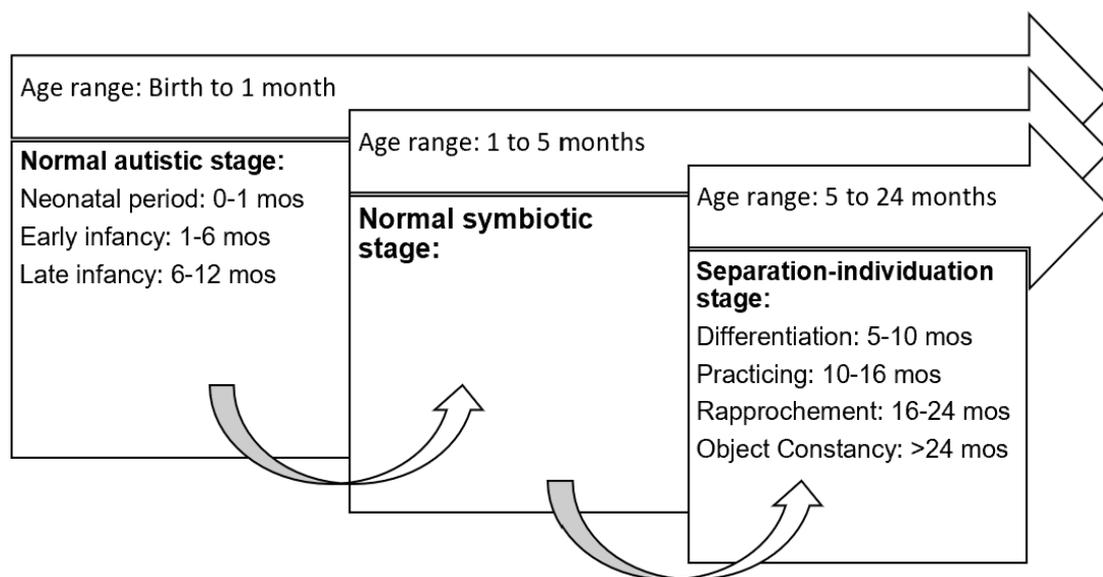


Figure 1. The Process of Psychological Birth

Mahler (1972), along with Mahler and Furer (1963), Mahler and Gosliner (1955), and Mahler, Pine, and Bergman (1975), postulated that the child’s psychological birth, defined as the emergence of an individual sense of self, occurs during the process of separation-individuation (S-I), which typically takes place between 4 and 36 months of age. This process is subdivided into distinct stages and substages (see Table 1), each representing critical developmental milestones in the formation of self-identity and differentiation from the primary caregiver.

Building upon this S-I developmental framework, Chia (2025) investigated the early developmental profiles of children with ASD during the early childhood period (0-6 years). His study identified several characteristic strengths commonly observed in children with ASD, such as exceptional memory for detail, intense focus on specific interests, and distinctive problem-solving strategies. Concurrently, he noted a range of developmental challenges, including delayed or atypical communication, repetitive behaviors or play patterns, and heightened sensory sensitivities. Chia (2025) conceptualised these autistic challenges as core experience domains (CEDs), which encompass sensory needs,

<sup>1</sup> Psychological birth is defined as the developmental process through which an infant gradually becomes aware of being a separate, autonomous self, distinct from the primary caregiver (Mahler et al., 1975).

communication differences, and social interaction differences. Situating these findings within the Mahlerian TS-I may offer a valuable lens through which to interpret the developmental trajectories of children with ASD, i.e., the changing autistic behavior patterns, particularly in understanding variations in self-development and relational engagement during the early years.

Table 1. The Developmental Process of Separation–Individuation

Stage	Development	Estimated Duration
1	Normal Autistic	0-1 month
2	Normal Symbiotic	1-5 months
3	Separation–Individuation	5-24+ months
Substages	Development	Overlapping Duration
3.1	Differentiation	5-10 months
3.2	Practicing	10-16 months
3.3	Rapprochement	16-24 months
3.4	Object Constancy	24+ months

