INFANTS' INTERACTIONS IN FOSTER AND INSTITUTIONAL CARE: TWO EXPLORATORY STUDIES[1]

Gabriella Garcia Moura[2], Orcid: https://orcid.org/0000-0002-0123-0372
Kátia de Souza Amorim[3], Orcid: https://orcid.org/0000-0003-0544-6370

ABSTRACT. Based on historical-cultural and socio-interactionist perspectives, which understand the infant interactions with his/her caregivers as pillars on which the complex functions of the human psyche are structured and developed, we investigated how infant interactions are constituted within contexts of foster and institutional care. Exploratory and longitudinal studies were carried out through three monthly video recordings with two infants: one in a foster care, followed from 1 to 3 months of age; and one in institutional care, from 3 to 5 months. Categories of observation were quantified. Results highlighted basic care as the driving force behind interactions in both contexts, although in the foster family there was a greater amplitude and overlapping of other types of interactive frames. It was discussed how the infants' interactive fields were configured in articulation with elements of historical and semiotic nature, which were updated in the situations. The importance of caregivers training regarding the role of interactions and semiotic mediation were pointed out, as well as the limitations of the study and the need for further investigations with larger samples.

Keywords: Infants; social interaction; child foster.

INTERAÇÕES DE BEBÊS EM ACOLHIMENTO FAMILIAR E INSTITUCIONAL: DOIS ESTUDOS EXPLORATÓRIOS

RESUMO. Partindo de pressupostos histórico-culturais e sociointeracionistas, que entendem as interações do bebê com seus cuidadores como pilares sobre os quais se estruturam e se desenvolvem complexas funções do psiquismo humano, buscou-se investigar como se constituem as interações de bebês em programas de acolhimento familiar e institucional. Para tanto, foram realizados estudos exploratórios e longitudinais por meio de três videogravações mensais, com dois bebês: um em acolhimento familiar acompanhado de um a três meses de idade; e uma em acolhimento institucional, de três a cinco meses. Categorias de observação foram quantificadas. Resultados apontaram os cuidados básicos como eixos condutores das interações em ambos os contextos, embora na família acolhedora houvesse maior amplitude e sobreposição de outros tipos de enredos interativos. Discutiu-se o modo como os campos interativos dos bebês se configuraram em articulação com elementos de natureza histórica e semiótica, que se atualizaram nas situações. A importância da formação dos cuidadores quanto ao importante papel das interações e mediação foram

---

[2] Universidade Federal do Espírito Santo (UFES), Vitória-ES, Brazil. E-mail: gabigmoura@yahoo.com.br
[3] Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto (FFCLRP), Ribeirão Preto-SP, Brazil.

sinalizadas, bem como as limitações do estudo e necessidade de novas investigações com amostras maiores.

Palavras-chave: Bebês; interação social; criança acolhida.

INTERACCIONES DE BEBÉS EN ACOGIMIENTO FAMILIAR E INSTITUCIONAL: DOS ESTUDIOS EXPLORATORIOS

RESUMEN. Partiéndose de presupuestos histórico-culturales y socio-interaccionistas, que entienden las interacciones del bebé con sus cuidadores como pilares sobre los cuales se estructuran y se desarrollan complejas funciones del psiquismo humano, se buscó investigar cómo se constituyen las interacciones de bebés en contextos de acogida familiar e institucional. Para esto, se realizaron estudios exploratorios y longitudinales por intermedio de tres vídeo-grabaciones mensuales con dos bebés: un en acogimiento familiar acompañado de 1 a 3 meses de edad; e una en acogimiento institucional, de 3 a 5 meses. Categorías de observación fueron cuantificadas. Los resultados apuntaron los cuidados básicos como eje conductor de las interacciones en ambos contextos, aunque en la familia acogedora hubo mayor amplitud y superposición de otros tipos de enredos interactivos. Se discutió la forma como los campos interactivos de los bebés se configuraron en articulación con elementos de naturaleza histórica y semiótica, que se actualizaron en las situaciones. La importancia de la formación de los cuidadores en relación al papel de las interacciones y la mediación fue señalada, así como las limitaciones del estudio y la necesidad de nuevas investigaciones con muestras más grandes.

Palabras-clave: Bebés; interacción social; niño acogido.

Introduction

In Brazil, since 2009, with the enactment of Law 12.010, which amended the Statute of the Child and Adolescent (ECA), the terms 'institutional care' and 'foster care' are used to refer to exceptional and temporary protective measures for children and adolescents who - due to experiencing violence, neglect, abandonment, orphanhood or vulnerability - were removed from the family of origin while awaiting family reintegration or, ultimately, referral to adoption. The institutional care can be offered in two modalities: 1) shelter - institution with capacity for up to 20 children/adolescents; or 2) foster-care - residential unit with capacity for up to 10 children/adolescents, where at least one caregiver resides. The foster care, recommended by Law 12010/09 as a preferential measure, consists of a family or a person from the community who voluntarily receives the child/adolescent in their home, for a provisional period. These families must be registered, skilled, trained and supervised by a multiprofessional team linked to a Foster Care Service (Conselho Nacional dos Direitos da Criança e do Adolescente [CONANDA] & Conselho Nacional de Assistência Social [CNAS], 2009). According to the last national survey conducted in 1,229 municipalities in the Brazilian territory, 2,624 institutional care programs were identified, and only 144 foster care programs were identified. The number of children and adolescents received in the institutions was 36,929, while 932 were under the protection of foster care, revealing that the functioning of the foster care in Brazil is still incipient (Assis, Pinto, & Avanci, 2014).

Specifically on the experiences of infants in these programs, the literature review by Moura (2017) showed that there are few Brazilian scientific articles addressing this issue. The survey carried out at BVS-PSI, between January 2010 and June 2016, found only four articles about infants in institutional care and no empirical study on foster care, only few theoretical studies. Accordingly, a review of previous literature (Moura & Amorim, 2013) already discussed the blatant invisibility of infants in Brazilian institutional programs and how this gap could contribute to omit possible violations or rights guarantees, making it difficult to construct policies that consider the demands of this age group. On the other hand, in the international scope, the literature reviews carried out through the PSYCINFO and SCOPUS databases revealed a much larger range of studies on this theme (Moura & Amorim, 2013; Moura, 2017). It was observed the predominance of studies investigating the association between adversities experienced by foster infants (such as maternal deprivation and/or parental care dysfunctions) and the development of psychopathologies or poorly adaptive behaviors (Dozier, Zeanah, & Bernard, 2013; McLaughlin et al., 2015). Also noteworthy were studies on intervention programs aimed at improving the quality of caregiver-infant relationships (Bernard, Meade, & Dozier, 2013; Zeanah, Shauffer, & Dozier, 2011).

