Title: The Lausanne Trilogue Play (LTP): Bringing together developmental and systemic perspectives in clinical settings

Running head: The Lausanne Trilogue Play

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Abstract

Developmentalists have demonstrated that the quality of relationships established by infants with their proximal social environment is crucial for lifecourse development. However, studies in the field of parent–infant relationships have been mostly centered on the mother–child dyad. Stemming from family systems theory that considers interactions within the whole family as critical for individuals' personal development, a group of family therapists and researchers in Lausanne (Switzerland) tried to bridge the gap between systemic and developmental thinking by stressing the need to establish the mother–father–infant triad as a collective unit of study. In response, they created the Lausanne Trilogue Play (LTP), a method to systematically assess the quality of mother–father–infant interactions. The LTP is an observational situation during which parents are asked to play with their infant in four parts: (i) one parent plays with the infant, other parent is "simply present"; (ii) the parents switch their roles; (iii) they play all together; (iv) the parents discuss in front of the infant. The theoretical model associated with the LTP postulates that the quality of the coordination demonstrated by the triad to achieve this task can be assessed mainly through the careful observation of non-verbal behaviors as indicators of the achievement of four interactive functions (i.e., participation, organisation, focalisation, affect sharing), whose fulfillment will determine the quality of relational functioning within the system. This paper aims to introduce the clinical, theoretical, and empirical foundations of the LTP and the family alliance model, its use in clinical and research contexts, as well as the most recent advances in the field of research on mother-father-infant interactions based on this method.

Keywords: Family alliance, Lausanne Trilogue Play, triadic interactions, mother-father-infant interactions, coparenting

Key points

- The Lausanne Trilogue Play and the family alliance model allow to characterize the quality of whole-family interactions as indices of family functioning.
- Research has shown that family alliance is rather stable in the transition to parenthood. A cooperative alliance was shown to predict more positive child outcomes up to adolescence, including better social cognition, less symptoms, and better emotion regulation.
- In the clinical context, the Lausanne Trilogue Play and the family alliance model can be used as an assessment tool as well as an intervention technique when used in combination with video-feedback.

The Lausanne Trilogue Play (LTP):
Bringing together developmental and systemic perspectives in clinical setting with an infant

Systemic thinking in therapy has brought to the fore the importance of context in the individual's psychological functioning. As the most proximal context, family interactions and relationships have been identified as key modifiable contributing factors in the development of the child, and, by extension, in the possible occurrence and maintenance of a psychopathological condition (Crockenberg & Leerkes, 2000; Parfitt et al., 2013, 2014). Family systems are organised and structured, with a strong interdependence between the members of the family (the "elements" of the system), each member assuming a role according to their status and functional abilities: the parents have for example to take care for the children, as their status is hierarchically higher than that of the children (Cox & Paley, 1997). Salvador Minuchin (1974) proposed that a family model wherein the parents were referred to as the family's *executive system* (a phrase that was later referred to as *coparenting*). In this executive system, parents are responsible for taking care of the children, with the double and apparently contradictory task of protecting their children and to let them progressively leave the family nest as they become adults. This is referred to as the *progressive separation-individuation process,* which is an essential process in family therapy.

In the systemic tradition, emphasis has been placed on verbal child and particularly adolescents. Curiously, less attention has been paid to the "birth of the family", that is, the transition to parenthood and the relational functioning of families of infants. This transition is a major step in the construction of the family context. For long, infancy has remained the field of approaches centered mainly on the dyadic mother-child relationship. One of the reasons explaining this overlook is the difficulty to consider a relational system in which one of the partners – the infant – does not speak, while speech is the central media of most family therapy models. In 1985, Patricia Minuchin, commenting on this focus challenged development psychologists to expand the lens of their theories and research paradigms. To meet this challenge, a specific paradigm was developed: The Lausanne Trilogue Play (LTP; Fivaz-Depeursinge & Corboz-Warnery, 1999). Its aims were twofold: (1) to document how parents implement a context allowing the infant to be engaged in an interaction with both parents, and (2) to determine paths of intervention in which the infant will be an active partner in the change processes. The LTP paradigm was created by the Center for Family Studies (Department of Psychiatry, Lausanne University Hospital and University of Lausanne).

