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RESEARCH ARTICLE

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Observing and interpreting clinical process: Methods and findings from 'Layered analysis' of parent–infant psychotherapy

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Abstract

This paper describes a method for investigating clinical process, Layered Analysis, which combines therapist countertransference reports and multi-faceted microanalytic research approaches. Findings from the application of Layered Analysis to video-recorded micro-events of rupture and repair in four psychoanalytic parent–infant psychotherapy sessions are presented. Layered analysis showed that countertransference and observation are complementary perspectives, which enable concomitant study of interactive events, conscious internal experiences, as well as nonconscious and unconscious elements of therapeutic interaction. Interactional rupture and repair were found to constitute co-constructed micro-events that occurred fleetingly and often implicitly, and differed in the structure, coherence and flow of interactions and in the relationship between verbal and nonverbal communication. Furthermore, interactional ruptures were found to sometimes 'get into' the therapist and transiently disrupt their self-organization, such that the therapist became a locus of disruption for the patient(s), actively contributing to the rupture, which thus became embedded in the therapeutic system. Interactive repair was found to be most often initiated by the therapist and to be underpinned by the therapist re-establishing self-regulation, through metabolizing embodied and verbal aspects of the rupture. Studying such processes can enhance our understanding of clinical process, inform therapist training and clinical supervision, and contribute to clinical outcomes.

KEYWORDS
countertransference, layered analysis, metabolizing, observation, psychoanalytic parent–infant psychotherapy, rupture and repair

1 | INTRODUCTION

Systematic investigation of clinical process in psychoanalytic psychotherapy raises important questions: what happens within the therapeutic encounter? What may contribute to change, stalemate, or harm? What dynamics are introduced by each participant and how do these affect the system (Kächele et al., 2009)? One way of addressing these questions is through the detailed study of the interactions that take place between therapist and patient/s during therapy sessions. This paper summarizes the work to date of a research project that aims to expand our understanding of clinical process by studying multifaceted layers of therapy process in Psychoanalytic Parent–infant Psychotherapy (PPIP) (for models of PPIP see Baradon et al., 2005, 2016; Salomonsson, 2018; Thomson–Salo & Paul, 2007). The research project examines embodied and verbal transactions in sessions with a focus on brief interactional micro-events. This paper focuses on the characteristics of moments of rupture in the sessions and aims to explore how they relate to the therapists' countertransference, and to describe the processes that bring about repair. A central intention is to enhance our grasp of the therapeutic encounter in ways that are relevant to clinical practice and training.

In psychoanalytically oriented therapies, a key source for understanding what goes on in the treatment process is the therapist's countertransference. By the term countertransference we refer the entirety of the therapist's emotional reactions, conscious as well as unconscious, in relation to the patient (Gabbard, 2001; Heimann, 1950). Therapeutic training programs habituate therapists to give accounts of their observations, experiences and understanding of the session through clinical notes, supervision, and clinical discussion groups. The countertransference is pivotal, not only to the therapist's personal understanding, but also to handling of the analytic process. Unavoidably, such narratives are limited by the therapist's biases of memory and defence. Also, most nonverbal communications are excluded from the therapist's account since what and how our own bodies communicate and how the other responds to these communications are rarely fully conscious to us. Therefore, the countertransference is a necessary yet insufficient source for understanding clinical process. This paper proceeds from the assumption that other sources might exist that could offer additional layers of information about the clinical process, and thus potentially expand our understanding of surface and more hidden aspects of the psychotherapeutic process.

Pioneers of infant research such as Stern (1971), Trevarthen (1979) and Tronick (1989) have contributed to understanding how participants co-construct moment-to-moment interactive processes in brief micro-events of interaction. Their methods of studying parent–infant interactions entail detailed observation and attention to subtle and fleeting communications, such as brief shifts of gaze, vocal response, facial expression, and body orientation. Such interactions can last less than a second (Beebe, 1982) and cannot always be monitored in live time. For example, microanalysis of face-to-face interactions of mothers with their 4-month-old babies revealed finely coordinated behaviors, such as looming in the mother and avoidance in the baby, that proved to be predictive of attachment disorganization (Beebe, 2006). Drawing upon the microanalytic research tradition on parent–infant interactions and its role in infant development, several authors have argued that key relational dynamics between the participants in psychotherapy can be discerned in brief interactions between them (e.g. Beebe & Lachmann, 2013; Stern et al., 1998). Moreover, it has been argued that such brief micro-events in therapy can fuel overall change processes

Key finding 1

The therapist's reported countertransference and observation of videoed interactions can function as complementary perspectives on clinical process; in combination they can expand our understanding of conscious and nonconscious elements of therapeutic interaction.

Key finding 2

Micro-events of interactive rupture often entail a disruption of expectancies that can dysregulate the therapist, who may then become a locus of disruption for the patient(s) and actively contribute to the rupture, primarily through fleeting nonverbal responses.

Key finding 3

Processes of rupture and repair in clinical work with parents and infants entail conscious, nonconscious and unconscious embodied elements; the therapist's capacity to metabolize, that is, take in and process traumatizing elements, is key to interactive repair and ultimately therapy outcome.

Statement of relevance

The study illuminates how using both countertransference reports and microanalytic research methods can help us understand in more detail the processes of rupture and repair between parents, infants, and therapists. In this way we can begin to elucidate the workings of psychoanalytic parent–infant psychotherapy and enhance clinical practice and training, thus promoting infant mental health.

primarily through qualitative shifts in the patients' way of being with the other (e.g. Salvatore et al., 2015).

'Clinical microanalysis', i.e. the use of microanalytic principles to the study of therapy process without necessarily following a systematic coding procedure (Personal communication Beatrice Beebe 25.12.22), has been extended from infant research to the study of psychotherapy process (Boston Change Process Study Group (BCPSG) 2002, 2007; Lyons-Ruth, 1998; Stern, 2004; Stern et al., 1998). It has been applied to adult and child psychoanalytic psychotherapies (Avdi & Seikkula, 2019; Harrison & Tronick, 2007; Vivona, 2019), music therapy (Suvini et al., 2017), dance therapy (Houghton & Beebe 2016) and parent–infant psychotherapy (Beebe, 2003, 2005; Cramer & Stern, 1988; Downing et al., 2008).

We have drawn upon this method of observing parent–infant interaction and the application of the microanalytic approach in different clinical situations, and brought the therapist's countertransference into dialogue with it. The method of Layered Analysis we have developed (Amiran et al., 2019; Avdi et al., 2020) studies clinical process in psychoanalytic parent infant psychotherapy (PPIP). PPIP treatments are of particular interest because the embodied, nonverbal communications between babies and their parents are of primary importance and are a central focus within the sessions (Baradon with Biseo, Broughton, James, & Joyce, 2016; Lieberman, 2004). This is in line with research on bi-directional influences between parent and infant and how they co-construct patterns of interaction and defense (Beebe & Lachman, 2002). It also resonates with psychoanalytic discussions of how analyst and analysand co-construct their analytic space (e.g., Lyons-Ruth, 1999; Ogden, 1994). The use of video-recorded PPIP sessions makes it possible to also include the therapist as a subject of study. Exploring therapists' conscious narratives of sessions and attempting to discern unconscious processes in both patients and therapists is of course a key element of psychoanalytic practice and supervision (e.g. McWilliams, 2021; Yerushalmi, 2019). However, our focus on the therapists' embodied responses in combination with their conscious clinical narratives is a relatively new focus in both psychotherapy and parent–infant research.