A common aspect in several international studies was the anchorage in the Attachment Theory (Bowlby, 1969/1990), which proposes healthy development as the product of a stable relationship with a sensitive and committed adult, capable of promoting an environment of enriched and adequate care. Under this approach, the quality of foster infant interactions has been widely discussed through the analysis of concepts such as parental sensitivity, nurturance care, synchronous care, and parental commitment (Jacobsen et al., 2018; Powell, Cooper, Hoffman, & Marvin, 2014). Such studies have focused on parental behaviors associated with the development of emotional regulation (of young children's ability to master their emotions); with cognitive learning and development; with the development of attachment; and, in general, with the best social and emotional adjustment of the foster child (Jacobsen, Ivarsson, Wentzel-Larsen, Smith, & Moe, 2014; Jacobsen et al., 2018).

In the face of this theoretical-scientific panorama, the question is how historical-cultural psychology, which considers the person interactions with its environment and social partners as pillars on which complex functions of the human psyche are structured and developed, can also contribute to the understanding of the interactive experiences of foster infants?

The constitutive role of social interactions

Social interactions are an object of deep interest in the field of Human Development Psychology, especially when considering children in their first years of life. This theme, in the present study, will be considered from historical-cultural approach. To speak of development in this perspective implies considering the influence of culture on psychological development, highlighting the role of social relations and the historical-cultural context. In this line, researchers dedicated to the study of infants (Cavalcante & Rodríguez, 2015; Costa & Amorim, 2015; Rodríguez, Moreno-Nuñez, Basilio, & Sosa, 2015; Rossetti-Ferreira, Amorim, Silva, & Carvalho, 2004) argue that the human baby is born into a semiotic universe - including symbols, sounds, gestures, objects and multiple languages - and its caregiver introduces and interprets this world to him/her. It is the social partners, usually the adults, who organize the interactive spaces of the baby, providing them with ways of perceiving and organizing the world in which they are inserted. Through social interactions, children are

allowed their immersion in the cultural world, in the symbolic universe. Despite the baby's ineptitude, dependence and fragility, its body-emotional expressions affect the other, representing its first communication resources in the interaction, so that the baby's cry, for example, is deeply social, assuming a communicative character when interpreted by the other, being this interpretation given in the parameters of culture, the beliefs present in a particular context (Amorim, Costa, Rodrigues, Moura, & Ferreira, 2013; Smolka, Amorim, & Leite, 2016).

Despite the diversity of forms of care that children spend in society, literature reviews have shown that studies of infant interactions have been conducted predominantly through observations of the mother-baby relationship (Moura & Amorim, 2013). In an extensive review that analyzed the interactive partners of infants, Amorim (2012) observed that the mother is the partner found in 78% of the studies. However, considering that each context promotes particular experience according to its social ecology and that it is from the interaction of the individual with the events of the social context that its personal history is constructed (Rossetti-Ferreira et al., 2004), it is understood as important to know, understand and give visibility to the diverse and constitutive experiences of babies in different contexts, especially those different from the familiar and beyond the mother-baby relationship. For this reason, one wonders: how are the interactive experiences of infants who are deprived of maternal care and of the family of origin and live in foster care programs? Starting from this question, the present exploratory study, based on two case studies, aimed to discuss how the interactions of infants are constituted in different contexts: a foster and an institutional care program.

Method

Participants

This paper represents a part of the PhD research carried out in two protective programs – foster and institutional care - located in two municipalities of the State of São Paulo. To ensure secrecy and confidentiality, city and program names have been omitted and participants' names replaced with fictitious ones.

The foster care occurred in the Silva Family, composed by the couple Cida (45) and Toninho (54) and the biological daughters Estela (22) and Tamires (12 years). Of the middle class, religious, a member of the foster care program 5 years ago, the Family had already cared more than 15 children between 0-3 years. During the research period, the Silva Family fostered four children: Nicolas, 15 days old; Cecilia, 6 months old; Julia, 3 years old and Sofia, 6 months old. As Júlia's age group exceeded the focus of the study and Sofia was fostered in the final period of the research, only Nicolas and Cecilia were selected as focal babies.

As for the institutional care, this was organized in village style, with six semi-detached houses, arranged side by side forming a semicircle. Each household served about four children, divided by age group (0 to 14 years), in the same residence a caregiver (social mother). The exception was the babies' house, with capacity to accommodate up to 8 babies and where there were three caregivers (Denise, Lourdes and Jorgina) working on duty shift. Jorgina worked at the institution for over 7 years, Lourdes for 5 years and Denise a few months ago. At the time of the research, three infants were being cared for: Antônio, 4 months old; Luísa, 3 months old; and Isabela, Luiza's twin sister. When the research began, these children had been cared for about two months. Antônio and Luísa were selected as

focal babies, since Isabela often slept during the recording period, with fewer records of this child.

Specifically for the present article, we chose to present the results of Nicolas (1-3 months) and Luísa (3-5 months), children with greater proximity in age and time of observation. Nicolas had been accepted into the Family in his 15 days of life, with a low weight (two kilos) and possible HIV seropositivity. He was followed in the research from 1 to 3 months of age, when he was adopted with five kilos and unconfirmed seropositivity. Luísa and her sister arrived at the institution with 21 days of life. They had low weight and suspected congenital syphilis. They had excessive body rigidity, which gave caregivers the feeling that they could 'break' them. During the first two months of their stay, Luísa gained more weight and grew more than her sister. Luísa was followed up in the research from three to five months, when she was adopted along with her sister. Syphilis had also not been confirmed.

Design

By means of observations in naturalistic contexts, we decided to conduct case studies (Yin, 2001), which allow us to investigate questions such as 'how' (i.e. 'how do infant interactions take place in care programs?'). It was also chosen the longitudinal study, which allows to follow (trans)formations in the interactions over time. Finally, the design of the study responded to exploratory objectives, without comparative purposes. Although it is not allowed to generalize quantitatively the conclusions, it allows the apprehension of aspects that interrelate personal-relational elements with the wider context.