## 2. APPLICATION OF MAHLERIAN THEORY IN UNDERSTANDING AUTISM SPECTRUM DISORDER

According to the current understanding of ASD based on the Diagnostic and Statistical Manual of Mental Disorders-5th Edition-Text Revision (DSM-5-TR; American Psychiatric Association, 2022), the condition is best defined as a neurodevelopmental disorder characterised by difficulties with three key traits: (i) social communication, (ii) restricted interests, and (iii) repetitive behaviors, that Wing and Gould (1979) termed them as the triad of impairments (TOIs), also known as the symptom triad of ASD (Reda et al., 2021). The Wing-Gould concept of TOIs has since formed the foundational triad in the clinical understanding of ASD. Over the past decades, the concept has evolved, deconstructed and reconstructed into several different conceptual models. One such model is Sarovic’s (2021) psychogenetic triad of ASD, consisting of autistic personality dimension, cognitive compensation, and neuropathological risk factors, that “delineates how they interact to cause a maladaptive behavioral phenotype” (Sarovic, 2021, p. 1) seen in individuals with ASD.

The other more recent model is Chia’s (2025) three core experience domains (CEDs), consisting of sensory needs, communication difference, and social interaction difference, observed in autistic children during early development. These are “the fundamental dimensions of how individuals with autism perceive, interpret, and engage with the environment around them ... in shaping one’s experience, while ... frames them as aspects of neurodivergent processing rather than medicalised symptoms of autism” (Chia, 2025, p. 112). These traits can be meaningfully aligned with the Wing-Gould concept of TOIs. Specifically, Wing and Gould’s category of social communication difficulties corresponds closely to Chia’s domain of communication difference, which encompasses delayed speech, atypical language use, and nonverbal communication challenges. Likewise, restricted interests can be understood within Chia’s domain of sensory needs, as these intense and specific fascinations often emerge in response to sensory regulation or stimulation preferences. Finally, repetitive behaviors, including stereotyped movements and rigid routines, are reflected in Chia’s social interaction difference domain, as these behaviors can serve as coping mechanisms in unfamiliar or socially demanding situations. Together, these frameworks demonstrate both continuity and evolution in the understanding of ASD, where Wing and Gould (1979) provided the foundational behavioral markers, Chia (2025) offers a lens that incorporates sensory and experiential dimensions of autistic development.

In DSM-5 (APA, 2013), the TOIs have been “condensed into two domains: social communication deficits and restricted patterns of behavior to which sensory processing deficits (SPD) were added, manifested by hypo- or hyper-reactivity to sensory stimuli or uncommon interests in sensory aspects of the surrounding environment” (Reda et al., 2021, p. 1).

By applying the Mahlerian TS-I, it helps educational therapists to frame ASD not only as a biological condition but also as a developmental deviation in early relational processes.

## **2.1 Normal Autistic Stage (0–1 month)**

This stage is already an outdated concept of the Mahlerian theory. Originally, it was described as a stage of primary narcissism, where an infant is self-absorbed and unaware of external reality. In other words, the infant is in a state of primary narcissism, largely unresponsive to external stimuli (Mahler et al., 1975). However, more recent infant research has challenged this idea, showing that infants are socially responsive from birth (Stern, 1985; Trevarthen, 2001). Today, this normal autistic stage has been largely rejected in developmental psychology, as newborns are known to be responsive to stimuli from birth (Beaulne, 2022).

The connection of this phase to ASD highlights one important point: Early signs of ASD may include lack of interest in faces, limited eye contact and reduced social interest (Zwaigenbaum et al., 2005), which the Mahlerian TS-I might have interpreted as a failure to move beyond or prolongation of this ‘autistic’ state (Mahler, Pine, & Bergman, 1975). However, biologically, these are more of neurological signs rather than emotional withdrawal.

## **2.2 Symbiotic Stage (1–5 months)**

The symbiotic stage begins with the infant feeling as if they are fused with their mother. Often the boundaries between self and others are blurred. In fact, a healthy infant shows interest in human faces, begins to smile socially, and engages in shared emotional exchanges (proto-conversations).

The symbiotic stage’s connection with ASD comes into the picture when children, who are later diagnosed with ASD, manifest disruptions in this stage, such as lack of social smiling, poor eye contact, and absence of cooing or vocal turn-taking (Ozonoff et al., 2010), possibly indicating a disruption in early relational attunement. Mahler et al. (1975) interpret this as failure to establish symbiosis, hindering the foundation needed for later individuation.

## **2.3 Separation-Individuation Stage (5–24+ months)**

This third developmental stage is broken into four substages as follows:

### **2.3.1 Differentiation**

This is the first substage of the third stage of Separation-Individuation. It lasts between 5 and 10 months. During this substage, infants begin to recognise their mother as a separate entity from themselves or distinguish themselves from others. They also develop stranger anxiety (i.e., the distress or fear an infant shows when encountering unfamiliar people) and increased alertness to their external environment (Mahler et al., 1975).