In normal relational processes, including the therapeutic relationship, interactions move between states of 'matching' (mutually coordinated and rewarding states), 'mismatching' (affectively negative, mis-coordinated states) and 'repair' of the latter (Tronick, 2007; Cohn & Tronick, 1989). Not all mismatches are disruptive or problematic for the interaction and, in fact, such glitches can provide opportunities for deep connection and change (Cavelzani & Tronick, 2016; Eubanks et al., 2018). Some mismatches, however, create a rupture; we use the term rupture to denote a sudden and distressing break of contact. Ruptures are often associated with behaviors that are accompanied by poorly modulated emotions, whose origin and meaning may be hard to comprehend. Such ruptures have the potential of negatively influencing the course of the therapy and may also sever the therapeutic relationship in the longer term. This conceptualization of interactional rupture has many similarities with the so-called second-generation research on the therapeutic alliance, which examines the dynamic development of rupture and repair processes as they emerge in therapy sessions (e.g. Eubanks et al., 2018; Safran & Muran, 2000). In this framework, therapeutic alliance ruptures, that is, breaks or tensions in the collaboration between patient and therapist and/ or a deterioration in the quality of relatedness, are an inevitable and potentially useful element of therapeutic interaction. The resolution of ruptures, which often entails moving between states of affective misattunement and attunement, is considered a potential change mechanism (Safran et al., 2011). This echoes infant development research which links rupture and contingent repair with security of attachment (Tronick & Beeghly, 2011).

In this study, we examine the characteristics of ruptures at the micro-level of the here-and-now in therapy sessions, and aim to describe their verbal, embodied, conscious and unconscious manifestations. In a multi-participant therapy, such as PPIP, ruptures may occur between any of the participants and often entail the whole system. In this paper, we also explore the therapist's role and examine how such ruptures relate to their countertransference. This focus on rupture also raises questions of how therapist and patient then reach towards repair and what happens when they are not able to effect it. While there is research into parental contributions to rupture and its impact on the infant (Barbosa et al., 2021; Tronick & Beeghly, 2011), to date, research has not focused on the therapist's part. This study addresses these questions by studying moments of rupture and repair between therapist and parent and/or

infant in PPIP sessions, through applying the method of Layered Analysis.

2 | METHOD

2.1 | Overall design

This is a qualitative study of therapy process in psychoanalytic parent–infant psychotherapy. The method of Layered Analysis (LA) was applied to brief segments of video-recorded psychoanalytic parent–infant psychotherapy sessions with four therapist–parent–infant triads. Layered Analysis (Amiran et al., 2019; Avdi et al., 2020) is a group-based analytic method that integrates a range of approaches to study therapeutic process. Analysis takes into account the clip's cinematic qualities, in the sense of movement, timing, rhythm, affective tone, and narrative. The term "layered" can be understood in the same way that contemporary image editing software works; an image is composed of an unlimited number of layers that can be emphasized or made invisible at times. Also, each layer can be seen separately, or a few together. The image - or here, the video clip - is not a singular image but is created through the layering of different inputs in a non-hierarchical order, and all contribute to the picture and meaning that is created. One can add or reduce some elements, but the whole as a structure is not dependent on any one of them and there is not a preference for one over the other.

2.2 | Participants

Four mothers and their babies and three PPIP psychotherapists (one male, two female) participated in this study. Of the four mothers, three were of low socioeconomic status and had experienced four or more adverse childhood experiences; two of the mothers also faced significant difficulties in their recent past. The fourth mother came from a middle-class family described as emotionally unavailable, though without evident trauma. The infants were females aged between one and six months. All of them were first born and the only child in the family. All mothers had sought support to improve their relationship with their baby, and all of them reported difficult attachment histories or conflicts with their own parents (see Table 1). The therapists were psychoanalytically trained, experienced in PPIP, and worked in mental health settings in European countries.

The LA was carried out by a group of five researchers and, for each case, the therapist. The researchers came from different backgrounds and included two psychoanalytic parent–infant psychotherapists, a developmental researcher, an adult psychotherapist and psychotherapy process researcher, and a filmmaker. Having a diverse group is critical to the method as it facilitates the layering of observations and the co-construction of a multifaceted description of clinical process.

TABLE 1 Description of sample.

Clara and Chloe	Mother Clara suffered extreme abuse from her mother, starting when she was a baby. As an adult, she was successful in her academic and career achievements. She wanted to become a mother despite failed relationships. In the clip for this study, baby Chloe was 3 months old and this was the 4th session.
Dora and Daphne	Mother Dora was referred to the PPIP service in her third trimester of pregnancy with baby Daphne as a high-risk case due to her abusive childhood and the baby's conception within a context of substance misuse and a violent relationship. This study examined the first postnatal session which took place when Daphne was one month old
Eliane and Eva	During her birth, baby Eva nearly died. Aged 4 months at referral she consistently avoided mother Eliane's gaze and Eliane felt that they had not bonded. The vignette analysed was from the 6th session.
Flora and Fleur	Baby Fleur was the child of Flora, a mother who sought help from the PPIP service because of difficulties with accepting her role of being a mother. The researched clip came from their 10th session when Fleur was 5 months old.

2.3 | Ethical considerations

The study protocol was reviewed and approved by the UCL Research Ethics Committee. All participants gave informed consent for this purpose. All personally identifiable details have been omitted or changed to preserve participants' anonymity. All treatments had ended at the time of the research study, which prevented possible interference in the treatment process.

2.4 | Materials

All the sessions with the participants who consented to this study were video recorded. The cameras were set up unobtrusively to capture the full image of all people in the room (therapist, mother and baby). Therapists were asked to select a session or part of a session, where they felt that something troublesome, worrying, incomprehensible or disturbing had happened between them and the

patient(s), and they wanted to find out more. These interactions were 3–6 min in length. Each clip was viewed as a proto-narrative envelope, that is, an interactional event that has a plot and a line of dramatic tension with a beginning, middle and end (Stern, 1999).

2.5 | Analytic method

The process of Layered Analysis involves repeated viewings that move back and forth in time, with observations of verbal and embodied communications, and viewers moving between conscious and unconscious levels of interpretation. Each clip was viewed repeatedly, at least 10 times, with the layering of visual images, sounds and graphs depicting verbal tone, pitch and turn-taking. The clips were viewed in real time, slowed down and sped up. Sometimes the timing of the narrative was changed, or smaller micro-moments were selected to be studied frame-by-frame. Other video-editing techniques that were used included zooming in on a participant, a behavior, a movement, or expression, blocking out some sounds or visual images to focus on other modes of expression. Each proto-narrative envelope is thus composed of multiple smaller and interrelated envelopes of meaning. Since the method focuses on several modes of expression, the analysis of these layers enables researchers to move beyond interpretations based on one expressive mode only. Instead, they can base them on global, multimodal perceptions of the therapeutic process. For example, instead of building an interpretation on solely the verbal dialogue between therapist and mother, meaning is created by layering the words, vocal tone, facial expressions, bodily movements, and emotional expressions of the therapist, parent and baby. This also paves the way for moving from linear causal interpretations ("he said X, to which she replied with Y") to global, circular ones ("he said X, moving his body forwards, while the baby grunted and the mother, looking askance, replied with Y").

During the viewing of the clips, the researchers brought their expertise in analyzing and coding of relevant tools and methods. These included:

(i) Discourse analysis is a qualitative, interpretative approach to studying language in use. It focuses on the content, organization, and function of talk e.g., in interactions in psychotherapy (Avdi & Georgaca, 2007). In therapy process research, discourse analysis can shed light on the interactional processes and relational dynamics through which meanings are reconstructed (Georgaca & Avdi, 2011). In addition, in this study particular attention was paid to linguistic evidence of reflective function in the adults' talk, given the importance that mentalizing can have for infant psychological development as well as the process of therapy.