The LTP and the Family Alliance Model

The LTP was designed as a four-part play session corresponding to the four possible ways of interacting in a triadic system (the setting and procedure are described in detail in Corboz et al, 1993):

1. One parent plays with the infant, the other parent is "simply present" as a third party;
2. The parents switch their roles;
3. Both parents play with the infant;

4. The parents interact together, the infant is third party.

In longitudinal studies of non-referred families to be described in more detail below, the development of functional and problematic coparenting of infants and of their influences on the infant social development were explored and documented thanks to this paradigm. It allowed to best describe families as totalities in terms of triadic alliances. Alliance has been defined as the degree of family engagement and coordination to carry out a joint activity (Fivaz-Depeursinge & Corboz, 1999). The family alliance theoretical model postulates that the quality of the family alliance will depend on the achievement of four interactive functions, that are hierarchically organised (Frascarolo et al., 2004). The achievement of these four functions are necessary for the partners to reach together the primary goal of play: sharing fun and pleasure as a threesome. These functions are as follows:

- Participation: first, all family members should be included in the interaction; that is, they are all available to interact and are interested in each other. From the moment that one partner is excluded, the interaction cannot be triadic. This function is mainly implemented by the distances and orientations between lower bodies.
- Organisation: Once all members are included in the interaction, the triad has to organise turn taking and/or to attribute differentiated roles according to the aim of the interaction. Each family member has a role to play in family interactions. This function is mainly implemented by the distances and orientations between upper bodies.
- Focalisation: Once all members are included in the interaction and their roles are distributed, the co-construction of an activity is possible; each participant's attention has to be focused on the same theme in order to co-construct an activity. This function is mainly implemented by the distances and orientations between heads and by gaze orientations.
- Affect sharing: Finally, once the three other functions are fulfilled, emotional attunement is possible; affects circulate between the participants and there is mutual empathy. This function is mainly implemented by facial, vocal and gestural expressions.

Variations in the accomplishment of the functions allow to describe four types of alliances. An alliance may be functional whereby the family succeeds in setting up a context allowing triadic exchanges, or dysfunctional when such a context cannot be set up. (i) When participation is not fulfilled, the systematic (self-) exclusion of one or more of the family members leads to a *disordered alliance*. (ii) When all members are included in the interaction but parents show difficulties in distributing roles and cooperating, organisation may not be fulfilled and the interactions reveal a *conflictual alliance*. These two alliances are dysfunctional; some of the processes described by S. Minuchin (1974) as emblematic of conflictive families, such as detouring or (problematic) triangulation of one member of the family have been documented in the families with dysfunctional alliances, the infant being the target of the detouring or triangulation processes (Fivaz-Depeursinge et al, 2012). (iii) When all members are included in the interaction and roles are distributed, achieving joint activities may be a struggle; the co-construction may go through a certain number of false starts.

Joint activities may be fluid, but the emotions may be a bit forced and affect sharing is thus not completely fulfilled. This alliance is *cooperative stressed*. (iv) Finally, if affects are mainly positive and shared between the three members or participants are emotionally attuned (possible negative emotions in the baby are also acknowledged and regulated in the interaction), the alliance is then "harmonious cooperative." The two latter types of alliance are considered as functional.

One of the innovatory contributions of the first studies using the LTP was to highlight an unexpected competence in infants, from the first trimester on (Fivaz-Depeursinge et al., 2005; Fivaz-Depeursinge & Favez, 2006), namely the *infant's triangular competence.* Specifically, when playing with one parent with the other one as third party (parts 1 and 2 of the LTP), the infants at times of high arousal rapidly shifted their gaze and affects such as joy or distress between the parents, as if bidding to share their affects with both. These so-called *triangular bids* were even more often observed when the infants played with both parents (part 3); they were also observed during the parents' dialogue when they were placed in the role of the third party (part 4) -- as if to share the parents' affects or to challenge the parents to include them in their dialogue. These early triangular capacities were documented in two studies of 3-4-month-old infants in non-referred families, in Lausanne (Fivaz-Depeursinge et al., 2004) and in a large US sample (McHale et al., 2008; see for more details McHale et al., 2018). The triangulation strategies of 9- and 18-month-old infants were systematically studied by means of microanalysis in a longitudinal sample (Fivaz-Depeursinge et al., 2005; 2009; 2012).

One of the characteristics of the LTP is to feature transitions between parts, as all parts are to be played in a row. Transitions between different configurations, as negotiated by the parents, happen to be particularly revealing of the degree of coordination between them. To negotiate successfully, say a transition from infant-mother to 3-together play, the parents prepare for the transition by first announcing their intention, but only actualizing it after confirmation: for example, the parent who is actively playing with the infant marks a pause, gazes at the other parent with possibly a verbal comment ("It will be your turn"); the parent in the third party position may answer by nodding positively and leaning toward the infant while the active parent sits straight in his chair. By doing so, parents also "translate" the instructions for their baby in non-verbal language. In functional family alliances, partners succeeded in making a transition both smooth and adjusted to the infants' responses. This process was not observed in dysfunctional family alliances.