Data Collection and Analysis Procedures

Data collection was performed through weekly videotapes, lasting twenty minutes with each baby, over 8 weeks. To compose the corpus and the discussion of the present study, three recordings of each baby were selected: the second week of recording; the fifth; and the eighth week, each representing one month of age of the babies. Each of the recordings was analyzed at 10-second intervals based on observational categories of interactions (Table 1). These sought to indicate where they occurred, who participated and how the interactions between babies and their social partners were configured.

The definition of interaction that guided the analysis of the videos is by Carvalho, Império-Hamburguer and Pedrosa (1996), being understood as a potential of regulation among components of the interactive field. 'Regulation' refers to socially directed behavior independent of response, and can occur even at a distance and even without the interactive partner realizing that it is regulating the behavior of the other. The existence of an 'interactive field' was considered whenever it was established: a) potential of regulation; b) regulation; or, c) co-regulation (involving reciprocity and mutually directed behaviors: 'doing something together'). From this, it was accounted for when the baby was surrounded by people (potential interactive field) but in individual activity, without engaging in any interaction, regulated or co-regulated. And when co-regulation occurred, these were analyzed considering: what did they do together? What is the content of this interaction? Did they talk? Smile? Did they look at each other? Did they touch each other? Still, the scenario of the interactions was verified: did they occur in moments of basic care? Were there affective exchanges, playful or teaching-learning moments?

Table 1 - Observational categories used in the analysis of video-recordings

Categories/Subcategories	Description
PLACE	
Where	Where was the baby located?
WHO WAS PRESENT	
Interactive Field	What people were the interactive field of the baby?
TYPES OF INTERACTIONS	
Individual action	Baby care directed only to its own activity.
Baby is regulated	Baby directed social behavior to another partner, but he/she did not see it, did not perceive it or intentionally did not respond.
Baby regulates	Some interactive partner directed the baby into social behavior, but the baby remained focused on its individual activity and/or continued to be regulated by another person.
Co-regulation	Baby directed behavior towards an interactive partner, who in turn directed behavior toward the baby (or vice versa) by setting up a mutually directed interaction.
INTERACTIVE RESOURCES	
Visual	Mutual exchanges of looks, face-to-face interaction.
Vocal	The baby and its interactive partner directed a vocalization at each other. E.g., babbling, screaming, vocalizations, conversations.
Corporal	When the baby touched and was touched; when it was in lap; when there were exchanges of affection.
Affective	Manifestations of emotional expressions like smiles, laughter, crying.
Gestures	Indicative gesture, e.g. pointing; Ostensible gestures, e.g. show or offer something; Symbolic gestures, e.g. 'bye', 'hi', 'no', 'hello'.
INTERACTIVE SCENARIOS	
Basic care	When interactions occurred due to moments of feeding, hygiene, medication, among others.
Joint Activity	Playful activities; activities that involved teaching and encouragement; conversations of the interactive partner with the baby, among others that were moments of 'doing something together' (joint action).
Affectivity	Moments of affective exchanges, exchanges of smiles and looks, caresses, kisses, hugs and conversations in tone of motherese.
Others	Other interactive scenarios.

Source: Produced by the authors.

These data were quantified and then converted into a chart, called Panoramic. The construction of the Charts was inspired by the work of the Research Group DETEDUCA (*Desarrollo Temprano y Educación*) of the Autonomous University of Madrid, coordinated by Professor Cintia Rodriguez Garrido. These researchers also perform video recordings with infants and use graphs (called Microgenetic) to represent what occurs simultaneously with the various participants - adult and child - in each second of the sequence of videos (Estrada, 2013; Nuñez, Rodriguez, & Olmo, 2017). Similarly, in the present study, the graphs constructed by Microsoft Excel software give visibility not only to the occurrences of the categories, but also allow to apprehend how they occur throughout the recording, illustrating the dynamics and (trans)formations of the interactions over the period of time.

Ethical Procedures

Concern about ethics in research and respect for the rights of children and adults was the guiding principle of the study, in accordance with Resolution 466 (Ministério da Saúde, 2012). After approval by the Research Ethics Committee [23537814.4.0000.5407], the participants and the children were informed about the voluntary nature of their participation, their objectives, justifications and methodology and signed the Terms of Free and Informed Consent. Also, the current commitment to promote the social relevance of the study, the significant advantages for the participants and their social-humanitarian destination remains.

Then, based on the Panoramic Charts of Nicolas (Figure 1) and Luísa (Figure 2), the interactive scenarios of the babies in the two care services will be analyzed.

Results

Foster Care

Panoramic Charts of Nicolas (Figure 1) show that Cida (foster mother), besides being the most frequent person in his interactive field, was also the person who interacted the most in a co-regulated way (with joint action and reciprocity). Toninho (foster father) worked in the period when the recordings were made and, therefore, there are no scenes of him with the child. Estela (older daughter), despite having had little presence in the interactive field, when present, interacted both by co-regulation and being regulated by the baby. Tamires (the youngest daughter), despite having more presence in the interactive field, little established regulations with the baby. Finally, Julia - another foster child - was present in the interactive field of Nicolas, was regulated by him in some moments, but without the occurrence of co-regulations. Therefore, Nicolas interacted primarily with Cida, through predominantly co-regulated interaction.

The interactions of Cida and Nicolas occurred mainly in moments of basic care (feeding, hygiene, bathing, medication, etc.). However, other types of joint activities (such as playful activities and conversations with the baby) and affectionate interactions (kissing and caressing) have been observed since the first weeks of the stay, all of which are concomitant with basic care. In Figure 1 (Panoramic Chart 3), it can be observed that, at three months of age, after two months of care, these scenarios were expanded, surpassing activities based on basic care.

Body contact was the most frequent feature between Cida and Nicolas. If it can be argued that body contact is intrinsic to the baby's basic care (raising the index of occurrence), on the other hand, the body interaction was not restricted to being in the lap, since kisses, caresses, massages (light touches on the back), change of position in the cradle, among other actions that involved touch, touching and being touched.

