

Chapter 3

The Developmental Perspective

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Introduction

From its very roots, psychoanalysis is inherently a developmental theory in that it focuses on the relationship between early experiences and ongoing mental development and especially adult character. At the same time, the psychoanalytic developmental theory originally emerged not from longitudinal studies of children, but rather from retrospective construction from analyses with adults. Not until psychoanalysts began working with children and pulling in observations from nurseries and preschool programs did the psychoanalytic developmental model become more multidimensional and focus on normative as well as nonnormative change.

Psychoanalytic theories of development have now evolved from their original stage-based developmental map to incorporate models of developmental psychopathology and of nonlinear systems and change (Fonagy & Target, 2003). As a result, contemporary psychoanalytic developmental theory has been increasingly able to capture the complexity and interactive nature of the developing mind across the lifespan. This shift has been facilitated by:

- The influence of attachment theory as a perspective on how early relationships and caring shape social and emotional development (Eagle, 2013);
- The increasing influence of social neuroscience in understanding the impact of early relationships on neural development and on key domains such as emotion and stress regulation (Mayes, Fonagy & Target, 2007); and
- The emergence of developmental psychopathology in the early 1990s as a field dedicated to uncovering the developmental course of psychological disorders of childhood and adulthood, to highlight the role of intergenerational transmission of psychopathology and the importance of early intervention (Lyden & Suchman, 2013).

Furthermore, as highlighted by Fonagy, Target, & Gergely (2006), the contemporary expansion of developmental psychoanalysis in the context of developmental psychopathology is evidenced by:

- Increased awareness of the importance of the cultural and social contexts of development;
- The focus on and understanding of the significance of early childhood experiences; and
- Understanding of the role of dependency, attachment, and safety in development alongside the role of instinctual drives.

Today's developmental psychoanalysis creates a narrative that emphasizes the impact of early relational experience on a range of emerging capacities in children (e.g., affect regulation, reward sensitivity, social engagement) and the longitudinal pathways to psychopathology. This approach influences not only theoretical conceptualizations, but also the nature of clinical practice. It places significant emphasis on the intersubjective aspects of the psychoanalytic therapeutic relationship, both on the nonverbal or implicit and on the verbal or explicit dimensions of therapeutic action, as well as their potentially mutative effects.

In this chapter, we explore how the understanding of psychopathology from a developmental psychoanalytic perspective has evolved and been transformed by findings in neuroscience, developmental psychopathology, attachment, and developmental research. We seek to illustrate how this evolution integrates and builds on the work of early theorists and to highlight the contributions of contemporary psychoanalysts to both the theory and the practice of developmental psychoanalysis.

Defining the Developmental Perspective

A developmental perspective has been part of psychoanalytic theory and clinical thinking since its inception. Freud's "Three essays on sexuality" (1905), in which he outlined his theory of psychosexual phases, introduced the idea of a staged developmental ontogeny for libidinal change and orientation, setting the scene for what was to be a continuous reworking and evolution of these ideas. This theory of development offered broadly conceived phases of psychosexual maturation based largely on the psychic experience of bodily change and defined through clinical work with adults. The result was what Kennedy (1971) described as the "genetic-reconstructive" approach, in which the focus was placed on the adult's analytic material and how it informs our reconstruction of the childhood experience. Freud (1905, p. 201) himself recognized that reconstructions inevitably contained distortions and recommended that psychoanalytic investigations be supplemented by direct observations of children. Out of this awareness emerged a "developmental approach" concerned with both internal and external influences on children's development. This approach to a psychoanalytic theory of development relied on direct child observation and external sources for evidence of influences on mental development, such as the quality of the child-parent relationship. Thus, from these early roots grew a framework for integration and the emergence of a developmentally informed psychoanalysis with both children and adults.

Anna Freud's work in Vienna and later in London as a clinical observer in the context of the Hampstead War Nurseries exemplifies this approach. As described by Mayes and Cohen (1996), Anna Freud was "at her natural bent an observer of children, and her observational skills, colored by a psychoanalytic environment, were honed pragmatically . . . On the one hand, she argued for meticulous, carefully recorded observations of children's moment-to-moment

activities and behaviors; on the other, she felt that one of the dangers of academic psychology ran the risk of deriving meaning solely from conscious behaviors with little to no understanding that one behavior might have multiple unconscious determinants” (pp. 119-120).