(ii) The Atypical Maternal Behavior Instrument for Assessment and Classification (AMBIANCE; Bronfman et al., 1999) studies atypical parental behaviors associated with infant attachment disorganization. The coding system entails the identification of discrete parental behaviors in relation to the infant. The frequency and intensity of these informs a rating for disrupted behavior. In the LA method, researchers trained in the AMBIANCE coding system used the list of discrete behaviors to identify potential markers of disrupted communication in the therapy session. Examples include the display of incongruent or contradictory messages (e.g. inviting contact but with closed body posture), hostile and intrusive behaviors, frightened or disoriented behaviors, role reversed behaviors, and withdrawal. Importantly, these behaviors were identified in both parents and therapists in relation to the baby and each other. Instead of the quantitative rating usually given in the AMBIANCE coding, the LA method involves the qualitative analysis of the disrupted behaviors alongside other layers of meaning.

(iii) Clinical microanalysis. This technique of analyzing segments of interaction frame-by-fame, pioneered by Stern (1971) and further developed by Beebe (1982) and others, enables distillation of the elements that make up the broader picture: a view of the world (of the moment) in a grain of sand. Each second of filmed interaction was split into 24 frames (still pictures). The frames at the start and end of each small movement of mother and/or infant and/or therapist was selected and could then be viewed backwards and forwards so that the shifts in time, and cause and effect could be better seen. It enabled the researchers to see subtle and rapid affects and behaviors that cannot be seen in real time. This tool was also valuable for answering questions such as "What came first?" or "What caused that reaction?" or "what emotional state is being communicated?".

(iv) Clinical narrative and countertransference reports – the final domain of layering is clinical and draws upon the therapists' narrative. These were based on their written case notes at the time of the therapy and their reconstruction of the narrative while viewing the clip with the research team. Importantly, the therapist participated in the research team's viewing and discussion of their case. Being both observed and observer, the therapist could integrate their countertransference and affective experiences with the new layers of meaning, such as the embodied (non- and

un- conscious) behaviors observed by the research group.

2.6 | Findings

An overall finding was that the sections selected by the therapists for further study, based on their sense that something significantly bewildering and/or disturbing had happened, were observed by the research team to constitute interactional ruptures. In other words, the therapists' countertransferential unease and/or puzzlement about the selected interactions paralleled the researchers' observations of significant dysregulation in one or more of participants. In some instances, the therapist had been aware of the negative affect, whereas in others layered analysis revealed subtle nonverbal responses by the therapist - such as pulling away, freezing, or displaying a stunned facial expression - which had not been reported and were presumably nonconscious. Importantly, some of the behavioral features of the therapists were codable on the AMBIANCE, signifying contributions of the therapist to heightened negative affect and mutual dysregulation. Thus, we see that the therapist can transiently become a source of threat to their patient under certain circumstances.

Through applying layered analysis to the selected segments from the four therapies, we observed the following key characteristics of rupture and repair processes in PPIP. Our findings are organized in three key areas:

(i) The characteristics of ruptures.

Finding: The observed ruptures were manifest in the structure and flow of the interaction, as well as in the relationship between the verbal and nonverbal domains.

(ii) The therapist's role in ruptures.

Finding: The therapists can be strongly affected by, and actively contribute to, interactional ruptures.

(iii) Processes of repair and the therapist's role

Finding: Repair of ruptures was contingent on the therapist re-establishing self-regulation and was most often initiated by the therapist.

2.7 | Characteristics of ruptures

We found a clear distinction between interactions in which the flow was smooth, mostly affectively attuned, coordinated and coherent, and those where rupture occurred. Coherent interactions also included interactional disruptions, but these were not considered ruptures as they were transient and did not interrupt the overall flow. The relationship between embodied and verbal communication seemed to play an important role in both attuned and ruptured interactions.

In attuned interactions, markers of mutuality (such as fluid turn-taking, appropriate length of pauses, affiliative tone of voice and gaze regulation) predominated and verbal and embodied modalities complemented and reinforced each other, with their rhythms overlapping. Nonverbal communication scaffolded the verbal communication and accentuated its meaning, whilst verbal messages clarified and amplified the embodied message. In addition, different nonverbal modalities (e.g., tone of voice and gaze) worked together to form a specific emotional contour. For example, in the interaction described below, the therapist's verbal and nonverbal communications worked together to contain Mother's negative affect and hostile attributions about Baby. We classified it as an attuned interaction despite some mismatches.

Example 1. Dora and Daphne. *The interaction takes place at the start of the first session with mother Dora and baby Daphne, aged 3 weeks, postnatally. Dora and therapist are sitting on cushions on the floor with Daphne lying on her back between them. Daphne is gazing calmly at the therapist and both adults are looking at her. As they settle into position, the therapist bends down, leaning on her right hand on the floor, close to Dora, sitting on her knees and facing Daphne on a mat, slightly to her mother's right side. Daphne is looking at the therapist who shifts her gaze between the mother and the baby. While looking at Daphne the therapist smiles and says in a gentle, modulated voice: "And she has your very blue eyes" and with a soft natural flow raises her head, still with a smile on her face, to look back at Dora. Upon hearing the therapist's words, Dora recoils subtly but abruptly away from Daphne and the therapist. Less than a second later, the therapist recoils from mother and baby. Mother leans back slightly, and her head turns away from Daphne and shifts sideways towards the therapist, as she points to the baby with her hand and states categorically in a questioning tone: "Is it my- hhh I can't see nothing in her (.) in me". The therapist mirrors Dora's movement away from Daphne, looks at Mother and says in an interested, modulated voice: "oh really? ooh, I'd say she looks like you".*

Dora's response to the therapist's apparently innocuous comment about baby Daphne looking like her was unexpected and was out of sync with the conversational flow until that point (constituting a mismatch) and could potentially disrupt it. From a discursive perspective, the

participants' views diverged and the therapist's proposed link between mother and baby did not develop into a fuller shared narrative. In her clinical report, the therapist described feeling surprised at Dora's reaction, since in their experience linking baby and mother often brings a softening in the mother – a sort of 'Ah yes, this is my baby'. The therapist was interested in Dora's denial, wondered what lay behind it. She was also concerned that the baby was being rejected by the mother. The fact that Dora denied, both verbally and through her embodied reaction, the proposed link with her baby might suggest that she felt threatened by the therapist's remark. The therapist registered and mirrored Dora's recoil, creating a matched response, but stated her own view and then began to explore Dora's representations of Daphne. The therapist's verbal and nonverbal response was affiliative and interested, and this presumably cued Dora that this was something they needed to think about and that it was safe to do so. In this example, the therapist's verbal and nonverbal communication contained the negative affect sparked by her suggestion of a similarity between Dora and Daphne. Thence, she could explore Dora's perspective on her baby and their relationship in a manner that aimed to foster mother's mentalizing. An interactive rupture was therein avoided.

In contrast, disrupted interactions were found to be jerky, the narrative lacked coherence, and communication seemed to reach a dead-end. In terms of the dialogue, the conversational sequence tended to be disjointed, turn-taking was interrupted by overlapping speech or unusually long pauses, the tone of voice was sometimes raised or inauthentic. In terms of meaning, therapist and parent did not construct meaning jointly, but rather interacted in a monological manner, each participant speaking on their own terms without incorporating the other's view in their turn (e.g., Lyons-Ruth, 1999). As concerns nonverbal behavior, intense and/or unexpected affect sometimes erupted. Also, disrupted AMBIANCE behaviors were sometimes displayed by some or all participants. Furthermore, verbal and embodied communications often conflicted, carrying divergent messages, with each mode of communication undermining the message of the other; such mixed messages are defined as affective communication errors in the AMBIANCE. These elements are illustrated in the following example drawn from the therapy discussed above.