Vocally mediated interactions were also highlighted. Cida often talked to the baby Nicolas, though Nicolas often kept his eyes closed. She changed her tone, using the *motherese (baby-talk)*, a type of speech characterized in the literature as with exaggerated intonation and differentiated rhythm in the pronunciation of the words; in which there are longer pauses between utterances; which uses more sentences in the third person and diminutives (Scorsi & Lyra, 2012). Cida also attributed meanings to Nicolas' gestures and expressions or even fancy dialogues in which the baby asked her, answered, contested, affirmed, praised. She took the baby as a much more responsive interlocutor than his effective abilities allowed him.

The Panoramic Charts allowed to visualize not only the occurrence of the categories, but mainly, when they occurred. In this sense, they indicate the absence or low occurrence of interactions when Nicolas was in the crib, where he usually remained alone in individual activity. They also indicate that, when there were more people composing the interactive field, Cida, Estela, Tamires and Júlia (Panoramic Chart 2 - Figure 1) were also the day of less amplitude and overlap of different scenarios and interactive resources between Nicolas and Cida, in addition to being low numbers of interactions of the baby with the other partners.

Panoramic Charts 2 and 3 (Figure 1) also show that when Julia (foster child, 3 years) was present in the field, the interaction indices of Nicolas and Cida were more restricted, based more on basic care. In coherence, it is observed that the greatest amplitudes of scenarios and interactive resources appeared precisely at the moments when there was only Cida in the interactive field of Nicolas and when he was in the lap.

In relation to the other study of case of the foster care, Cecília (followed from 6 to 11 months), although its results are not detailed in the present work, it is worth noting that Cida was also the person who most constituted the interactive field of Cecília and the interactions between they were predominantly co-regulated. The most frequent scenario was related to joint activities (of a playful and/or teaching-stimulus nature). Speech and vocalization were the most recurrent features and, along with the gestural expressions ('bye', 'to clap', 'to point'), were the resources that increased during the care. Also important, the body contact index, the second most accounted resource despite the fact that the lap is one of the places where Cecília was less. That is, despite spending long periods in the crib, stroller and walker, this did not prevent touches, caresses, tickles, and kisses and hugs.

Figure 1 - Panoramic Charts – Nícolas, from 1 to 3 months of age – Foster Care.
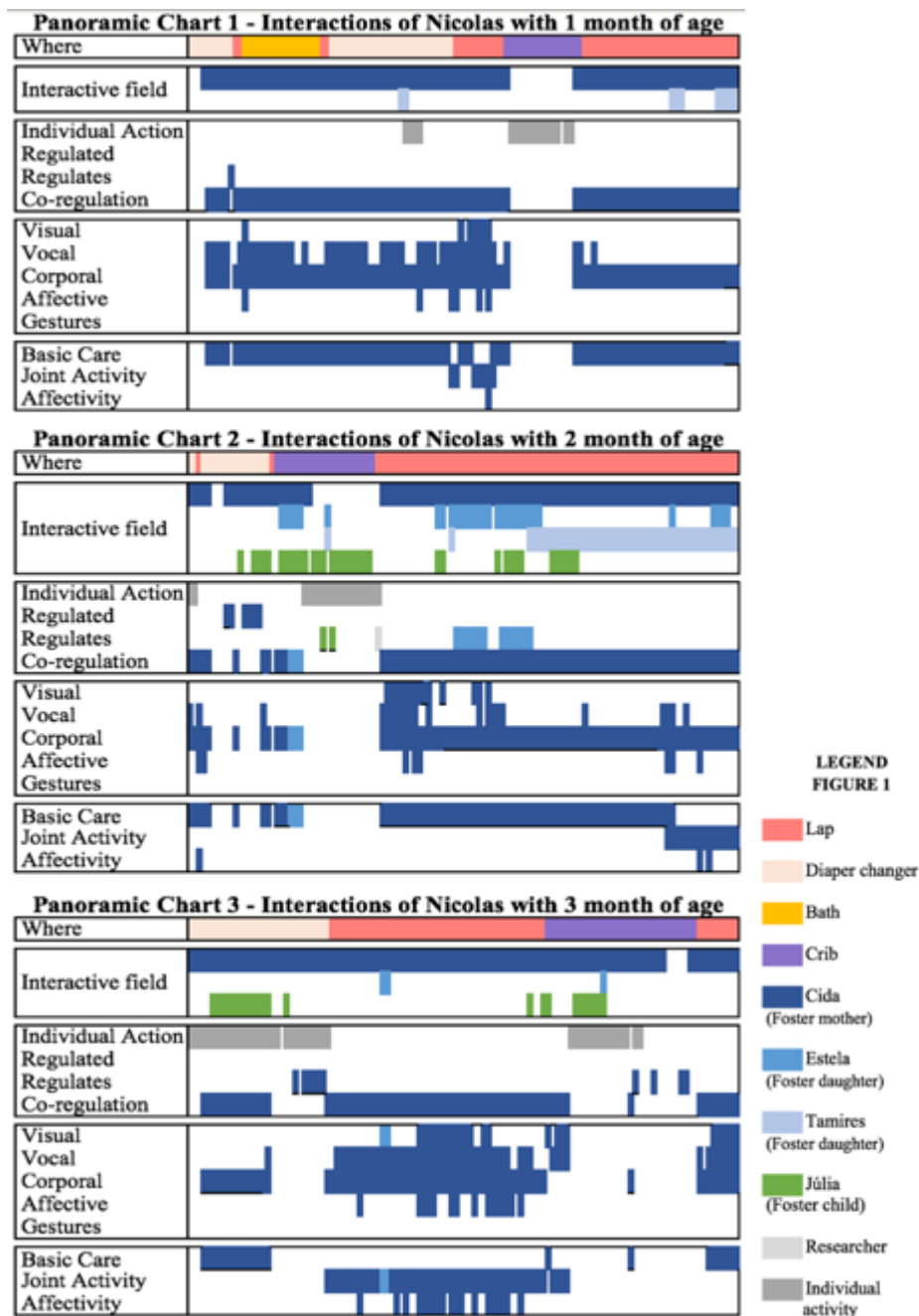
Source: Produced by the authors

Institutional Care

As shown in Figure 2, Luísa's interactive field varied according to the shift of employees. Although there were two caregivers on the daytime shift, the interaction indices of one were always much higher than the others, although both were present, indicating that only one used to make up the interactive field of the focal child. Concerning the participation of the other infants, Antônio and Isabela, it was observed that when Luísa was being

videotaped, Antonio used to stay in the crib, in another room; and Isabela, twin sister, was sometimes present in the interactive field, since both were placed next to each other, but in such a way that it did not favor the interaction between them.