Mapping Development

Psychoanalysis and developmental psychology use different investigative tools to gather their observations. The former draws on principles that originated in clinical research with adults and were then elaborated by work with children, while the latter draws on naturalistic observational as well as experimental studies of children. Different research and observational approaches do not always integrate easily. Confusion and controversy have also obstructed discourse. Such confusion can usually be reduced to definitional differences, although controversy often erupts over more substantive matters (Abrams & Solnit, 1998). By the early twentieth century, a number of scholars in Europe and the United States were beginning to map various domains of developmental change, from motor to cognitive skills (Gesell, 1937; Piaget, 1937/1954). These domains were typically observable and measurable, and were only loosely related in maturational progression to the psychosexual developmental phases. The challenge for psychoanalysts working with children was to create a more detailed map of development that incorporated changes in the child’s internal as well as external landscape.

The psychoanalytic developmental approach therefore had the challenge of integrating the work of theorists from the field of developmental psychology and the emerging field of child psychoanalysis. The strong tendency toward stage-like theories of development bears witness to the influence of existing developmental psychology theories of the time. Furthermore, the motivation of these early theorists came from their wish to extend the understanding of

psychopathology from the observation of children in both clinical and naturalistic settings. Spitz (1945), for example, based his thinking about development on his observations of institutionalized infants who had limited access to consistent caregiving and stimulation. He saw new affective expressions such as the social smile as psychic organizers and indicators of a new level in psychic structural organization. For him, development was both cumulative and epigenetic, meaning that each stage was built upon the previous one whether the developmental path was normal or pathological, and individual variation in each stage was shaped by environmental and caring experiences. Each stage brought new psychic formations as well as new observable cognitive, motor, and socioemotional capacities.

Another influence on the developing field of developmental psychoanalysis was the work of Jean Piaget (1937/1954), who thought of behavior as an adaptation to the demands of the external world. Indeed, Anne-Marie Sandler (1975), in her review of Piaget's contribution to psychoanalysis, points out that psychoanalysis, rich though it is in many ways, is relatively impoverished in its conceptualization of cognitive processes. In that context, Piaget's detailed study of cognition showed how this field might be relevant to psychoanalysis, both theoretically and clinically, through deepening our understanding of conscious and unconscious processes. Piaget thought of the child's adaptation to the environment as coming to an equilibrium between assimilating new information within already available categories, and accommodating new information by forming new categories. Piaget saw this process as altering the development of internal cognitive schemas, whilst emphasizing the role of external influences in both cognitive and emotional development.

Anna Freud (1965) was a significant contributor to the emergence of a cohesive and integrative developmental psychoanalysis. Her interest in learning about the developmental

process beyond the understanding of children's neurotic psychopathology, together with her departure from a rigid and stage-like conceptualization of psychopathology, contributed to the emergence of a more integrated and fluid developmental view of normality and pathology. One of her principal legacies is the blending of innovative perspectives into established facts and theories of psychoanalysis (Abrams & Solnit, 1998). Her concept of lines of development represents perhaps the best-known psychoanalytic developmental map. The lines stand as "historical realities which, when assembled, convey a convincing picture of an individual child's personal achievements or, on the other hand, of his failures in personality development" (Freud, 1965, p. 64).

This contribution was a major step forward in the application of an approach that viewed personality and pathology as being the interaction between major mental agencies (ego, superego, and id) and external reality. From this perspective, psychopathology was understood as the result of disharmonies between the different lines of development—an interactive process involving both internal and external realities. This was reflected in the emphasis on understanding the ego in all its aspects: developmental, integrative, adaptive and economic. Anna Freud stressed the fact that psychological development does not end with childhood but continues throughout the lifespan. A picture of development emerged as an active, dynamic process, always interactive with experience and environment, and always purposeful in providing the child with the optimal available adaptation, given external and internal needs and demands. This view of development invited the inclusion of both the influence and interaction of the individual's biology and his/her relational environment.

In accordance with this view, the contemporary field of developmental psychopathology further promotes a move away from the stage-based developmental map, to incorporate new

ideas involving models of nonlinear systems and change. Work in this new field focuses on understanding the interplay and genesis between normality and pathology. The goal is to comprehend the processes of adaptation and maladaptation across the lifespan by pursuing multiple levels of analysis and a multi-domain approach to mapping development (Cicchetti & Cohen, 2006). In many ways, the field of developmental psychopathology has come to provide, in psychoanalytic terms, a “container” for the integration of both developmental psychology and psychoanalytic methods of studying and understanding development and psychopathology. As a result, a contemporary developmental psychoanalytic perspective is characterized by focus on an increasing level of integration and adaptation, and the capacity, in both theoretical and clinical settings, to capture the complexity and interactive nature of the developing mind across the lifespan in its theory and its clinical applications (Matthew, 1998).