Example 2. Dora and Daphne. *This micro-event takes place about half-way into the first postnatal session, about 20 minutes after the event described above. The interaction follows several instances of mutual dysregulation, where Daphne cries desperately and Dora responds in a manner that oscillates between hostility and helplessness, triggering further crying. At this point Daphne is lying on her back, making grunting noises. Dora takes hold of Daphne's legs, lifts them up and starts to change her nappy, saying in a sharp, quite loud and staccato voice "no crying, no crying sweetie!" although Daphne is not crying at that moment. The word "sweetie" is incongruent with Dora's hostile vocal tone, and with the abrupt way she handles Daphne. This behaviour would be coded in the AMBIANCE as intrusive hostile behaviour (harsh voice) and an affective communication error (incongruent messages of 'no crying' and 'sweetie'). In response, the therapist leans in towards Daphne, touches her tummy gently, initially with her fingertips and then with her whole hand, and says "But if you don't cry, how will you tell mummy when you don't feel very well?". The therapist's verbal message reframes the crying to communication, a potentially helpful intervention, but her vocal tone is reproaching. In this instance, the therapist's behaviour is also codable on the AMBIANCE as she displays contradictory messages of support and disapproval. In response to the therapist's comment, Dora looks at the therapist, sits up and laughs nervously. Such laughter is considered a manifestation of fear and/or disorientation in the AMBIANCE. It is also viewed as a marker of rupture in joint meaning-making from a discourse analytic perspective*.

In this interaction, the therapist's intervention was characterized by a disjunction between her verbal message and nonverbal display. This seemed to further dysregulate Dora, who may have felt judged. In this sense, the intervention, which aimed to introduce a developmentally appropriate perspective of Daphne's crying to Dora and thus invite her to mentalize Daphne's state of mind, actually contributed to the rupture. Reporting her countertransference at that point in the session, the therapist described feeling thin-skinned to Daphne's cries and deeply protective towards the baby. She wished to cut out Dora's harsh interactions. But, on viewing the video later, the therapist was shocked to see how similar sentiments were enacted in her tone of voice and physical turn towards Daphne while excluding Dora.

We observed similar instances of the therapists contributing to ruptures in other sessions, and such instances usually emerged in response to disruptive interactions between mother and baby. In these instances, therapists' verbal message, which was often in line with a therapeutic intervention, was incongruent with their affective displays. In addition to such communication errors, we observed therapists displaying other types of atypical behaviors, such as sudden embodied responses (e.g. physical movement away), unexpected affect (e.g. sudden laughter incongruent with the affective tone of the conversation), or a psychic withdrawal expressed through facial and/or postural stilling as a form of freezing. Such displays

are considered indications of frightened/ disoriented states of mind in the AMBIANCE. Thus, one of our key findings is that the therapists were also susceptible to - and potentially active contributors to - disruptive communications that could be disorganizing to the parent and baby. This point is explored in greater depth in the section that follows.

2.8 | The therapist's role in ruptures

We found that dysregulated parent–infant interactions could "get into" the therapists and transiently disrupt their self-organization. In their reports, therapists described their countertransference as feeling "confused" or "off balance" and reacting in unexpected ways that differed from their habitual therapeutic stance. Although they were not always able to describe exactly *how* they reacted, Layered Analysis added to our understanding of these subtle nonconscious and unconscious processes as they manifested in observable embodied expressions. In addition, such unusual or surprising behaviors were often codable in the AMBIANCE. Inasmuch as these behaviors evoked shock, confusion or withdrawal in the other, we consider them as disorganizing and thus traumatizing in the context of a therapeutic relationship and setting. Thus, the therapist could unwittingly contribute to further dysregulation in the triadic system. These processes of therapist and triadic dysregulation are illustrated through two examples below.

Example 3. ***Clara and Chloe***. *The following interaction takes place in a session with 3-month-old Chloe and her mother, Clara. Chloe presents as very avoidant, rarely initiating eye contact with either adult. Clara sits on the floor, holding Chloe on her knee, and recounts a swimming session they recently attended. She makes a sudden and loud "PSHSHSH" sound to illustrate how Chloe reacted when going underwater. Chloe responds in an ambiguous manner to Clara's loud sound: she displays both signs of interest and positive engagement (she turns her gaze towards her mother and vocalizes, looking at her) and signs of negative affect (she startles, her smile turns to a grimace, she flails her arms, her arms and torso tense up). Her behaviour suggests that Chloe was confused and frightened by mother's loud tone. The therapist responds very quickly and says in a loud and high-pitched voice "oh yeah, what did mummy just DO?" and then laughs in a high-pitched, prolonged manner. This behaviour is interpreted as indicating fear and disorientation in the AMBIANCE. In response, Chloe frowns and averts her gaze from both adults.*

In this example, the therapist's response to the dysregulated interaction between Clara and Chloe was both aroused and arousing. In their report, the therapist described picking up on Chloe's expression and attempting to put baby's shock into words, thus offering the possibility of finding meaning in the interaction. She described feeling alerted to something powerful in what had happened, unconsciously linking Mother's response with her expression when had previously recounted her experience of sexual abuse. The therapist's response was potentially helpful in terms of content, as it responded to Chloe's startle, put her experience into words, and invited Clara to reflect upon her baby's experience and mental state. However, there was a discrepancy between her words and her laughter, and both were expressed in an aroused affective state. These expressions of the therapist's affective arousal were also arousing for the patient(s), as evidenced in Chloe averting her gaze.

Example 4. Flora and Fleur. *Baby Fleur is sitting on mother Flora's lap facing her chest and avoiding eye contact with both her mother and the therapist. Flora comments on diaper changes during the night and says they are like an "assault". When Flora says the word "assault", Fleur whines briefly at the very same time as the therapist recoils rapidly away from mother and baby in a big body movement but with a neutral face, and then leans forward into a collapsed posture. Flora mirrors the therapist's back and forth movements, and then, as the therapist freezes, Flora turns abruptly to Fleur, saying that she wanted to "dock in", that is, to be breastfed. Flora continues to talk, facing her baby now, while the therapist has a frozen and blank facial expression for 16 seconds.*

In this example, the therapist's nonconscious communication of 'chaotic retreat' (recoil, still-face) seemed to have cued Flora and Fleur to threat; in response, both mother and baby turned away and withdrew into self-protective maneuvers. The therapist described having felt thrown and perplexed by the sudden use of the word 'assault' – it felt like breakthrough of violent unconscious material in Flora. However, the therapist was neither aware of their bodily cue of retreat, nor of the momentary freezing.

As illustrated in these examples, the emergence of unconscious traumatic material in the parent-baby interaction, or from parent to therapist, seemed to dysregulate the therapist. The confusion was both reported by the therapists and reflected in their behavior which was codable in the AMBIANCE. The manifestations of their dysregulation led to further dysregulation in mother and baby. In some events of rupture, mothers turned away from the therapist, displayed facial withdrawal, stilling, and signs of disorientation or hostility. Babies sometimes showed that they were frightened, and other times displayed active defenses (e.g.,

gaze avoidance, twisting body away, withdrawal), as well as avoidance and disengagement, accompanied by bewildered facial expressions and bodily tension. In sum, we observed that the threat was moving between the triad, with each participant potentially acting as trigger to the other.