Co-regulated interactions occurred continuously within a certain time frame, always when the child was in the lap (being fed), at the diaper changer or the bath. Thus, the main interactive scenario with Luísa was based on basic care and the main way of contact was the body contact. However, unlike the case of Nicolas, in Luísa, the body contact was little accompanied by other interactive resources. While in interaction with caregivers, there were few speeches, smile exchanges, face-to-face interactions. Still, long were the intervals of time between one speech and another, standing out the silence. The occurrence of motherese (baby-talk) was also low.

In relation to the joint activities, which could involve playful and teaching-stimulus activities, among others, these also had low indices of occurrence. Only in the Panoramic Chart 6 (Figure 2), it can be observed that Luísa and the caregiver Denise were involved in an activity that had as its scenario the words of the caregiver for the child, superimposed on the moment of basic care. No interactions were found when the child was in the stroller and in the baby car chair, places where she was alone in individual activity.

It is evidenced that, although recordings have captured moments that would potentially privilege high indices of baby-caregiver interaction, this result was not found, since the content of the interactions was restricted to the intrinsic body contact of the act of holding the baby to feed or clean it. The extent of both the interactive scenarios and the types of resources used in the interaction with Luísa was greatly reduced.

Comparing Luísa's three Panoramic Charts (Figure 2), another point draws attention to the homogeneity with which the interactions occurred during the months of recordings. Each Chart of Luísa (Figure 2), representing one month of age, reveals her interactions with a different caregiver who took on the tasks of her basic care. In spite of this, we highlight how three different caregivers, with different care experiences and over three months, have the same way of interacting with Luisa, even with the child's growth and development. This fact raises questions: does the transformation that a baby goes through does not change the way of relating to it? Or is there an institutional style of caring?

Before discussing this question, it is worth presenting a brief overview of the results of Antonio (followed from 4 to 6 months old). As in Luísa's case, Antonio's interactive field varied according to the shift of employees. Moreover, of the four focal babies, in his case the lowest interaction indices were observed, with interaction observed only in one day, in others the charts remained almost blank. Moreover, from the little accounted for, there were more behaviors of Antônio regulated by the caregivers than co-regulations or regulations of caregivers by him. In the only recording in which we saw a greater number of interactions, in the first recording, when the baby was 4 months old, he interacted with Denise and Jorgina. The co-regulated interactions with Denise were based exclusively on basic care (bathing and hygiene), while with Jorgina, they were divided into several scenarios, especially the playful and/or teaching-stimulus. His interactions with other children were also few, since in the position in which he was placed, the potential was restricted to hearing and being heard. Antonio was called a 'good baby' because they said he cried little and slept well. These characteristics may also be associated with his low indices of interaction, since, as previously mentioned, crying and other expressions are powerful communicative resources that attract the caregivers' attention.

Figure 2 - Panoramic Charts – Luisa, from 3 to 5 months of age – Institutional Care.
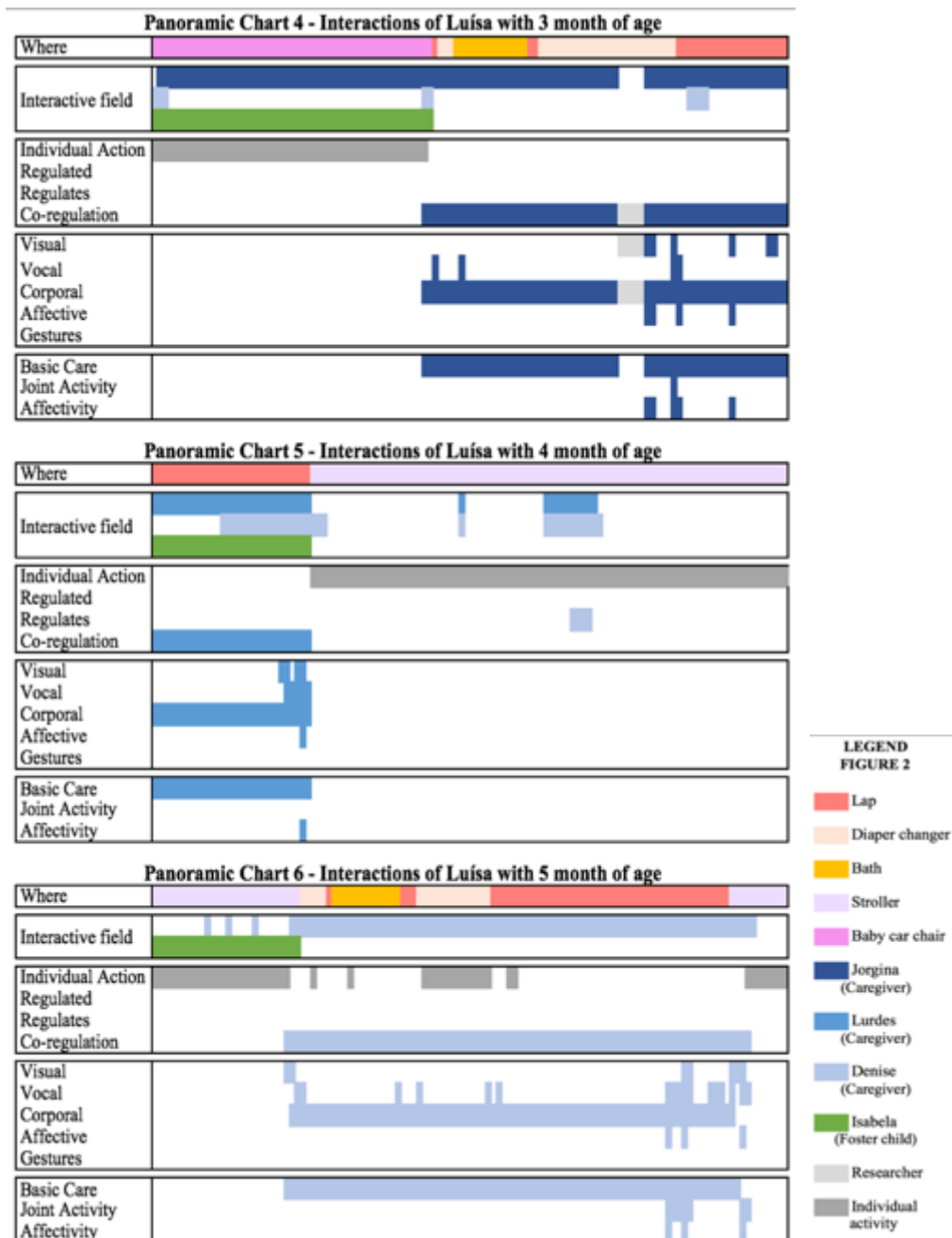
Source: Produced by the authors.