In terms of this substage’s connection with ASD, some children with ASD may not exhibit typical stranger anxiety or lack typical responses to unfamiliar people. However, they also show a lack of orientation to their primary caregivers and that may indicate failure in differentiation, a precursor to difficulties in self-other understanding (Hobson, 2004).

### 2.3.2 Practicing

This second substage lasts between 10 and 16 months. During this period, the child begins to crawl and also learns to walk. Crawling and walking increase motor development that allows the child to explore independently. In addition, there is what is called a 'love affair with the world,' with joy in movement and engagement. The child begins to relate to their caregiver, usually the mother, as a secure base to connect with the immediate world around them.

In terms of this substage's connection with ASD, children identified or diagnosed with ASD during this substage might show limited interest in social referencing (i.e., looking back to caregiver while exploring). The child may appear content to play alone or fixate on objects rather than engage with people. In other words, children with ASD display solitary play and also reduce their social referencing (Adamson et al., 2004). This can be seen as a disruption in the emotional tethering and joint attention crucial for secure exploration.

### 2.3.3 Rapprochement

This is the third substage, lasting between 16 and 24 months. During this substage, a child seeks to reestablish closeness with the caregiver while maintaining their autonomy. There is also an increased awareness of separateness can create ambivalence (e.g., clinginess mixed with defiance). In other words, children simultaneously strive for independence and seek closeness, leading to ambivalence toward the caregiver (Mahler et al., 1975).

In terms of the substage's connection to ASD, according to Hobson (1993), children with ASD may not exhibit this ambivalence or push-pull dynamic, showing either withdrawal or indifference. This might suggest difficulty in negotiating emotional closeness, a hallmark of social difficulties in autism. These children with ASD remain overly dependent (Hobson, 1993).

### 2.3.4 Object Constancy

This is the fourth and last substage in the third stage of separation-individuation and it occurs beyond 24 months of age. During this period of development, a child internalises the caregiver as a stable emotional presence. They can tolerate physical separation from their caregiver without anxiety and, thus, enabling emotional regulation. At the same time, the child also begins to develop a more cohesive sense of self, which is closely related to, and can also be considered an outcome of, the emergence of individuation.

During this process of individuation, the child develops a sense of being a separate and distinct individual from the caregiver (usually the mother). This includes differentiating one's self from others, developing bodily and emotional autonomy, and beginning to regulate internal states independently. A cohesive sense of self emerges as a result of successful individuation. It is particularly associated with the final substage of object constancy (24+ months). The child develops an internalised, stable representation of the caregiver, allowing them to feel secure even when physically apart. This internal stability contributes to the formation of a cohesive and continuous sense of self.

The emergence of individuation involves a series of developmental processes that ultimately lead to the formation of a cohesive sense of self. While individuation refers to the unfolding process through which the child differentiates from the caregiver and establishes autonomy, the cohesive self is the psychological outcome: a stable, integrated sense of identity. Within the context of the Mahlerian TS-I, the final substage, object constancy, plays a pivotal role in consolidating this internal sense of self. However, in children with ASD, delays or atypical development during this critical substage may

contribute to several core difficulties commonly associated with the condition. These include challenges in emotional regulation, inconsistent or atypical attachment behaviors, and impaired development of identity and empathy. According to Tustin (1981), such disruptions in emotional and relational development may be linked to difficulties in achieving object constancy, thereby impacting the child's ability to form a stable and cohesive self. This highlights how ASD can influence not only social and communicative functioning but also the foundational processes of self-development. Table 2 below provides a summary of how the normal development in separation-individuation process is disrupted by possible manifestations of autistic behavioral traits.