Initially designed for families with infants in their first year, the LTP has been developed since then in different versions, to be adapted to the infant's age and to the number of children in the family (see Favez et al., 2017, for a presentation of the different versions of the LTP). One of the most innovative and clinically sound versions of the LTP is its prenatal version (Carneiro et al., 2006). This version of the LTP features an enactment by the parents of their first meeting with their fantasy newborn baby. The parents were instructed to enact the four configurations of the LTP with their future baby represented by a life-sized doll. The results of the prenatal family alliance proved to be not only a precursor, but a strong predictor of the later post-natal family alliance (see the next section).

Longitudinal and process-oriented studies: The LTP as a tool to study the development of family alliance

The LTP was used in a systematic fashion in several longitudinal studies funded by the Swiss National Science Foundation. In a first study beginning in 1998, 50 families were recruited during pregnancy. The objective was twofold: to investigate the normative process of couples' adjustment to first-time parenthood and coparenthood during the first two years and to study how this adjustment impacts the child's socio-affective development. Families were recruited during pregnancy and had research visits in the 5th month of pregnancy and in the postnatal period at 3, 9, and 18 months postpartum. A first follow-up was conducted when the children were 5 years old, and a second was conducted during adolescence at age 15 years. The first important result of this study was that the quality of family alliance, measured on four occasions from pregnancy (in the prenatal LTP) to 18 months seemed to be stable for most families, regardless of the quality of their adjustment. Indeed, 61% of the families showed a cooperative alliance all along (a "high stable" pattern), while 21% of the couples experienced conflict or disorder from pregnancy to toddlerhood (a "low stable" pattern). In turn, 18% of the couples showed a decrease in the alliance (a "high to low" pattern), with the quality of the alliance starting to deteriorate after 3 months postpartum. Interestingly, these couples were those reporting greater marital satisfaction prenatally, while all the children in these families (n = 7) were male (Favez et al., 2006). A second set of results concerned the way these different patterns of family alliance development allowed to predict variables characterizing child development. Results showed that children from families with a "high-stable" pattern of family alliance development showed less psychofunctional symptoms and greater autonomy in the play and elaborated less conflictual themes in a task in which they were asked to act out relationship situations with dolls at age 5 years (Favez et al., 2012). Interestingly, these children also showed greater performances in Theory of Mind tasks (false beliefs tasks; Perner et al., 1987). Data from the second follow-up of this study also showed that these children still showed greater competences in Theory of Mind at adolescence (Tissot et al., 2022).

From 2009 to 2012, another longitudinal study aimed to investigate if a positive family alliance might buffer the negative consequences of maternal depressive symptoms on the family and the infant. The rationale of the study was that, whereas maternal postpartum depression (PPD) was shown to impact the child through an alteration of the mother's parenting capacities, in particular her parental sensitivity (Ainsworth et al., 1978), the role of the father in these situations remains to be defined. Scholars have argued that fathers might compensate for the consequences of the mother's difficulties due to PPD as long as the father was supportive and helpful and that the mother could accept the father's support. In sum, the paternal buffer effect in situations of maternal PPD might depend on the quality of the interparental relationship. Indeed, in case of marital distress, the father would likely be less supportive or, if he was, the mother would less likely accept his support. The father's efforts to compensate for the mother's difficulties might be perceived as a threat, which may reinforce the mother's depression, especially if she feels incompetent and sees that the father is more successful in

his relationship with the baby than she is. A second important feature of this study was that we wanted to investigate these processes with a sample of non-referred mothers. Indeed, whereas the devastating consequences of severe PPD are now well established (e.g. Field, 2010), less is known about the potential consequences of less severe forms. Investigating the consequences of these less severe forms of PPD was important, especially since these situations are more likely to remain undiagnosed and thus untreated. The results of this study did not confirm the main hypothesis of this study, as maternal depression was only weakly associated with sensitivity (Tissot, 2013). However, we found significant associations between depression and coparenting support, especially at 3 months postpartum. Coparenting support observed during the LTP was lower in families in which maternal depression was higher (Tissot et al., 2017). Moreover, coparenting support at 3 months postpartum was shown to mediate the association between maternal depressive symptoms and child's psychofunctional and externalized symptoms at 18 months (Tissot et al., 2016). These results suggested that, in situations of mild PPD, mothers may be able to establish a "good enough" relationship with their child, but that they may encounter difficulties in their coparenting relationship, which may eventually affect the child.