Classical Psychoanalytic Developmental Theory: Emergence and Evolution

The developmental perspective is acknowledged by all genuinely psychoanalytic theories to some degree (Fonagy, Target & Gergely, 2006), transcending the different versions of development of the various classical psychoanalytic schools. This point of view is now expanding in the light of current scientific evidence and ongoing clinical exploration in the contemporary developmental psychodynamic landscape. The shift away from a “genetic-reconstructive” understanding of psychopathology began early on in the history of psychoanalysis with Freud’s development of the structural model of the mind (Sandler, Holder, Dare, & Dreher, 1997), and with it came the understanding of anxiety as a response to both internal and external stimuli. In this way, Freud restored adaptation to the external world as an essential part of the psychoanalytic account and set the scene for the emergence of several

models of development that still influence the work of contemporary developmental psychoanalysis. These models ranged from those that conceive of development as relying on “an average expectable environment” that affirms the importance of the actual parent (Hartmann, 1950/1964) to later modified versions describing all mental activity—both interactional and intersubjective—as relational, and defining internalization as the basic psychological process that propels development (Loewald, 1978). Increasingly, a shift occurred from a one-person psychology toward an interactional approach (a two-person system) that informed the field’s understanding of development: That is, psychological development requires the care (and mind) of the parent, and that it is the infant’s place in the mind of the parent that gives rise to the quality of the infant’s own mental life.

Within the evolution of developmental psychoanalysis there have been several different narratives regarding progression along the developmental path across the lifespan, all of which have come to co-exist and influence both psychoanalytic theory and clinical technique. Initially, the psychoanalytic developmental model emphasized the centrality of the drives, in which the primary motivation was the reduction of internal tension in a quest for homeostasis. Viewed through this lens, the interest in object relations emerges in the course of development and comes secondary to the primitive motives. As a result, psychopathology was equated with very early development. For example, early conceptualizations in child psychoanalysis depicted the infant going through subjective phases that paralleled adult psychotic states (Klein, 1946/1952). However, as this model evolved, informed by observational studies of children, interest grew in motives and processes autonomous from the drives and a reconceptualization of psychopathology in terms of developmental deficits instead of solely as a result of drive–defense conflict. This view slowly moved away from the centrality of the Oedipus complex and focused

on the impact of early dyadic processes as the foundation of ego development. In other words, the quality of the early relationship (object relation) and its influence in the development of the internal organization was seen as central. Informed by this shift away from the primacy of the drives, other models of development attempted to portray the physically dependent infant while depicting his/her social nature from the beginning and its importance in terms of personality development. Descriptions of the early gradual process of separation and differentiation depicted an infant ready to engage in the drama of finding him/herself in the eyes of his/her primary caregiver (Winnicott, 1965). A focus on the importance of the quality and psychological availability of early care and interpersonal organization became increasingly central in the conceptualizations of child psychoanalysis and developmental theory. In the words of Clarke and Scharff (2014), “A fundamental contribution of object relations theory comes from the principle inherent in the formulation of the complex relationship between the infant and the mother. It is the notion that one must understand the subjective experience of the child to understand the meaning of the object relationships involved” (p. 19).

An early example of this lens is found in the work of Margaret Mahler (Mahler, Pine, & Bergman, 1975), who studied the mother–child relationship and the longitudinal correlation between object relations and psychic structure formation. Mahler’s work is a good example of how the primacy of object relations is assumed and the basically “object seeking” character of instincts is emphasized. This description of object relations contributed significantly to the clinical understanding of borderline personality disorder patients—specifically Mahler’s view of patients as fixated in a rapprochement, wishing to cling but fearing the loss of their fragile sense of self, wishing to be separate but also fearing to move away from the parental figure (Fonagy & Target, 2003).

However, Mahler's description of the infant in a state of primary narcissism, that is, a state in which there is no differentiation and complete dependency, is disputed by contemporary evidence on infant development that depicts a newborn infant actively perceiving and learning, with specific expectations about the structure of the physical and social world (Gergely, 1992). The infant is seen as an active agent in the relationship, with an emerging sense of intentionality and an innate capacity to seek, encourage, and (when necessary) avoid relating (Tronick, 2007).