Discussion

The objective of the present study was reached to the extent that it was possible to verify some of the ways in which are constituted the interactions of infants in different care programs - both foster and institutional care - by observing the way in which the interactive

fields of the babies were arranged. In the analysis, one of the points that stood out refers to the contrasting results between foster and institutional care, with a marked difference in the frequency of occurrence of interactions. In the context of foster care, there were higher indices of co-regulated interactions. Nicolas's basic care moments (1 to 3 months old) involved conversations (with motherese), songs, toys, sharing of routines and activities, overlapping different scenarios and resources. In the case of Luísa (3 to 5 months), at the institution - although she is older than Nicolas and has a longer time of care, which gives rise to the expectation that she has already developed a relationship with her caregivers, a greater set of interactive sets – their interactions were restricted to basic, automated care, reduced resource diversity and scenarios. This difference is most striking when analyzing the proportion of the number of children per caregiver. Each care service received three children, the adult/child ratio is low, as recommended in the Technical Guidelines (CONANDA & CNAS, 2009). Even in the institutional care, there were three children for two caregivers, being even smaller than in the foster care, where the foster mother alone took care of the three children. Despite the low proportion of children to adults, care practices at the institution were characterized by a more impersonal pattern.

These contrasting results between the foster and the institution care can lead to a comparison of values, so that the foster care would show the measure of protection more adequate than the institution. But such a conclusion may be hasty and a trap to be avoided, mainly because the study was based on two case studies, and it is probable that there are in Brazil other programs of foster and institutional care, with higher and lower quality. On the other hand, although it does not allow broader generalizations or more precise comparisons between the results, the present research is not unfeasible, since its design allows exploring the theme, proposing reflections and formulating hypotheses for new studies. Thus, within the limits of this work, one may question, for example, the extent to which the characteristics of Cida (or the socio-emotional and economic profile of the foster family), with her idiosyncratic life history, influence how she interact with the children? Also, what is the influence of the qualification and follow-up of the foster families by the technical staff of the service on these results?

Although the methodological design of the present study does not permit or support comparisons between the two care programs, it is still necessary to indicate that several studies have found differences in the developmental outcomes of children in foster care and institutions. For example, the BEIP Project is a randomized controlled, longitudinal study conducted in Romania that followed the insertion and care of previously institutionalized children in a family care program, evaluating a wide range of domains at 30, 42, 54 months and at 8 years of age and early adolescence. It is an interdisciplinary study involving the areas of Medicine, Psychiatry, Pediatrics, Genetics, Psychology, and Neurosciences, and the results indicate that family care is associated with better developmental outcomes compared to institutionalized children (Bick, Dozier, Bernard, Grasso, & Simons, 2013; Dozier et al., 2013; Drury et al., 2012; Gleason et al., 2014; McLaughlin et al., 2015). Similar research has been conducted in several other countries and corroborates these results (Jacobson et al., 2014; 2018).

In addition to the comparison, the results show a need to look at the ways in which these services are organized, how the interactions and the construction of children's relations in these environments are conceived, in order to understand what is being created as a stimulus or hindrance to the occurrence and effective interaction and experiences with and for these children. Even as mentioned, foster care programs in Brazil are still incipient,

and it is necessary to broaden the focus on care experiences and emerging conflicts by investing in further studies on their limits and possibilities.

In this analysis of the specificities of each context, it is worth considering the structure/organization of both contexts in articulation with cultural, social, historical, economic, and political elements (Rossetti-Ferreira et al., 2004; Amorim, 2012). Such elements, semiotic and polysemic in nature, are concretized and continually updated in the here and now of situations, from the dialectic interrelationship of ideological elements with the socio-economic and political conditions in which people are inserted, interacting and developing. They reveal themselves in the organization of spaces, routines, practices, discourses and the body itself, defining processes that simultaneously enable and delimit interactive fields, favoring certain social organizations, certain meanings and senses. In this way, one can question whether the results on the foster care and the forms of interactions of Cida with Nicolas cannot be attributed to a familiar environment, where affection relations are traditionally allowed. Or, to what extent did each participant in this family context, including the husband and the daughters, assume a culturally assigned role/position? It is possible that in the case of this foster care, Cida was exercising a classic role as mother-woman, responsible for raising children, a dedicated and central educator in the care of children's homes and well-being, while her husband took the place of the provider father and the daughters assisted the mother by learning skills ideally aimed at the female role. On the other hand, the results of the institutional care are in line with numerous studies that discuss the institutional style of caring. This represents a mode of organization of care practices at these institutions that is historically given and reproduces a pattern based on minimal dialogue, ritualized care, low index of interaction, and few sensitive and contingent responses from the caregiver to the baby (Golin, Benetti, & Ferreira, 2013; Groark & McCall, 2011). This institutional style of care has been attributed to the poor training of caregivers, who have received more information and knowledge about health, safety and nutrition, but have little access to information in the field of the relationship and its role in child development (Zeanah, Shauffer, & Dozier, 2011).

From the point of view of development, knowledge about the role of interactions in the constitutive process (Carvalho, Imperio-Hamburguer, & Pedrosa, 1996; Lira & Pedrosa, 2016; Nuñez et al., 2017; Rodriguez et al., 2015; Smolka et al., 2016) allows us to infer that restrictions on the amplitude of interactions may fail to promote developmental experiences, thus preventing the child from immersion in the universe of signs of our culture. Further, the nature of the relationship will depend, among others, on the content, diversity and quality of the interactions, which distinguish one relationship from another, which allow the construction or not of affective bonds (Hinde, 1976). Thus, it is understood that, depending on how the caregiver performs the care, such moments can become privileged spaces of play, individualized look, considering preferences and characteristics of each child.