2.9 | Processes of repair and the therapist's role

Based on our observations, interactive repair took the form of a gradual, cumulative process, seemingly part of the overall relationship dynamic in contrast to rupture. Repair processes also started with bodily cues. In some instances, these embodied invitations were initiated by the therapist and in others repair proceeded from mutual cueing between mother and therapist that each wanted this relationship to continue; baby then settled into the changed atmosphere and joined the interaction.

We found that the therapist's capacity to register, reflect, and respond to the rupture was crucial in determining whether repair would happen or there would be an ongoing dysregulated dynamic. We identified four inter-related elements central to the process of interactional repair following a rupture: the therapists' capacity to self-regulate their affective arousal; emergent meaning making as the therapist began to make sense of the interaction; the therapist's actions towards re-establishing connection, and the time needed for these reparative responses.

Repair was anchored in, perhaps even conditional on, the therapists' internal working to restore self-regulation. This was often manifest through the therapist taking a pause before responding. Therapists' reports did not always document this pause, so it was not necessarily conscious. Rather, such pauses could be observed in the therapists' transient withdrawal from the interaction, for example, through a preoccupied look, silence, and in facial or bodily stillness. Whether or not such pauses reflected disorientation or a process of self-regulation was deduced from the actions that followed; in cases where the therapist came out of the pause with a gesture or verbalization that indicated some sort of resolution and understanding, we assumed that they had moved from a disrupted to a more coherent state.

The therapists' reports also emphasized the importance of meaning-making in the process of repair. Ruptures may signify not only the loss of joint meaning-making but also the therapist's confusion, expressed as "what is happening? I don't understand". Regaining a sense of understanding moved the therapist forward in self-regulation and empathic openness to the other.

We also observed that in the process of successful self-regulation leading to mutual regulation, the therapist's embodied knowledge often seemed to precede conscious symbolic knowledge and verbalization. In other words, the therapist's responses sometimes seemed to start from embodied knowledge, such as slowing down or stilling, nodding, leaning forward, rather than conscious reflection. Also, in successful repairs, the therapists often commented on or invited explicit exploration of the underlying feelings. These elements of the process of interactive repair are illustrated in the example that follows.

Example 5. Eliane and Eva. *Baby Eva is avoidant, often averts her gaze and this has been a cause for concern. As they settle on the floor, the therapist waits for Eva to look at her and after a moment Eva turns her gaze to the therapist, while mother Eliane watches; then Eva moves her head away, lowers her face and shuts her eyes. Eliane says "Oh DEAR" in a loud, high-pitched voice and then laughs eerily, with a frightened facial expression; all these responses would be coded as frightened/ disoriented behaviours on the AMBIANCE. Eva continues to look away and twists her torso further away from the adults. The therapist's face becomes still, with a frozen smile; her response would also be coded as frightened/ disoriented behaviour on the AMBIANCE. Eliane then begins to loom towards Eva; the therapist leans in and interrupts the loom by asking Eliane how she is finding Eva's gaze. Eliane looks up at the therapist with a startled expression and then engages with the therapist and begins to talk about her feelings about Eva*.

This is an example of mutual traumatization within the triadic system, as Eva's turning away triggered a dysregulated, frightened laugh in her mother, which seemed to 'get into' the therapist who transiently froze. The therapist's countertransference report was of utter confusion and a feeling of shock. Reconstructing the event clinically, the sense was of rejection ricocheting between the triad. As mother Eliane started to loom into Eva's face, an example of a hostile behavior on the AMBIANCE, the therapist interrupted the loom and invited Eliane to talk about her relationship with Eva. Frame-by-frame examination of this micro-interaction revealed that the therapist's intervention came mid-way through Eliane's loom, in a response that was too fast to be the result of conscious processing. We suggest that during this brief period of stillness, the therapist was able to regulate her high arousal and dysregulation triggered by Eliane's response to Eva. Following this, the therapist interrupted the oncoming loom, reconnected with Eliane and invited self-reflection. In this way, the rupture was repaired, and Eliane and therapist were able to begin to explore Eliane's experience in relation to Eva.

3 | DISCUSSION

Clinical process in psychotherapy is complex, multidimensional, and varying in its behavioral and emotional manifestations. The focus on the dynamic interplay of conscious, nonconscious and unconscious exchanges between therapist and patient(s) is a cornerstone of psychoanalytic psychotherapy and a central element of psychoanalytic training, supervision and practice. Due to the multitude of events in the session, tools are needed to register, comprehend, and interpret what occurs on all these levels. One of the methods we propose is Layered Analysis, which combines clinical insight and report by the therapist with clinical microanalytic approaches by a research team. Countertransference and observation are both important sources of information regarding the therapeutic process. We found a concordance between the therapists' report of surprise and/or unease about a specific interactional micro-event and the research team's observations of embodied expressions of rupture and repair. This finding suggests that both observations and reported countertransference capture similar phenomena, albeit from different perspectives and each having different assets and shortcomings. The reported countertransference reflects what arose in the mind of the therapist, including thoughts, fantasies, feeling states and bodily reactions that they became aware of, which cannot be observed. However, it is impossible for the therapist to be aware of all feelings, thoughts, embodied communication as well as what they assume goes on in the others' mind in the consulting room. The researchers have even less access to the therapist's feelings and thoughts but, through careful viewing of the clips, can perceive markers of rupture and repair that were not consciously registered by the therapist in the session and thus unavailable as information about the countertransference. This refers especially to bodily markers of countertransferential feelings, manifested in atypical behaviors, that the therapist was not aware of, such as displeasure, annoyance, a feeling of being 'assaulted'. Thus, although the therapists selected the clips for further analysis based on their countertransferential unease about the specific interactions, which suggests that they had some level of awareness that something 'was not quite right' during these interactions, careful observation inherent in the method of LA added detail and depth to this diffuse unease. In addition, this observation of bodily expressions also informed us how the therapist was affecting the patient(s), whether this was conscious or not. Therefore, in our view, countertransference report and researcher observation are complementary perspectives, each needed in order to enable 'binocular vision' (Bion, 1965). This makes possible the concomitant study of interactive events, conscious internal experiences, and those that are not conscious but expressed bodily.

With a spotlight on the therapists' experience and behaviors, it was possible to reach a deeper understanding of the processes of rupture and repair and how they may be experienced individually and systemically. It appears that rupture is heralded for the therapist with an experience registered as unease, confusion, shame or another negative emotion. These countertransferential feelings seem to be sometimes transmitted to the patient through anomalous behaviors such as withdrawal, freezing or interactive errors, of which the therapist may be unaware. Although we did not have access to the patients' self- reports, the observed behaviors in mothers and babies (withdrawal, avoidance, hostility) suggests that they may at times have experienced the relationship with the therapist as aversive, even threatening. The researchers' own countertransference when watching the videos offered additional insights, for example when team members reported 'a sinking heart', 'tension' or realized that they were holding their breath while watching. Through such countertransferential "resonance" (Salomonsson, 1998) and "tuning fork responses" (Stone, 2006) we may further understand the patients' experiences.

The therapists' countertransference reports and observable behaviors indicated that, in tandem with the interactional disruption, their self-organization was disturbed. Behavioral characteristics of disturbance in self-organization were seen also in the mothers and babies. Our study shows that, in addition to the self- and interactional perturbance, there is a systemic influence of disruption, whereby the triad of infant, mother and therapist mutually influence each other's behavior (Butner et al., 2017). We thus highlight *self*, *dyadic* and *systemic* trajectories of disruption, which occur so rapidly that it may be impossible to establish a linear causal chain. In this study we were unable to isolate cause and effect between the three units: self, interactive, systemic. We assume that, in the moment, these parallel and presumably inter-related trajectories are mostly fleeting, embodied cues of disorganization, split-second chains of movements that are taken in subliminally (BCPSG, 2002, 2005).