The integration of these findings on newborn and infant learning within an object relations frame seeks to explore the epigenetic evolution of fundamental constructs such as cognition and affect in the context of the relational sphere (Dodge & Rutter, 2011). For example, early formulations initiated by Sandler and Rosenblatt (1962) and expanded by Fonagy, Gergely, Jurist, and Target (2002) place feeling states and the notion of a feeling of safety at the center of the psychoanalytic theory of motivation. In this model, the affect state is seen as the key organizer of interpersonal relationships as well as cognition in infancy throughout the developmental continuum. Psychopathology is no longer equated solely with disruptive experiences in infancy and a fixation at an earlier developmental stage, but instead understood as a more complex interaction of early caring, biology, and endowment/genetic factors.

Contemporary developmental psychoanalytic models are systemic in nature. Development is viewed as a consequence of the continuous interaction between the person (psychology and endowment) and the environment (the relationship between the person and the social systems). In order to predict development under this transactional model (Sameroff, 2009), one must examine a system of interactional exchanges and continual restructuring. In many ways, this idea is similar to Anna Freud's invitation to child analysts always to keep in mind the question "What moves development along?" and to gather conceptual approaches from

multiple disciplines while maintaining a respect for the analytic observational tool (Freud, 1958). Out of the contemporary push toward the integration of multiple investigative tools, and with new knowledge coming from multiple fields (neuroscience, attachment theory, clinical case studies, developmental psychology and psychopathology, and genetics, among others), a new brand of contemporary developmental psychoanalysis has emerged, which enhances its capacity to influence other fields as well as its ability to develop interventions that translate psychoanalytic theory and practice in the context of multidisciplinary systems.

Toward an Integrative Contemporary Psychoanalytic Model

Developmental psychoanalysis has become more explicitly integrative in its quest for new ways to understand the development of psychopathology. It seeks the integration of earlier psychoanalytic theories with contemporary ideas, and it promotes a more active dialogue and process of cross-fertilization with other fields that study development, such as cognitive and affective neuroscience, psychology, and education. In addition, its focus is not solely on an individual, but also on the many systems in which that individual develops and functions. Furthermore, specific conceptual constructs that are developed from clinical data facilitate and inform this integration.

The Concept of Intersubjectivity and its Centrality in Contemporary Developmental Psychoanalysis

Contemporary psychoanalytic developmental theory emerges from an object relations tradition in which psychological development is viewed as occurring in an interpersonal matrix (Blatt & Levy, 2003). In recent years, different psychoanalytic schools of thought have converged in an effort to formulate psychoanalysis as a relational theory. In this context,

intersubjectivity has been defined in the context of the analytic situation as the field of intersection between two subjectivities, the interplay between two different subjective worlds (Benjamin, 1990). A common thread is found in the belief that the human mind is interactive, that is, inherently social, rather than monadic, and that the psychoanalytic process should be understood as occurring between subjects rather than within the individual. From this perspective, mental life is seen through an intersubjective lens (Benjamin, 1990; Fonagy et al., 2002). This shift, in combination with the groundbreaking work of infant researchers (Beebe, 2005; Stern, 1985) that documented intersubjectivity at the outset of human development, has allowed developmental psychoanalysis in the past 25 years to tap into the rich vein of research on attachment. As described by Fonagy and Target (2007), “Infant research teaches us that human external reality is inherently shared because it is constructed out of shared feelings, shared intentions and shared plans . . . This shared reality, which is largely built within attachment relationships, may well give knowledge of the external world a lasting sense of significance and pleasure (or more negative qualities such as danger, depending on the quality of the early relationship)” (p 921).

From this point of view, relationships are the organizers of psychic life. The focus is thus on the dynamic interchange between people instead of within the individual mind. As a result, the dyad, rather than the individual, becomes the fundamental unit of development, and dyadic structures organize mental life from the start. This opens up new ways of conceptualizing the developmental pathways of specific psychopathologies that guide our clinical formulations and practice (Fonagy et al., 2002). The field of trauma is an example of how this evolution has benefited our understanding and clinical practice with this population. There has been much progress, for example, in understanding the link between an early history of abusive or neglectful

environments and the development of psychopathology (Cicchetti & Lynch, 1993; Rainekei, Cortés, Belnoue, & Sullivan, 2012). The relevance of this research extends to changes in social policy and effective clinical interventions with high-risk populations (Midgley & Vouvra, 2012; Solomon & George, 2011), allowing the psychoanalytic developmental tradition to reclaim its legacy of informing social change.