Another result that stands out is that, in both contexts, the lap was a privileged place for the occurrence of interactions involving reciprocity and a joint doing. As discussed by Seidl-de-Moura et al. (2004), the exchanges of looks, physical contact, closeness and warmth provided by the caregiver's lap are essential for the establishment and maintenance of interactions, especially in the case of small babies whose movement and positioning depends totally on the caregivers.

In contrast, when Nicolas and Luísa were observed in cribs, strollers and baby car chairs, most of the time the children remained in individual activity, outside of a potential interactive field and, consequently, no possibility of even occurring adjustments. This same situation - of babies being left on the edge of the interactive field - was also observed when

many adults and/or older children were gathered in an interactive field, as they tended to interact more with each other and less with the baby (Figure 1). It is true that, in an environment of collective care or even in a family context, babies may not always be and remain in their lap. Their caregivers have other things to do, and developmental theorists also discuss the important role of exploratory activities of the babies with the physical world around them (Cavalcante & Rodríguez, 2015; Nuñez et al., 2017; Rodriguez et al., 2015). However, these results suggest that it is also necessary to consider that the organization of the environment can be structured according to the needs of the children. Adults can promote creative, safe, stimulating environments that enable varied experiences for infants, even when they are not in direct interaction with them (Rossetti-Ferreira et al., 2004; Smolka et al., 2016).

Going beyond adult-infant interactions, it is necessary to discuss the other foster children. In both contexts, there were no or very few occurrences of infant-infant and infant-childreb interactions, even by the routine mode of organization: infants usually remained in baby car chairs, side by side, without even being able to observe each other. The recordings showed that, even with respect to older infants, the interaction was not effective, possibly revealing that infant pairs interactions do not occur or contribute to development. Indeed, the dominant development theories prioritize the role of the adult in development, disregarding the potentialities of peer interactions. However, contemporary studies of infants in day-care settings have contributed to show that even very small infants are interested in and interact with other infants (Amorim, 2012; Amorim et al., 2013). For example, in the study by Costa and Amorim (2015), it was observed that the babies regulated their behaviors in function of the behavior of other babies. The gaze was the communicative resource predominant in the baby-baby dyad, such interactions becoming more complex with time, occurring, even, abbreviations in communication. Thus, as in day-care centers, services and care are privileged scenarios for discussing peer interactions.

Final considerations

The present study has contributed to the discussion of empirical data on infant interactions in different care programs, a subject rarely studied in Brazil, as the literature reviews showed. Such studies are important for the implementation of public policies for early childhood, in view of the specificity and relevance of the first years of life. In addition, the research discussed data from a foster care experience that, although recommended by Brazilian legislation as a preferential measure, its implementation in this country remains incipient and poorly investigated. And it was presented an unusual methodological investigation procedure in the Brazilian literature, capable of capturing the sequence of moving events, as well as subtle aspects of the interactive dynamics, giving a systematic character to a qualitative analysis.

On the other hand, the study also had limitations, since it was based on two case studies - one in an institutional context and the other in a foster care - only in three moments (one per month), which, although it is socially crossed, prevents quantitative generalization and comparison. Therefore, new studies, preferably with larger samples, should be performed to explore risk and protective factors and to find out better alternatives for infant protections. As Lira and Pedrosa (2016) point out, situations involving withdrawal from family life and institutionalization need to be further studied by Psychology, which "[...] offers

subsidies to seek a better quality of care in this space, based on adequate knowledge about the child" (p. 8)

Considering the constitutive role of the socio-interactive processes, it is necessary to invest in overcoming mechanized care practices, which are limited to the maintenance of life, disregarding its socializing role. The training and awareness of the caregivers/educators/social mothers about the educational and the mediator dimension of care, interactions, speeches and games, whether during routine activity or in a guided activity, is imperative. And new studies in the field of human development have a high potential for contribution to the crucial aspects of this process being more intentionally pursued by the care programs.

References

Amorim, K. S. (2012). Processos de significação no primeiro ano de vida. *Psicologia: Teoria e Pesquisa, 28*, 45-53.

Amorim, K. S., Costa, C. A., Rodrigues, L. A., Moura, G. G., & Ferreira, L. D. I. M. P. (2013). O bebê e a construção de significações, em relações afetivas e contextos culturais diversos. *Temas em Psicologia, 20*(2), 309-326.

Assis, S. G., Pinto, L. W., & Avanci, J.Q. (2014). Nationwide study on children and adolescent in foster care in Brazil. *Paediatrics Today, 10*(2), 135-146.

Bernard, K., Meade, E., & Dozier, M. (2013) Parental synchrony and nurturance as targets in an attachment based intervention: building upon Mary Ainsworth's insights about mother-infant interaction. *Attachment Human Development, 15*(5), 507-523.

Bick, J., Dozier, M., Bernard, K., Grasso, D., & Simons, R. (2013). Foster Mother-infant bonding: associations between foster mothers' oxytocin production, electrophysiological brain activity, feelings of commitment, and Caregiving Quality. *Child Development, 84*(3), 826-840.

Bowlby, J. (1969/1990). O vínculo da criança com a mãe: comportamento de apego. In J. Bowlby. *Apego perda* (Apego, vol. I). São Paulo, SP: Martins Fontes.

Carvalho, A. M. A., Império-Hamburger, A.,& Pedrosa, M. I. (1996). Interação, regulação e corregulação no contexto do desenvolvimento humano: discussão conceitual e exemplos empíricos. *Publicações IFUSP/P-1196*, 1-34.

Cavalcante, S., & Rodríguez, C. (2015). The understanding of die as an object that has numerical functions. A longitudinal study using two children from the ages of 24 to 36 months interacting with an adult. *Estudios de Psicología, 36*(1), 48-70. doi: 10.1080/02109395.2014.1000028

Conselho Nacional dos Direitos da Criança e do Adolescente [CONANDA], & Conselho Nacional de Assistência Social [CNAS] (2009). *Orientações técnicas: serviços de acolhimento para crianças e adolescentes*. Brasília, DF.

Costa, C. A., & Amorim, K. S. (2015). Abreviação em relações de bebês com seus pares de idade. *Psicologia: Teoria e Pesquisa, 31*(1), 15-23.