Table 2. A Summary of Normal Development in Mahlerian TS-I and Autistic Manifestation

<b>TS-I Stage</b>	<b>Normal Development</b>	<b>Possible ASD Manifestation</b>
1. <b>Autistic Stage</b>	Self-absorption, minimal interaction (debunked)	Early signs: lack of eye contact, minimal responsiveness
2. <b>Symbiotic Stage</b>	Fusion with caregiver, social smiling	Weak bonding, lack of mutual gaze or affect sharing
<b>3. Separation-Individuation Stage</b>		
3.1 Differentiation	Stranger anxiety, increased alertness	Flat affect, limited response to unfamiliar people
3.2 Practicing	Joyful exploration, social referencing	Repetitive behaviors, poor shared attention
3.3 Rapprochement	Seeking closeness + autonomy, emotional ambivalence	Social indifference or extreme dependence
3.4 Object Constancy	Stable self-image, emotional regulation	Inconsistent attachment, difficulty with emotional memory

### 3. CLINICAL IMPLICATIONS OF THE MAHLERIAN TS-I IN EDUCATIONAL THERAPY

The Mahlerian TS-I is best understood as a developmental and psychoanalytic framework rather than a diagnostic tool. Its primary function is to describe and interpret the emotional and psychological processes through which an infant or child gradually differentiates from the primary caregiver (usually the mother) and forms a cohesive, autonomous sense of self. It can help educational therapists, as well as clinicians and caregivers, understand the developmental disruptions in early object relations and self-other differentiation that may mirror or exacerbate core features of ASD. While the Mahlerian framework does not provide diagnostic criteria, it offers valuable insights for informing therapeutic responses to the unique developmental profiles seen in autistic children.

Specifically, the Mahlerian TS-I is, first and foremost, a descriptive developmental model. It outlines typical emotional and relational milestones in early childhood, particularly between birth and 3 years old. These stages (ranging from symbiosis to individuation and object constancy) help educational therapists understand how a child's sense of self, autonomy, and attachment typically emerge over time (Mahler et al., 1975). Interventions grounded in this understanding can focus on enhancing emotional attunement, e.g., through responsive caregiving and affective mirroring that support a child's emerging emotional awareness and connectedness. Educational therapists may also design play-based activities to facilitate joint attention and shared play, especially during the practicing and rapprochement phases, to strengthen interpersonal engagement and reciprocal interaction.

Next, the Mahlerian TS-I is best viewed through a psychoanalytic interpretive lens. Rooted in psychoanalytic theory, the Mahlerian framework provides an interpretive lens to examine early relational dynamics, attachment behaviors, and the development of self-other boundaries. It helps

educational therapists and other allied professionals explore how early interactions might influence later emotional, relational, or even psychopathological outcomes, particularly in children showing atypical development such as in ASD (Tustin, 1981). Using this lens, educational therapists can develop relational strategies that support attachment security, especially in children who display social withdrawal or inconsistent bonding behaviors. Consistent, attuned adult responses help create a sense of relational safety, allowing children to move more confidently through the stages of individuation.

Thirdly, the Mahlerian TS-I is also a conceptual tool for case formulation. While it cannot diagnose conditions like ASD, the Mahlerian framework can inform case formulation in clinical or educational therapy contexts. For example, it can help explain why a child might struggle with emotional regulation, attachment, or social referencing by situating those behaviors within a disrupted separation-individuation process. Therapeutic goals may include building the child's sense of self as separate yet connected, fostering both autonomy and relational connectedness. Structured routines, symbolic play, and self-reflective language can be introduced gradually to help children with ASD develop an internalized sense of self, while maintaining emotional ties with caregivers and peers.

In short, the Mahlerian TS-I is a conceptual map of early psychological development, useful for understanding but not for diagnosing. It complements, but does not replace, medical or neurodevelopmental models used in the formal diagnosis and treatment planning for ASD. Its real strength lies in its capacity to inform developmentally attuned, relationship-based interventions, offering a richer appreciation of the emotional and relational needs of neurodivergent children.

#### **4. LIMITATIONS OF THE MAHLERIAN TS-I**

The Mahlerian TS-I offers a compelling psychoanalytic framework to understand early emotional development, particularly how infants gradually differentiate from their primary caregiver to develop a cohesive sense of self (Mahler, Pine, & Bergman, 1975). When applied in the context of ASD, the Mahlerian TS-I provides insights into how disruptions in early relational processes may mirror or exacerbate core autistic traits. However, its application to ASD also presents several notable limitations that must be critically examined, especially in light of current neuroscientific and developmental research.

One major limitation is the outdated concept of the 'Normal Autistic Stage' (0–1 month). This stage portrays the infant as self-absorbed and emotionally unresponsive. Past and current developmental research (e.g., Bahn, 2021; Stern, 1985; Trevarthen, 2001) has long debunked this view, demonstrating that infants are socially engaged from birth, capable of eye contact, facial recognition, and affective attunement. Framing early autistic traits (e.g., reduced eye contact or responsiveness) as a failure to emerge from this stage risks misunderstanding these behaviors as purely emotional withdrawal rather than manifestations of neurodevelopmental differences (Zwaigenbaum et al., 2005). Thus, the early assumptions of the Mahlerian TS-I are not entirely compatible with contemporary understandings of early infant development in ASD.