Attachment Theory and its Impact on Contemporary Developmental Psychoanalysis

Although psychoanalysis and attachment theory were originally seen as incompatible perspectives, it is now evident there are important synergies between them (Eagle, 2013; Blatt & Levy, 2003). In the past 25 years, attachment theory, rooted in the premise that a continuous exchange between theory, practice, and research is essential, has become an integrative force that has facilitated interdisciplinary dialogue and exchange. Today, the language of attachment has become probably one of the most common of the developmental perspectives familiar to psychologists, social workers, counselors, and other allied professionals such as pediatricians and teachers (Tyson, 2000).

Bowlby (1979), a psychoanalyst himself, felt that actual events such as loss and separation affected the development of the child and the later functioning of the individual in adulthood. He emphasized the importance of understanding infant–mother attachment as being based on a primary and autonomous instinctual system instead of a derivative of the drives. Because it emerged through observations of real-life separations and losses in childhood, attachment theory reflects the emphasis on an integrative view of human development that brings together internal and external experience, relationships among children and adults, and a broader systemic view of a child’s environment.

Contemporary clinical researchers working using the attachment lens, such as Steele and Steele (2008), have built on the efforts of Ainsworth (1970), who operationalized the study of the effect of the quality of maternal care has on the development of the child's behavioral patterns of attachment. Ainsworth's work using the Strange Situation and Mary Main's work on the Adult Attachment Interview (AAI; Main, 1991) was pivotal in facilitating a bridge between contemporary attachment research and its clinical applications and developmental psychoanalysis. For example, Main's research using the AAI first suggested that a parent's metacognitive capacity, that is, the ability to reflect on one's experiences, serves as a significant protective factor. In follow-up studies, Carlson and Sroufe (1995) & Van IJzendoorn (1995) focused on the importance of a mother's capacity to regulate and organize her thoughts and feelings about her own childhood history of receiving care. They found that this capacity linked to her ability to regulate, organize, and respond sensitively to her child's own attachment needs (comfort, safety, and closeness). This was a significant shift toward an emphasis on the impact of the quality of the relationship on the child's emotional and social development and on defining a "developmental environment".

Working from an interactional model, developmental psychoanalysis has further explored and expanded on this notion, while retaining its focus on the investigation of mental processes as experienced and constructed from a subjective perspective. There is a clear link between adult psychopathology and having a "good enough" experience of a parental mind that can "keep the child in mind" in a way that allows the child to experience and develop his/her own separate and unique sense of self within a safe and predictable intersubjective space. Fonagy and colleagues (2002) addressed this link by integrating developmental psychoanalytic constructs with emerging findings from the fields of social cognition, neuroscience, and genetics under the umbrella of

attachment theory and research, and redefined the already existing construct of *mentalization*. Mentalization, which was developed as an empirically testable construct, was first operationalized as *reflective functioning*, an overt manifestation in narrative of an individual's mentalizing capacity (Fonagy, Target, Steele, & Steele, 1998; Slade, 2005). This core psychological capacity is defined as the ability to understand the behaviors of the self and others in terms of underlying mental states and intentions. More specifically, through the capacity to mentalize, individuals are able to explain the behaviors of the self and others by reference to the present state and intentions of the agent (such as beliefs, hopes, and wishes). From this perspective, mentalizing can be described as the key to social communication and information gathering (Fonagy, Luyten & Strathearn, 2011).

Follow-up studies have extended Main's original findings (Main & Goldwyn, 1984; Main, 1991), suggesting that a primary caregiver who is able to hold on to complex mental states (that is, one who is able to mentalize effectively) is able to hold her child's internal affective experience in mind, thereby facilitating her understanding of her child's behavior with respect to the child's own feelings and intentions. The caregiver, functioning from this *reflective stance*, imparts meaning to the child's affective experiences in a way that promotes the child's affect regulation and emerging sense of self. In this way, the caregiver fosters the child's emotional security (Fonagy, Steele, & Steele, 1991; Steele, Steele, Croft, & Fonagy, 1999). Especially in circumstances of adversity, mentalizing capacity on the part of the caregiver is vital to maintain and facilitate a range of progressive developmental processes in the child. Conversely, the absence of this experience of effective parental mentalizing is seen as underlying the development of various forms of psychopathology in the child. By operationalizing reflective functioning as a measure of mentalizing capacity and studying the impact of parental reflective

functioning on a child's development, psychoanalytic researchers have demonstrated the importance of the caregiver's mentalizing capacity to the normative developmental outcome of the child. The findings of this research have highlighted—for child psychotherapists and for other allied professionals working with children—the importance of working with parents in exploring the meaning of the parenting experience and how it impacts their reflective capacities (Toth, Rogosch, & Cicchetti, 2008). This is particularly relevant in the context of intergenerational transmission of relational trauma (Suchman, Decoste, Roosa Ordsay, & Beers, 2013).