More recently, a third study led between 2018 and 2022 focused on the mechanisms underlying the links between the quality of triadic relationships and child development. Indeed, whereas several studies have shown that the quality of coparenting or family alliance seems to contribute to the child's socioaffective development in a specific way (Teubert & Pinquart, 2010), yet little is known about the processes responsible for this association. In other words, why children growing up in families with lower coparenting support, higher interparental conflict, or less cooperative family alliance may tend to fall off-track in their socioaffective development and, for example, may be at higher risk of developing early symptomatology? In this study, we hypothesized that these children would be at higher risk of experiencing stressful interactions in their everyday life, which might affect the development of their emotion regulation (ER) capacities. As ER has been shown to be a strong mediator of the links between the quality of the parent-child relationship and child outcomes (for reviews, see Miu et al., 2022; Rattaz et al., 2022), we investigated how the early development of ER could explain the links between mother-father-child relationships and child socio-affective development. More specifically, we focused our attention on one of the physiological components of ER, namely vagal tone. Vagal tone is a measure of the parasympathetic action of the vagus nerve on the organs, and particularly on the heart. According to the polyvagal theory (Porges, 1995), when the (social) environment is safe, the vagus nerve exerts a parasympathetic influence on the heart, which slows it down and fosters a calm state that promotes social engagement (Porges, 1991). In the face of an increase in the environmental demand, such as social stress, vagal tone will decrease, allowing for the mobilization of physiological resources that are necessary for the individual to cope with the situation (fight or flight responses). Vagal tone can be measured through the monitoring of the cardiac activity, and notably via the observation of heart rate variability (HRV), which will necessarily be

lower when an individual is stressed and has a fast-beating heart (Laborde et al., 2017). In this study, we monitored 4-month old infants' cardiac activity with an electrocardiogram during dyadic (mother-infant and father-infant) and triadic (mother-father-infant) interactions, so that we could measure the level of stress experienced by the babies in the different relational configurations. The first, yet only partially unpublished, results of this study indicate that family alliance is indeed related to physiological ER, and that this link is not explained by the separate quality of mothers' and fathers' parenting capacities (Rattaz, Tissot, Puglisi, Epiney, et al., 2023; Rattaz, Tissot, Puglisi, Razurel, et al., 2023). As these first results are encouraging, the next step of the analyses will be to focus on linking family interactions and infants' physiological ER to broader infant outcomes in order to validate the hypothesized model.

The LTP as a clinical tool

Since its inception, the LTP paradigm was thought as a tool for clinical work with families. Several procedure have thus been designed, either for evaluation or for therapeutic intervention, in which the LTP plays a central role. A first example is the "systemic consultation" model developed at our Center (Frascarolo-Moutinot et al., 2012; Frascarolo-Moutinot et al., 2009). The systemic consultation is a protocol of brief assessment proposed by a team (clinicians, researchers, or both, hereafter called the "leading team") to families with young children and their therapist(s). It aims not only to lead to a global assessment of the quality of interactions within the family, but also to bring answers to specific questions (regarding communication, emotions, behaviors in the whole system or sub-systems) that the family and the therapist(s) may have and that can be, at least partially, answered through the observation of the family interactions. It generally takes place in two sessions. In the first session, the family and the therapist(s) are asked to come with specific questions in mind. Typical examples are the place and role of one specific child among siblings, the potential impact of marital conflict on the child(ren), how to coparent a child with special needs or, more simply, what are the strengths and weaknesses of the family. After a brief discussion, during which the leading team present the protocol and various documents (a short questionnaire to be completed at home by the parents and a consent form to be filmed) and the family and the therapist(s) present their questions to the leading team, parents are invited to play with the child (or children if siblings are present), notably in an LTP setting, frequently combined with complementary assessment such as dyadic free play or the PicNic Game (Favez et al., 2016). In the second session, the family and the therapist(s) come back for a video-feedback session, during which the leading team will tentatively answer to the questions that were raised using short clips of the family interactions to illustrate their answers. This video-feedback session must be carefully prepared by the leading team in-between sessions. One of the principle for the video-feedback is that, regardless of the questions asked by the family, the leading team should focus as much on the resources as on the difficulties they observed during the interactions, even though resources may be scarce. Another general principle of the systemic consultation is that the leading team will ask to know as little as possible about the family, especially

the specific reasons for consulting their therapist(s). This principle aims to prevent a confirmation bias that would excessively orient the assessment toward an in vivo observation of the reasons of consultation or the "problematic" behavior. The main aims of the systemic consultation is to bring new information, perspectives, and point of views driven by the leading team into the therapeutic space, which can ultimately help to create a new reality for the family. However, being so brief and defined in space and time, the "systemic consultation" is mainly an assessment protocol with potential clinical benefits, rather than an intervention protocol per se.