Furthermore, the Mahlerian TS-I places the emphasis on the mother-child dyad and emotional separation as the central developmental task, rooted in psychoanalytic traditions. While insightful, this perspective has underemphasized the biological, genetic, and neurological underpinnings of ASD. More recent models, such as Sarovic's (2021) psychogenetic triad, which includes autistic personality dimensions, cognitive compensation, and neuropathological risk factors, has offered a broader and more integrative account of autism. Similarly, Chia's (2025) Core Experience Domains (CEDs) reflect how autistic individuals experience the world through sensory needs, communication differences, and social interaction differences. These frameworks incorporate both the neurobiological and experiential aspects of ASD, providing a more holistic understanding than the Mahlerian TS-I alone.

Another critical limitation is the Mahlerian TS-I's linear, stage-based model of development, which assumes universal and sequential progression. This does not account for the non-linear, uneven, or asynchronous developmental trajectories often observed in autistic children (Adamson et al., 2004). For instance, joint attention, social referencing, or emotional regulation may emerge at different rates or take alternative forms in ASD. Viewing these variations through the lens of the Mahlerian TS-I may inadvertently pathologize natural neurodivergent expressions, reinforcing a deficit-based narrative rather than supporting a strengths-based, neurodiversity-informed approach (Chia, 2025).

Lastly, the Mahlerian TS-I offers limited clinical utility in guiding interventions for ASD. It is not a diagnostic model and provides little in terms of practical strategies aligned with evidence-based approaches, such as Applied Behavior Analysis (ABA), Developmental Individual-difference Relationship-based Model (DIR/Floortime), or sensory integration therapy. While it may support educational therapists in understanding relational disruptions or attachment difficulties, it should not be viewed as sufficient for planning intervention. Moreover, its culturally specific psychoanalytic origins may not translate effectively across diverse caregiving and familial contexts (Beaulne, 2022). As such, the Mahlerian TS-I is best understood as a supplementary framework rather than a central model for understanding and addressing autism in clinical or educational settings.

## **5. CONCLUSION**

While the Mahlerian TS-I offers valuable insights into the early relational and emotional development of children, its application to the ASD intervention must be approached with caution. The Mahlerian framework provides a psychoanalytic lens through which disruptions in attachment, self-other differentiation, and emotional regulation can be explored, areas that are often affected in children with ASD. By aligning the Mahlerian developmental stages with observed autistic traits, educational therapists and clinicians can deepen their understanding of the socio-emotional profiles of autistic children, particularly in terms of relational engagement and self-development during the early years. This framework may be useful in guiding interventions that foster secure attachments, emotional attunement, and a more cohesive sense of self.

However, the Mahlerian TS-I should not be viewed as a comprehensive model for understanding or treating ASD. Its limitations, including outdated developmental assumptions, lack of emphasis on biological underpinnings, and a rigid stage-based progression, highlight the need for more integrative frameworks. Contemporary models, such as the Core Experience Domains (Chia, 2025) and the Psychogenetic Triad (Sarovic's 2021), offer more nuanced, neurodiversity-informed perspectives that accommodate the complex and heterogeneous nature of ASD. Ultimately, the Mahlerian TS-I can serve as a supplementary tool in educational therapy, enriching practitioners' perspectives on early emotional development, but it must be used in conjunction with current, evidence-based practices and a respectful understanding of neurodivergent development.

## **5. ACKNOWLEDGEMENT**

None.

## **6. COMPETING INTERESTS**

The author has declared that no competing interests exist.

## **7. FINANCIAL DISCLOSURE**

Non funds obtained.

## 8. ARTIFICIAL INTELLIGENCE DISCLOSURE

No generative AI or AI-assisted technologies were used in the preparation of this manuscript.