Integration and Cross-Fertilization from a Developmental Perspective

Social Neuroscience and the Developing Social Brain

An example of cross-fertilization from other fields is found in the strong evidence provided by social neuroscience for the role of early attunement in relationships on the longitudinal development of affect regulation and capacity to engage in relationships (Schoore, 2003). For instance, there is now strong evidence demonstrating the negative impact of neglectful and/or abusive early relationships on development and an association with a diverse range of adverse neurodevelopmental outcomes, including long-term cognitive and academic delays. Similarly, there is now good evidence about adverse effects on the overall development of a child's brain architecture (National Scientific Council on the Developing Child, 2008). This evidence has resulted in the development of innovative dyadic modalities of treatment (Lieberman & Van Horn, 2008; Suchman et al., 2013) that integrate psychoanalytic thinking based on clinical data (Fraiberg, Adelson, & Shapiro, 1975) and research findings from the fields of neuroscience and attachment.

The empirical findings from these clinical applications facilitate the conceptualization of psychopathology as more than the results of maladaptive internal working models resulting from experiences of relational and environmental trauma. Rather, the integration of the social cognitive lens into the conceptualizations of developmental psychoanalysis allows for movement away from a disorder-centered approach and introduces a conceptualization of the patient's pathology as the result of difficulties in social adaptation and stress regulation. An example of this integration is found in the work of Csibra and Gergely (2011), who have coined the term "the pedagogic stance" to describe a human-specific, cue-driven social cognitive adaptation of mutual design, dedicated to ensuring efficient transfer of relevant cultural knowledge. From this point of view, humans are predisposed to "teach" and "learn" new and relevant cultural knowledge. This adaptation is part of a developmental progression throughout life, but is particularly relevant at certain key stages in development such as adolescence, when the capacity to learn from others is most required. Gergely, Egyed, and Kiraly (2007) speak of "ostensive communicative cues" as means by which "teachers" (caregivers) indicate to a child that information that is about to be transmitted is trustworthy and generalizable beyond the current situation ("epistemic trust") (see also Chapter 14 and 25). In infancy, these cues include eye contact, turn-taking contingent reactivity, and the use of special vocal tone by the caregiver, and they establish the adult as having the infant's subjective experience in mind. This empirical developmental research has direct relevance to therapeutic work. By mentalizing the other in the context of a developmentally informed clinical intervention, the therapist is providing the patient with the experience of feeling as if someone sees the world from his/her perspective, having established a situation of epistemic trust. In this way, the therapy offers a new developmental experience and an environment of "safety" in which the patient is able to feel understood and to

open up to learning about both their internal world and the external world (Fonagy & Bateman, 2012).

Gene × Environment Interactions and the Impact of Care on Gene Regulation

Most mental disorders are multifactorial, meaning that their etiology involves multiple genetic and multiple environmental factors. In the past decade, there has been a movement away from the study of purely genetic effects and toward the research of gene × environment interactions in the field of psychiatric genetics (Bakermans-Kranenburg & Van IJzendoorn, 2007). Rutter & Silberg (2002) described three reasons justifying the exploration of this interaction. First, a genetically influenced differential response to the environment constitutes the mechanism thought to give rise to evolutionary change. Second, to suppose that there are no gene × environment interactions would seem to require the assumption that environmental responsivity is the one biological feature that is uniquely outside genetic influence. Third, a wide range of naturalistic and experimental studies in humans and animals have shown great heterogeneity in response to all manner of environmental features, both physical and psychosocial, confirming in this way the inevitable involvement of genetic influence.