A second example, this time a structured intervention program, is the Reflective Family Play (RFP, Philipp, 2012). The RFP combines principles of the Watch, Wait, and Wonder intervention program (WWW; Cohen et al., 1999; Muir et al., 1999) and the LTP and family alliance model. The RFP is a brief psychotherapeutic intervention program, during which parents are asked to play with their child(ren) according to a scenario similar to the LTP. Following the core principle of WWW, parents are asked to follow the child(ren)'s initiatives during the play. During the video-feedback sessions, the clinician explores parents' representations and stimulates parents' mentalization processes, inviting them to reflect on their partner's and their child(ren)'s emotions, thoughts, and intentions that guided their behaviors during the play. More details about the RFP may be found in another paper in the present volume.

A third example is an effort made by a group of experts (led by James McHale) from six countries under the name International Coparenting Initiative to create a workbook containing guidelines to help clinicians to integrate coparenting and family-level processes in their clinical work with families and young children from 0 to 5 years. The idea was to propose as set of guidelines, including procedures, that any clinician, regardless his or her training, experience, therapeutic orientation, or work habits, could use in his or her practice with families and young children, in addition to what they usually do with families, whether it be individual or dyadic work. Dubbed "framing the work" (FTW), this set of guidelines comprises assessment, monitoring, and brief intervention procedures targeting coparenting and whole family relationships. An ideal application of the protocol would be to dedicate a couple of sessions to the thematic of coparenting at intake, as well as near the end of therapy. At each time point, the clinician will conduct (i) an assessment session, that includes a moment of videotaped family interactions using the LTP or derived protocols, as well as self-reports, and (ii) a feedback session. The feedback session consists in reviewing both parents' self-reports, highlighting both differences and similarities (agreements and disagreements) between the parents in their perceptions of how the family and child function. But the major part of the feedback session will be dedicated to a videofeedback based on the family interactions videotaped during the LTP. Between intake and the end of therapy, the clinician will conduct the therapeutic work as he/she sees fit (or according to the principles and methods in place in his/her institution/service). In addition, the manual also offers tools for monitoring all the moments when, in the course of therapy, themes linked to coparenting have been discussed, either on the parents' or the clinician's initiative. FTW has

been designed to propose simple methods to work on coparenting, without the need of training to a whole new form of family therapy. Ultimately, the objective of this set of guidelines is to raise awareness of parents (and clinicians) on the importance of coparenting and whole-family relational processes, which might already be a clinical gain in itself in some cases. Indeed, these processes tend to be harder to identify as problematic in families facing difficulties that may feel more salient (such as child symptoms) and might not be identified as potential causes of these more salient difficulties.

Conclusion: Bringing together developmental and systemic perspectives in clinical situations

We conclude this paper by reaffirming the LTP and the family alliance model as a paradigm combining developmental and systemic perspectives which, we believe, has contributed to a mutual enrichment between these two perspectives.

First, the formation of this systemic-developmental model allowed to improve our understanding of family dynamics. The alliance requires the coordination between all members to accomplish a given function. At the empirical level, this coordination may be defined through the systematic observation of the group at work as a whole and including the interaction between each of its subsystems. Finally, operational criteria can be defined for each behavioral level, namely: participation, or inclusion of all members; organisation, or the distribution of specific roles according to the aim of the interaction; focalisation, or the co-attention by each participants on the same theme; finally, affect sharing or mutual empathy.

Second, the development of a systemic view on infant development allowed to improve the way we understand it. Indeed, it was the observation of the father-mother-infant interaction in exploring the family alliance, in the perspective of family systems, which unexpectedly revealed the early infant's triangular competence. Giving her the opportunity of interacting with more than one person at a time - beyond the classical developmental methods, but true to the family systems perspective - revealed the young infant's readiness to interact with both parents at the same time, and then beyond, also with siblings and other partners (not described here). It should be emphasized that it was only through microanalysis, a fundamental method used by pioneer developmentalists, that this competence was revealed (see also Bradley & Smithson, 2017; Tremblay & Rovira, 2007). For an illustration of the specific microanalytic method used in our studies, the reader might refer to Frascarolo et al.'s work (2018) demonstrating in detail the continuity of family alliances throughout development in contrasted families.

Overall, the development of the LTP paradigm provided clinicians with a mean of assessing the development of the coparental relationship and the contribution of the infant in the family. It helped bring together domains of child development and family dynamics: the infant emerged as an actor and player in the family from the very outset of life.

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