## REFERENCES

- Adamson, L. B., Bakeman, R., & Deckner, D. F. (2004). The development of symbol-infused joint engagement. *Child development*, 75(4), 1171-1187. <https://doi.org/10.1111/j.1467-8624.2004.00732.x>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>
- Bahn, G. H. (2021). Margaret Mahler and the modern implication of separation-individuation theory. *Psychoanalysis*, 32(1), 1-10. <https://doi.org/10.18529/psychoanal.2021.32.1.1>
- Beaulne, S. (2022). A clinician's perspective on the communicative intention in autism: Call to reconsider our understanding of non-verbal behaviours, private and inner speech and echolalia in children with autism spectrum disorder. *Journal on Developmental Disabilities*, 27(3), 1–29. <https://psycnet.apa.org/record/2023-54052-001>
- Chia, K. H. (2025). Evolving autistic behavior patterns and mental wellness across the lifespan: A 3-core experience domain perspective. *Asian Journal of Medicine & Health*, 23(8), 108-123. <https://doi.org/10.9734/ajmah/2025/v23i81289>
- Hobson, R. P. (1993). *Autism and the development of mind*. Mahwah, NJ: Lawrence Erlbaum Associates. <https://www.scirp.org/reference/referencespapers?referenceid=1320260>
- Hobson, R. P. (2004). *The cradle of thought: Exploring the origins of thinking*. New York, NY: Oxford University Press. <https://www.amazon.sg/Cradle-Thought-Exploring-Origins-Thinking/dp/0330488287>
- Mahler, M. S. (1972). On the first three subphases of the separation-individuation process. *International Journal of Psychoanalysis*, 53, 333-338. <https://psycnet.apa.org/record/1973-20729-001>
- Mahler, M. S., & Furer, M. (1963). Certain aspects of the separation-individuation phase. *Psychoanalysis Quarterly*, 32, 1-14. <https://www.scilit.com/publications/b46f9fc322199888122e7961d791807c>
- Mahler, M. S., & Gosliner, B. J. (1955). On symbiotic child psychosis: genetic, dynamic and restitutive aspects. *Psychoanalytical Study of the Child*, 10, 195-214. <https://doi.org/10.1080/00797308.1955.11822556>
- Mahler, M. S., Pine, F., & Bergman, A. (1975). *The psychological birth of the human infant: symbiosis and individuation*. New York, NY: Basic Books. <https://www.scirp.org/reference/referencespapers?referenceid=3012467>
- Ozonoff, S., Iosif, A. M., Baguio, F., Cook, I. C., Hill, M. M., Hutman, T., Rogers, S. J., Rozga, A., Sangha, S., Sigman, M., Steinfeld, M. B., & Young, G. S. (2010). A prospective study of the emergence of early behavioral signs of autism. *Journal of the American Academy of Child and Adolescent Psychiatry*, 49(3), 256–66.e662. <https://doi.org/10.1016/j.jaac.2009.11.009>
- Reda, M., Meguid, N. A., Eid, O. M., Hussein, F., & Elalfy, D. Y. (2021). Study of sensory processing deficits in autism spectrum disorder symptom triad: An Egyptian sample. *Middle East Current Psychiatry*, 28(1). Article No. 3. <https://doi.org/10.1186/s43045-020-00082-5>
- Sarovic D. (2021). A unifying theory for autism: The pathogenetic triad as a theoretical framework. *Frontiers in Psychiatry*, 12. Article ID: 767075. <https://doi.org/10.3389/fpsy.2021.767075>
- Stern, D. N. (1985). *The interpersonal world of the infant: A view from psychoanalysis and developmental psychology*. London, UK: Routledge. <https://doi.org/10.4324/9780429482137>
- Trevarthen, C. (2001). Intrinsic motives for companionship in understanding: Their origin, development, and significance for infant mental health. *Infant Mental Health Journal*, 22, 95-131. [https://doi.org/10.1002/1097-0355\(200101/04\)22:1<95::AID-IMHJ4>3.0.CO;2-6](https://doi.org/10.1002/1097-0355(200101/04)22:1<95::AID-IMHJ4>3.0.CO;2-6)

- Tustin, F. (1981). *Autistic states in children*. London, UK: Routledge. <https://doi.org/10.4324/9781003090366>
- Wing, L., & Gould, J. (1979). Severe impairments of social interaction and associated abnormalities in children: Epidemiology and classification. *Journal of Autism and Developmental Disorders*, 9(1), 11-29. <https://doi.org/10.1007/BF01531288>
- Zwaigenbaum, L., Bryson, S., Rogers, T., Roberts, W., Brian, J., & Szatmari, P. (2005). Behavioral manifestations of autism in the first year of life. *International Journal of Developmental Neuroscience*, 23(2-3), 143-152. <https://doi.org/10.1016/j.ijdevneu.2004.05.001>