Initial support for this field came from animal studies such as those conducted with rhesus macaque monkeys by Suomi (2011) and colleagues, which showed that an environmental feature, namely, whether monkeys were peer-reared or mother-reared, altered the impact of genes. More recent human studies, such as those conducted by Gunnar and Vazquez (2006), support the importance of exploring gene × environment interactions in the context of the impact of care on gene regulation. Gunnar and Vazquez found that secure attachment plays a crucial role in buffering the effects of stress in early development, leading to what is called “adaptive hypoactivity” of the hypothalamic–pituitary–adrenal axis in early development, which in turn

results in resilience in the face of adversity. This work has great potential significantly to influence interventions with children involved with the child welfare system, just as Bowlby's work and the naturalistic observations of Spitz (1945) changed policies regarding the hospitalization of children and the understanding of the meaning of loss and separation to children. Furthermore, research on gene \times environment interactions supports a shift away from a deterministic view of developmental psychopathology, as well as supporting the value of relationally based psychoanalytic interventions. In the context of early child maltreatment and neglect, for instance, the identification of susceptibility genes and how environmental factors interact with these genes facilitates our ability to identify risk and targets for developing interventions to preempt the onset of illness, and guides efforts to tailor and personalize treatments for individuals with stress-related mental health problems (Perepletchikova et al., 2011).

How Developmental Psychoanalysis Informs Contemporary Modalities of Treatment

Perhaps the greatest challenge to the classical conceptualization of adult psychopathology as being directly linked with infantile experiences comes from the ever-growing understanding in developmental psychoanalysis of the complexity and fluidity of the developmental continuum. This understanding is in turn informed by contemporary findings in neuroscience, genetics, and developmental psychopathology. This shift is evident in the clinical accounts of contemporary child psychoanalysts, who often reflect on the need for clinical modification when working with specific pathologies and the importance of a research-informed systemic approach to intervention (Boston Process Study Group, 2007).

The work of infant researchers within the attachment tradition supports the need to revisit not only our theoretical understanding of psychopathology but also the components of our clinical practice. This evolution represents a challenge to the classical view of the psychoanalyst as a neutral and somewhat passive agent of change. Infant research in combination with the ever-growing literature on parent–infant psychotherapy (Baradon, 2010) has resulted in new ways of conceptualizing adult clinical material from a developmental perspective. This has influenced the way we think about important technical concepts such as countertransference in both adult and child treatment. For instance, viewed from a “dyadic systemic perspective” (Beebe & Lachmann, 2002), the relationship between the patient and the psychotherapist is thought of in the context of “interactive tilts” in which the patient’s unconscious goals—for instance, his/her need to obtain the love and approval of the therapist—affect the patient’s self-regulatory range and interactive patterns in the room. Faced with these “tilts,” the therapist, in the same way as a sensitive parent, attempts to respond to them by exploring his/her own need for the patient, and remains aware of a state of “interactive vigilance in the room” as the interactive system is tilted toward regulation of the patient’s state. As the psychotherapist allows the reinstatement of a flexible movement back and forth in the room, the process of psychotherapy is understood from this systems perspective as a continual co-construction of experience.

This explanatory process is similar to that described by Fonagy and Bateman (2012) in their work with borderline patients using mentalization-based treatment (MBT). In this approach, the psychotherapist assesses the current stress-regulation capacities and interpersonal functioning of the patient, framed by a developmental understanding of the patient’s relational history and how it has impacted his/her current functioning. Much of this formulation of the

patient's functioning is informed by both the therapist's experience of the patient in the "here and now", and the emerging knowledge and understanding of the patient's internal representations of the self in the context of relationships. In this way, the contemporary developmental psychoanalytic perspective is one that explores the intersubjective processes that informed psychic development from the beginning of life through to adulthood, and attempts to translate this evolving body of clinical and research findings to the development of cohesive and integrative interventions. Here we briefly describe two such interventions.

MBT-A: A Clinical Intervention with Adolescents Informed by the Contemporary Developmental Perspective

An example of a psychoanalytically informed developmental intervention is the work of Trudie Rossouw with self-harming adolescents. Mentalization-based treatment for adolescents (MBT-A) has produced valuable clinical insights regarding the importance of integration of modalities when working with such adolescents. One of the landmarks of Rossouw's intervention is the exploration of what Fonagy and Bateman (2012) have termed "the alien self". The alien self is an internal representation of the self that emerges when a significant portion of the self has been developed and experienced in the context of a relational exchange filled with parental projection, and very little experience of a primary object attempting to keep one's mind in their mind and remain curious and inquisitive as to the intentions, wishes, and feelings of the child. Like other MBT interventions, Rossouw's (2012) work seeks to help the young person and his/her family to improve their awareness of their own mental states and the mental states of others through enhancing their capacity to mentalize. MBT-A integrates explicit and implicit ways of encouraging the reflective capacities of the young person and family. Family interventions consist of focused and experiential approaches to psychoeducation, insight, and