We suggest that one aspect of this dysregulation is that the expectancies of the participants in the session are disrupted (Beebe & Lachmann, 1998, 2002, 2013; Stern, 1985). Events that are either felt to be sudden, intense and unprocessed or an accumulation of low-level unpredictable micro-events may disrupt the individual's anticipation of what-will-happen-next. The ordinary framework of working together, which always includes ongoing mismatch and repair and therapeutic challenging of the other, is abruptly thrown off course. In all therapies such situations occur within the transference-countertransference relationship. In parent–infant psychotherapy an additional factor is that the therapist may witness interactions that are

deeply disturbing and thus professionally and humanely challenging to them, because infantile affective states are so very primary and raw. We hypothesize that such interactions violate the normative expectancies of the therapist's attachment and caregiving systems. They may also trigger memory traces of perhaps only partially resolved states in the therapist's own past. This may cause the therapist to lose their habitual therapeutic stance and thus become threatening to their patients. Dysregulated, and challenged in one's capacity to mentalize and make meaning in the here-and-now of the event, the therapist cannot immediately move towards interactive repair with their patient (Luyten & Fonagy, 2015). Something needs to take place for the therapist to regain a sense of self-regulation and capacity to think.

In our view, the move to repair, that is, restore the therapeutic working relationship, is underpinned by internal work of metabolizing (Bion, 1962) in the therapist. By this term, we mean the emotional and mental digestion of the raw elements that imploded the interaction, emotional regulation and meaning-making (BCPSG, 2005; Grotstein, 2007; Ogden, 2004). We observed that such metabolizing often started with a physical response, such as stilling or recoil, which arguably indicated that the patient's communication had been *taken in*. We suggest that the therapist may unknowingly pause briefly to enable them to carry out the required internal work. This embodied aspect of metabolizing arguably precedes more conscious mental work in the therapist. In other words, meaning-making seems not only to entail conscious processes of symbolized understanding and mentalizing but also embodied, implicit responses that give meaning to the other's actions. Indeed, Sletvold (2016) suggests that listening to the psychoanalyst's body is the foundation for analytic thinking: "The importance of reflective thought is acknowledged but is seen as resting on the analyst's ability to become aware of her unconscious bodily relational experience" (p. 186). At this point, the disturbance can be said to lodge inside the therapist's body. Often this is accompanied by an observable expression or action such as stilling or 'a turning inward'. These behaviors differ from disrupted (AMBIANCE-codable) behaviors, such as withdrawal or dissociation, in that additional cues are given that contradict threat. For example, the therapist may still maintain eye contact, physical proximity (leaning in), vocalizations ("mm"), or other indicators of psychological presence. Another aspect of such pauses we observed was that that the therapist 'comes back' to the patient, though with a subtly different manner. The therapist at such moments seemed inclined to a more nuanced affective joining at the level of the patient and, from a mentalizing point of view, tended to a state of mind associated with and enabling genuine inquiry (Fonagy et al., 2022).

Processes of metabolizing allow for self-regulation in the therapists, described in their self-reports in terms of regaining their habitual capacity to think. Our suggestion that the therapist's self-regulation is a prerequisite to interactive regulation concurs with Beebe and Lachmann's (2020) proposition that "self-processes may be even more organizing than interactive processes" (p 313). We believe that the therapist's disrupted self-organization can both result from interactive ruptures and contribute to them. In this sense it disruption in the therapist's self-organization can be seen both as cause and effect of interactive ruptures in therapy.

Interactional repair is described as successful when "the patient and therapist resume collaborating on the work of therapy with a strong affective bond" (Eubanks et al., 2018, p. 509). This was confirmed in our study. While the internal work of the therapist seems to be a condition for repair, a mutual wish for resumed emotional connectivity is equally necessary, whether this is conscious to the patient or not. In Example 5, the mother Flora actively cued her wish to restore the therapeutic work through glancing rapidly at the therapist. In the case of Eliane and Eva (Example 6), mother responded to the therapist's intervention, albeit with negation of the content. The therapist continued with interested reflection and quite quickly the rebuff was discarded, and regulated turn-taking and collaborative reflection took place again.

3.1 | Strengths, limitations, and further study

The method of Layered Analysis has both strengths and limitations. Importantly, it is not an appropriate method for looking at therapy outcomes over the whole course of therapy. The focus of the analysis is on only very brief moments in time. However, this method can be complementary to outcome research and can provide rich information that can contribute to understanding how final outcomes are reached over time. It is likely that the cumulative effects of significant clinical moments contribute to longer term treatment outcomes. Further research using mixed methods, to integrate findings from Layered Analysis with outcome data, will provide a rich source of information about the factors that contribute to therapeutic change.

The method relies on both systematic observation and the use of objective measures and subjective interpretations of the material. The therapists' and researchers' countertransference in relation to the material forms the basis of the interpretations and meaning that is made, and any findings are necessarily interwoven with subjective experiences and particular skills and interests of the research group and the individuals within it. This means

that the "findings" of the analysis do not uncover a single truth or reality, but instead a set of socially constructed sets of meaning that can illuminate our understanding through multiple lenses and realities (Roy-Chowdhury, 2010). The function of a research group is an essential component to the analysis process as it enables new meanings to be socially generated. A limitation of this study was that the patient/s have not been part of the selection of the material to analyze, nor the analysis itself. An interesting further area of study will be to involve patients in the analysis and co-construction of meaning making. In addition, in recognition of the role of the therapist's nonconscious and unconscious contributions to ruptures, future research could include the measurement of the therapists' attachment dynamics in examining rupture and repair processes.

A novel contribution of this work was the application of microanalytic methods to PPIP. We do not know if and how the method can be transferred to other psychotherapy methods and the question of transferability to other types of interventions thus needs further investigation. In addition, we recognize that LA is a time-consuming, laborious process that cannot be easily integrated in routine clinical practice. On the other hand, paying detailed and systematic attention to brief interactions seems to enrich clinical understanding and may contribute to therapist development and clinical outcomes.

3.2 | Clinical implications

There are several clinical implications to Layered Analysis, our method of multi-modal and multi-disciplinary observation. The first relates to clinician self-awareness. LA can develop greater awareness of normally nonconscious bodily experiences, affective states, and countertransference. Seeing oneself from the outside engenders more sensitivity to how one behaves, how the other perceives oneself, and the bi-directional influences in micro-events. The application of different perspectives enriches the clinician's understanding of these self-other processes. These capacities are important for good practice and, in our view, should be built into training programs for therapists and other practitioners. Although the value of video feedback in interventions has long been recognized (e.g. Bakermans-Kranenburg et al., 2003), the LA method is novel in bringing in clinicians' self-observation, focus on micro-interactions and group discussion. Another implication for practice and training is that when a therapist or other practitioner does not sufficiently metabolize the patient's material and/or their own countertransference, they may be more susceptible to interactive errors. Such moments of discomfort or unease in the therapist are likely to be significant to understanding this co-constructed dynamic. In this sense, what is observed in the video clip is like holding a mirror to the therapist's non- and un- consciousness.