Dozier, M., Zeanah, C. H., & Bernard, K. (2013). Infants and toddlers in foster care. *Child Development Perspectives, 7*(3), 166-171.

Drury, S. S., Gleason, M. M., Theall, K. P., Smyke, A. T., Nelson, C. A., Fox, N. A., & Zeanah, C. H. (2012). Genetic sensitivity to the caregiving context: the influence of 5httlpr e BNDF val66met on indiscriminate social behavior. *Physiology & Behavior, 106*(5), 728-735.

Estrada, L. F. (2013). *Componentes emocionales e interacciones triádicas adulto-objeto-bebé entre los 12 y 16 meses de vida. Un estudio de caso* (Tesis de Maestria). Universidad Autónoma de Madrid, Madrid.

Gleason, M. M., Fox, N. A., Drury, S. S., Smyke, A. T., Nelson, C. A. & Zeanah, C. H. (2014). Indiscriminate Behaviors in Previously Institutionalized Young Children. *Pediatrics, 133*(3), e657-e665.

Golin, G., Benetti, S. P. C., & Donelli, T. M. S. (2011). Um estudo sobre o acolhimento precoce inspirado no método bick. *Psicologia em Estudo, 16*(4), 561-569.

Groark, C. J., & McCall, R. B. (2011) Implementing changes in institutions to improve young children's development. *Infant Mental Health Journal, 32*(5), 209-525

Hinde, R. (1976). On describing relationships. *Journal of Child Psychology and Psychiatry*, 17(1), p. 1-19.

Jacobsen, H., Ivarsson, T., Wentzel-Larsen, T., Smith, L., & Moe, V. (2014) Attachment security in young foster children: continuity from 2 to 3 years of age. *AttachmentHuman Development,16*(1), 42–57.

Jacobsen, H., Vang, K. A., Lindahl, K. M., Larsen, T. W., Smith, L., & Moe, V. (2018) Quality of social interaction in foster dyads at child age 2 and 3 years. *Child Psychiatry & Human Development*. Recuperado de: https://doi.org/10.1007/s10578-018-0823-7

Lei nº12.010, de 29 de julho de 2009. (2009). Dispõe sobre a adoção e altera e revoga artigos do Estatuto da Criança e Adolescente. Brasília, DF: Presidência da República. Casa Civil. Subchefia de Assuntos Jurídicos.

Lira, P. P. B., & Pedrosa, M. I. (2016) Processos de significação sobre família em brincadeiras de crianças em acolhimento institucional. *Psicologia: Teoria e Pesquisa, 32*(3), 1-9.

McLaughlin, K. A., Sheridan, M. A., Tibu, F., Fox, N. A., Zeanah, C. H., & Nelson, C. A. (2015). Causal effects of the early caregiving environment on development of stress response systems in children. *Proceedings of the National Academy of Sciences, 112*(18), 5637-5642.

Moura, G. G.,& Amorim, K. S. (2013). A (in)visibilidade dos bebês nas discussões sobre acolhimento institucional. *Psicologia em Estudo, 18*(2), 235-245.

Moura, G. G. (2017). *Interações e relações de bebês em contextos de acolhimento familiar e institucional* (Tese de Doutorado). FFCLRP.Universidade de São Paulo, Ribeirão Preto.

Nuñez, A. M., Rodriguez, C., & Olmo, M. J. (2017).Rhythmic ostensive gestures: how adults facilitate infants' entrance into early triadic interactions*. Infant Behavior and Development, 49*, 168-181.

Powell, B., Cooper, G., Hoffman, K., & Marvin, R. (2014). *Thecircle of security intervention: enhancing attachment in early parent-child relationships.* New York, NY: Guilford Press.

Resolução nº 466 de 12 de dezembro de 2012. (2012). Aprova diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília, DF: Ministério da Saúde.

Rodríguez, C., Moreno-Núñez, A., Basilio, M., & Sosa, N. (2015). Ostensive gestures come first. Their role in the beginning of the shared reference. *Cognitive Development, Special Issue: Semiotic and Cognition in Human Development, 36*, 142-149.

Rossetti-Ferreira, M.C., Amorim, K.S.,Silva, A.P.S., & Carvalho, A. M. A. (2004). *Redes de significação e o estudo do desenvolvimento humano.* São Paulo, SP: Artmed.

Scorsi, L., & Lyra, M. C. D. P. (2012).O manhês e o desenvolvimento da comunicação adulto-bebê: uma revisão da literatura com uma proposta de análise microgenética das trocas mãe-bebê.*Interação em Psicologia, 16*(2), 293-305.

Seidl-de-Moura, M. L., Ribas, A. F. P., Seabra, K. C., Pessoa, L. F., Ribas Jr, R. C.,& Nogueira, S. E. (2004). Interações iniciais mãe-bebê. *Psicologia: Reflexão e Crítica, 17*(3), p. 295-302.

Smolka, A. L. B., Amorim, K. S., & Leite, S. A. S. (2016). Questões de desenvolvimento humano na perspectiva histórico-cultural: bebê, criança e adulto em foco. In A. L. B. Smolka & S. A. S. Leite (Orgs.), *Psicologia do desenvolvimento: teorias e práticas em diferentes contextos.* Campinas, SP: Mercado das Letras.

Zeanah, C. H., Shauffer, C., & Dozier, M. (2011). Foster care for young children: why it must be developmentally informed. *Journal of the American Academy of Child and Adolescent Psychiatry, 50*(12), 1199-1201.

Yin, R. K. (2001) Estudo de caso: planejamento e métodos. In R. K. Yin. *Estudo de caso* (2 ed.). Porto Alegre, RS: Bookman.

Gabriella Garcia Moura: Adjunct Professor of the Department of Social Psychology and Development of the Federal University of Espírito Santo (UFES), working mainly on the following themes: child development, first year of life, family and institutional care. Orcid: https://orcid.org/0000-0002-0123-0372

Kátia de Souza Amorim: Professor of the Faculty of Philosophy, Sciences and Letters of Ribeirão Preto (USP), working in the area of Human Development Psychology, working mainly on the following topics: babies and young children, communication and signification, construction of bonds, development, children with and without special needs.Orcid: https://orcid.org/0000-0003-0544-6370