modeling of a reflective and inquisitive stance by the psychotherapist. By working with the young person and the family in the here and now, the intervention seeks to provide a new relational experience for both the young person and the family. In this experience, internal representations can be revisited with the aim of resulting in more coherent narratives of the self in the context of relationships and, most importantly, increasing a sense of agency and with it an improved capacity for “mentalized affectivity” (thinking while experiencing strong and activating feelings; Fonagy et al, 2002; Jurist 2005). Outcome research from this intervention provides support for the clinical hypothesis, with young people’s self-harming behaviors showing significant reduction, coupled with improvements in their parents’ reflective capacities (Midgley & Vrouva, 2012).

Mothering from the Inside Out: A Dyadic Clinical Intervention:

Mothering from the Inside Out (Suchman et al., 2013) is a 20-week individual attachment-based therapy intervention that aims to help mothers with substance abuse problems develop more balanced representations of their children and improve their capacity to mentalize (operationalized for research as reflective functioning). The program seeks to intervene individually with mothers in order to improve their capacity to respond sensitively to their young children’s cues, to respond and soothe their children when distressed, and to foster progressive social and emotional development in their children (all characteristics of reflective functioning). The program assesses the mothers’ attachment patterns and the quality of their attributions regarding their children’s behaviors. The intervention seeks to identify and prevent potential intergenerational transmission of maladaptive patterns of attachment behavior, which had potentially already influenced the psychological trajectory of the parent. By tackling “intergenerational transmission of representations”, this intervention offers the mother the

opportunity of a “new developmental experience”, one that allows her to consider new ways of responding and interacting with her child. The aim of this approach is to improve the mother’s representational balance and reflective functioning capacities.

As evidenced in these examples of work with adolescents and mother–toddler dyads, contemporary developmental psychoanalysis seeks to integrate disciplines and clinical modalities in the same fashion as it did more than 50 years ago. However, the ever-growing link between research and practice, and the technological advances in fields such as neurology and genetics, allow a wider scope of ideas to influence our clinical practice and confirm some of the basic tenets of the field. However, at its core the developmental psychoanalytic intervention continues to seek the same goals, namely, to foster progressive development by facilitating the emergence of a coherent sense of self, the capacity to handle emotions (affect regulation) and the general capacity for self-observation in the context of relationships.

Conclusions and Future Directions

There has been an expansion and evolution of developmental psychoanalysis in the context of developmental psychopathology, evidenced by increased awareness of the importance of the cultural and social contexts of development; the focus on and understanding of the significance of early childhood experiences; and the expansion of a conceptualization that considers understanding of the role of dependency, attachment, and safety in development alongside the role of instinctual drives and also the awareness regarding the synthesizing function of the self (Fonagy et al., 2006). Developmental psychoanalysis has evolved and taken on a developmental psychopathology perspective that acknowledges the constant interplay between biology/endowment and experience/environment. Child psychoanalysts and

developmentally oriented psychodynamic clinicians are taking their work to outreach settings (hospitals, schools, prisons) and are translating the rich language of contemporary developmental psychoanalysis into models that are accessible and innovative (Zanetti, Powell, Cooper, & Hoffman, 2011).

In general, advances in the fields of cognitive neuroscience and genetics have informed a progression toward a more flexible, integrative, and systemic developmental psychodynamic approach. The psychoanalytic focus on the representation of subjectivity and how it emerges from early development has much to contribute to the understanding of individual differences in the quality of functioning of basic mental mechanisms and how they are affected by early adversity. Most important, developmental psychoanalysis and its conceptualization of the mind as an immediate experience, a sensation, a motivation, an action, and perceptions rooted in the body and its developmental experiences (Klin & Jones, 2007), brings further depth to the analysis. Furthermore, psychoanalytic developmental conceptualizations add to the understanding of processes such as resilience and the long-term sequelae of chronic stress. The examples of clinical conceptualization and practice in this chapter illustrate how contemporary developmental psychoanalysis tells a story of a developing mind in the context of the interpersonal matrix as it is influenced by both internal and external variables. A psychoanalytic perspective on development and psychopathology identifies and operationalizes central constructs and agents of change responsible for the continuities and discontinuities along a developmental continuum.

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