Another implication for clinical practice pertains to increasing awareness of rupture and repair since, in some cases, ruptures are evidenced through subtle or fleeting embodied responses that do not seem to have been registered consciously by the therapist. The findings regarding characteristics of matched, mismatched and ruptured interactions are nuanced. Fluctuations in flow and coherence occur along an affective continuum between intense affective displays and mild yet observable arousal. Such perturbations in attunement fluctuate over the course of a proto-narrative event and can be observed in embodied communications between participants. The importance we attribute to the therapist's sensitivity to embodied communication around rupture cannot be overstated.

With regards to repair, our emphasis is different. We have highlighted the internal work required of the clinician to take in the rupture and soothe their own ruffled emotions. One barrier is the clinician's discomfort about negative feelings towards the patient. The clinicians in the study were surprised at the extent of negative emotion their bodies conveyed, for example, by withdrawal, disapproving tone of voice, and unmarked mirroring. We see a role for the training schools to initiate open and non-judgmental spaces for exploring these feelings. In our view, this calls for a move away from the theoretical framework that views patient psychopathology as triggering rupture. In that framework, the therapist is regarded as getting caught up in the patient's transference. In lieu, we propose a framework that acknowledges that in bi-directional interactions the therapist, too, may trigger rupture in the ongoing therapeutic framework. This intersubjective paradigm highlights how unconscious and nonconscious apprehensions and behaviors in every participant in the session interact. Emphasizing the necessity for the analyst to become aware of such processes aligns with the view of Betty Joseph (1989): the analyst's guide to the patient's most important anxiety 'lies in an awareness that, in some part of oneself, one can feel an area in the patient's communications that one wishes not to attend to – internally in terms of the effect on oneself, externally in terms of what and how one might interpret' (p. 111). In our view, the LA method can contribute to making such areas prominent.

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CONFLICT OF INTEREST STATEMENT

All authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are not publicly available nor are they available on request, due to ethical restrictions.

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REFERENCES

Amiran, K., Avdi, E., Baradon, T., & Sleed, M. (2019). Microanalysis of clinical process in psychoanalytic parent infant psychotherapy. Unpublished conference paper.

Avdi, E., Amiran, K., Baradon, T., Broughton, C., Sleed, M., Spencer, R., & Shai, D. (2020). Studying the process of psychoanalytic parent–infant psychotherapy: Embodied and discursive aspects. *Infant Mental Health Journal*, *41*(5), 589–602. https://doi.org/10.1002/imhj.21888

Avdi, E., & Georgaca, E. (2007). Discourse analysis and psychotherapy: A critical review. *European Journal of Psychotherapy and Counselling*, *9*(2), 157–176. https://doi.org/10.1080/13642530701363445

Avdi, E., & Seikkula, J. (2019). Studying the process of psychoanalytic psychotherapy: Discursive and embodied aspects. *British Journal of Psychotherapy*, *35*(2), 217–232.

Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., & Juffer, F. (2003). Less is more: Meta-analyses of sensitivity and attachment interventions in early childhood. *Psychological Bulletin*, *129*(2), 195–215.

Baradon, T., Broughton, C., Gibbs, I., James, J., Joyce, A., & Woodhead, J. (2005). *The practice of psycho-analytic parent–infant psychotherapy: Claiming the baby*. Routledge.

Baradon, T., Biseo, M., Broughton, C., James, J., & Joyce, A. (2016). *The practice of psycho-analytic parent–infant psychotherapy: Claiming the baby* (2nd ed.). London, New York: Routledge.

Barbosa, M., Beeghly, M., Moreira, J., Tronick, E., & Fuertes, M. (2021). Emerging patterns of infant regulatory behavior in the still-face paradigm at 3 and 9 months predict mother-infant attachment at 12 months. *Attachment & Human Development*, *23*(6), 814–830. https://doi.org/10.1080/14616734.2020.1757730

Beebe, B. (1982). Micro-timing in mother-infant communication. In M. R., Key (Ed.) Nonverbal communication today *(Contributions to the sociology of language*, Vol. 33, pp. 169–195). Mouton.

Beebe, B., & Lachmann, F. M. (1998). The contribution of mother-infant mutual influence to the origins of self- and object-representations. *Psychoanalytic Psychology*, *5*(4), 305–337. https://doi.org/10.1037/0736-9735.5.4.305

Beebe, B., & Lachman, F. M. (2002). *Infant research and adult treatment: Co-constructing interactions*. The Analytic Press.

Beebe, B. (2003). Brief mother-infant treatment using psychoanalytically informed video microanalysis. *Infant Mental Health Journal*, *24*(1), 24–52. https://doi.org/10.1002/imhj.10042

Beebe, B. (2005). Mother-infant research informs mother-infant treatment. *The Psychoanalytic Study of the Child*, *60*(1), 7–46. http://doi.org/10.1080/00797308.2005.11800745

Beebe, B. (2006). Co-constructing mother-infant distress in face-to-face interactions: Contributions of microanalysis. *Infant Observation*, *9*(2), 151–164. https://doi.org/10.1080/13698030600810409

Beebe, B., & Lachmann, F. (2013). *The origins of attachment. Infant research and adult treatment*. Routledge.

Beebe, B., & Lachmann, F. (2020). Infant research and adult treatment revisited: Cocreating self- and interactive regulation. *Psychoanalytic Psychology*, *37*(4), 313–323. https://doi.org/10.1037/pap0000305

Bion, W. R. (1962). *Learning from experience*. Karnac Books.

Bion, W. R. (1965). *Transformations*. Karnac Books.

Boston Change Process Study Group. (2002). Explicating the implicit: The local level and the microprocess of change in the analytic situation. *The International Journal of Psychoanalysis*, *83*(5), 1051–1062. https://doi.org/10.1516/00207570260338746

Boston Change Process Study Group. (2005). The "something more" than interpretation revisited: Sloppiness and co-creativity in the psychoanalytic encounter. *Journal of the American Psychoanalytic Association*, *53*(3), 693–729. https://doi.org/10.1177/00030651050530030401

Boston Change Process Study Group. (2007). The foundational level of psychodynamic meaning: The implicit process in relation to conflict, defence and the dynamic unconscious. *The International Journal of Psychoanalysis*, *88*(4), 843–60. https://doi.org/10.1516/T2T4-0x02-6H21-5475

Bronfman, E., Parsons, E., & Lyons-Ruth, K. (1999). *Atypical maternal behavior instrument for assessment and classification (AMBIANCE): Manual for coding disrupted affective communication. Unpublished Manuscript*. Harvard Medical School.

Butner, J. E., Deits-Lebehn, C., Crenshaw, A. O., Wiltshire, T. J., Perry, N. S., Kent de Grey, R. G., Hogan, J. N., Smith, T. W., Baucom, K. J. W., & Baucom, B. R. (2017). A multivariate dynamic systems model for psychotherapy with more than one client. *Journal of Counseling Psychology*, *64*(6), 616.

Cavelzani, A., & Tronick, E. (2016). Dyadically expanded states of consciousness and therapeutic change in the interaction between analyst and adult patient. *Psychoanalytic Dialogues*, *26*(5), 99–615. https://doi.org/10.1080/10481885.2016.1214478

Cohn, J. F., & Tronick, E. (1989). Specificity of infants' response to mothers' affective behavior. *Journal of the American Academy of Child & Adolescent Psychiatry*, *28*(2), 242–248. https://doi.org/10.1097/00004583-198903000-00016

Cramer, B., & Stern, D. (1988). Evaluation of changes in mother-infant brief psychotherapy: A single case study. *Infant Mental Health Journal*, *9*(1), 20–45. https://doi.org/10.1002/1097-0355(198821)

Downing, G., Bürgin, D., Reck, C., & Ziegenhain, U. (2008). Interfaces between intersubjectivity and attachment: Three perspectives on a mother–infant inpatient case. *Infant Mental Health Journal*, *29*(3), 278–295.

Eubanks, C. F., Muran, J. C., & Safran, J. D. (2018). Alliance rupture repair: A meta-analysis. *Psychotherapy*, *55*(4), 508–519. https://doi.org/10.1037/pst0000185

Fonagy, P., Campbell, C., & Luyten, P. (2022). Alliance rupture and repairs in mentalization-based therapy. In C. F., Eubanks, L. W., Samstag, & J. C., Muran (Eds.), *Rupture and repair in psychotherapy: A critical process for change*. American Psychological Association.

Gabbard, G. O. (2001). A contemporary psychoanalytic model of countertransference. *Journal of Clinical Psychology*, *57*(8), 983–991.

Georgaca, E., & Avdi, E. (2011). Discourse analysis. In D. J. Harper & A. Thompson (Eds.), *Qualitative research methods in mental health and psychotherapy: An introduction for students and practitioners* (pp. 147–162). Wiley.

Grotstein, J. S. (2007). *A beam of intense darkness: Wilfred Bion's legacy to psychoanalysis*. Karnac Books.

Harrison, A. M., & Tronick, E. Z. (2007). Contributions to understanding therapeutic change: now we have a playground. *Journal of the American Psychoanalytic Association*, *55*(3), 853–874. PMID: 17915650.

Heimann, P. (1950). On counter-transference. *International Journal of Psychoanalysis*, *31*, 81–84.

Houghton, R., & Beebe, B. (2016). Dance/movement therapy: Learning to look through video microanalysis. *American Journal of Dance Therapy*, *38*(2), 334–357.

Joseph, B. (1989). *Psychic equilibrium and psychic change*. Tavistock/Routledge.

Kächele, H., Schachter, J., & Thomä, H. (2009). *From psychoanalytic narrative to empirical single case research*. Routledge.

Lieberman, A. F. (2004). Child-parent psychotherapy: A relationship-based approach to the treatment of mental health disorders in infancy and early childhood. In A. J., Sameroff, S. C., McDonough, & K. L., Rosenblum (Eds.), *Treating parent–infant relationship problems: Strategies for intervention* (pp. 97–122). The Guilford Press.

Luyten, P., & Fonagy, P. (2015). The neurobiology of mentalizing. *Personality Disorders: Theory, Research, and Treatment*, *6*(4), 366. https://doi.org/10.1037/per0000117

Lyons-Ruth, K. (1998). Implicit relational knowing: Its role in development and psychoanalytic treatment. *Infant Mental Health Journal*, *19*(3), 282–289. https://doi.org/10.1002/(SICI)1097-0355(199823)19:3≤282::AID-IMHJ3≥3.0.CO;2-O

Lyons-Ruth, K. (1999). The two person unconscious: Intersubjective dialogue, enactive relational representation, and the emergence of new forms of relational organisation. *Psychoanalytic Inquiry*, *19*(4), 576–617. https://doi.org/10.1080/07351699909534267

McWilliams, N. (2021). *Psychoanalytic supervision*. Guilford Press.

Ogden, T. H. (1994). The analytic third: Working with intersubjective clinical facts. *International Journal of Psycho-Analysis*, *75*(3), 3–19.

Ogden, T. H. (2004). On holding and containing, being and dreaming. *The International Journal of Psychoanalysis*, *85*(6), 1349–1364. https://doi.org/10.1516/T41H-DGUX-9JY4-GQC7

Roy-Chowdhury, S. (2010). Is there a place for individual subjectivity within a social constructionist epistemology? *Journal of Family Therapy*, *32*(4), 342–357.

Safran, J. D., & Muran, J. C. (2000). *Negotiating the therapeutic alliance: A relational treatment guide*. Guilford Press.

Safran, J. D., Muran, J. C., & Eubanks-Carter, C. (2011). Repairing alliance ruptures. *Psychotherapy*, *48*, 80–87.

Salomonsson, B. (1998). Between listening and expression: On desire, resonance and containment. *Scandinavian Psychoanalytic Review*, *21*, 168–182. https://doi.org/10.1080/01062301.1998.10592677

Salomonsson, B. (2018). *Psychodynamic interventions in pregnancy and infancy: Clinical and theoretical perspectives*. Routledge.

Salvatore, S., Tschacher, W., Gelo, O. C., & Koch, S. C. (2015). Dynamic systems theory and embodiment in psychotherapy research. A new look at process and outcome. *Frontiers in Psychology*, *6*, 914.

Sletvold, J. (2016). The analyst's body: A relational perspective from the body. *Psychoanalytic Perspectives*, https://doi.org/10.1080/1551806X.2016.1156433

Suvini, F., Apicella, F., & Muratori, F. (2017). Music therapy micro-analysis of parent–infant interaction in a three-month-old infant later diagnosed with autism. *Health Psychology Report*, *5*(2), 151–161. https://doi.org/10.5114/hpr.2017.63845

Stern, D. N. (1971). A microanalysis of mother-infant interaction. *Journal of the American Academy of Child Psychology*, *10*, 501–517. https://doi.org/10.1016/s0002-7138(09)61752-0

Stern, D. N. (1985). *The interpersonal world of the infant: A view from psychoanalysis and developmental psychology*. Basic Books.

Stern, D. N., Bruschweiler-Stern, N., Harrison, A. M., Lyons-Ruth, K., Morgan, A. C., Nahum, J. P., Sander, L., & Tronick, E. Z. (1998). The process of therapeutic change involving implicit knowledge: Some implications of developmental observations for adult psychotherapy. *Infant Mental Health Journal: Official Publication of The World Association for Infant Mental Health*, *19*(3), 300–308.

Stern, D. N. (1999). Vitality contours: The temporal contour of feelings as a basic unit for constructing the infant's social experience. In P. Rochat (Ed.) *Early social cognition: Understanding others in the first months of life* (pp. 67–80). Lawrence Erlbaum Associates Publishers.

Stern, D. (2004). The present moment in psychotherapy and everyday life *(Norton series on interpersonal neurobiology)*. W. W. Norton & Company.

Stone, M. (2006). The analyst's body as tuning fork: Embodied resonance in countertransference. *Journal of Analytical Psychology*, *51*(1), 109–124. https://doi.org/10.1111/j.1465-5922.2006.575_1.x

Thomson–Salo, F., & Paul, C. (2007). *The baby as subject* (2nd Ed.). University of Melbourne and Royal Children's Hospital.

Trevarthen, C. (1979). Communication and cooperation in early infancy: A description of primary intersubjectivity. In M. Bullowa (Ed.) *Before speech: The beginnings of human communication* (pp. 321–347). Cambridge University Press.

Tronick, E. (1989). Emotions and emotional communication in in infants. *American Psychologist*, *44*, 112–119. https://doi.org/10.1037//0003-066X.44.2.112

Tronick, E. (2007). *The neurobehavioral and social-emotional development of infants and children*. W. W. Norton.

Tronick, E., & Beeghly, M. (2011). Infants' meaning-making and the development of mental health problems. *American Psychologist*, *66*(2), 107. https://doi.org/10.1037/a0021631

Vivona, J. M. (2019). The interpersonal words of the infant: implications of current infant language research for psychoanalytic theories of infant development, language, and therapeutic action. *The Psychoanalytic Quarterly*, *88*(4), 685–725. https://doi.org/10.1080/00332828.2019.1652048

Yerushalmi, H. (2019). Negative capability, heuristics and supervision. *British Journal of Psychotherapy*, *35*(2), 290–304.

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