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The Social and Cultural Genesis of Collective Imagination During Infancy

Abstract

A cultural-historical conception of children's development foregrounds imagination as the key psychological function. Yet, few empirical studies have explored the genesis and motivating conditions for the development of imagination. This paper explores the development of imagination as an inter-psychological activity in infants' group settings and the early development of imagination as an intra-psychological function. Qualitative data were generated through an educational experiment that drew on a *Conceptual PlayWorld*: a collective model of practice for the development of play and imagination. Thirteen infants participated in the study. Visual methods were used for digital data collection and analysis. Diverse forms of imagining were mapped. Being in the imaginary situation as a play partner, the teacher introduced an advanced form of imagining into infants' environment and invited infants to join collective forms of imagining. Infants recognized and responded to the invitations coming from the teacher and their peers and developed a motive orientation to collective imagining. Infants' collective imagining with the adult was enriched and extended as well as developed in dialectic interrelations generating transformation of the group relations. The outcomes of the study advance theory about the early development of imagination and inform practice about the critical role of imagination in early years.

Keywords collective imagination; early years; child development; infancy; play-based settings

1. Introduction

Play is the highest form of development of the preschool child, and this development is revealed through how the preschool child creates imaginary situations and uses imagination to change the visual field in order to give it new meaning. In the notes prepared by Vygotsky (2005) for his lecture on play he scribed that before the preschool period, there is no imagination. Imagination is the developmental outcome of the early childhood period (under 3-year-olds). In most of the recent literature, imagination has taken centre stage in studies of children's play (e.g., Hakkarainen, Brèdikytè, Jakkula & Munter, 2013). But this has primarily

been in the contexts of preschool-aged children of 4- and 5-year-olds, where imagination is said to be established, or where studies show how play develops from an imaginary situation with explicit rules (role-play), to rules with an imaginary situation (games) for the school-age child (Vygotsky, 1966). But if there is no imagination before the preschool period, then how does it develop? The purpose of this paper is to present the findings of a study that sought to examine this under-researched area and to study the nature and development of imagination in infancy and toddlerhood. The central question that is the focus of this paper is: how do infants form and develop imagination in early childhood settings? This paper begins with a theoretical discussion of imagination as a psychological function, followed by what is known about the dialectical relations between imagination and reality. A brief theoretical overview of the educational experiment featured in this paper is given, alongside the study design. The findings are reported under four headings to illustrate the nature and development of collective imagining. Finally, like Lindqvist (1995), we argue that “imagination is both a prerequisite for and a result of play action [...]. Play is a meeting between the internal and external, and emotion colours the interpretation to the same extent as the external reality” (p. 55). In this study, we go one step further, by showing the genesis and development of imagination as a relation between inter-psychological and intra-psychological functioning for the infancy period as collective imagining. These concepts nuance our understanding of the early childhood period of infancy and toddlerhood where the development of imagination begins.

2. Imagination as a Process and as a Higher Mental Function in Early Years

As Gajdamaschko (2006) points out, despite the growing interest in recent years in Vygotsky's theoretical work, imagination as conceptualized in his writings, remains a field of research that has not been sufficiently studied. In his writings, Vygotsky (1987, 1999, 2004) underscored imagination as a critical concept, dialectically interrelated with learning and development. In his text *“Imagination and Creativity in Childhood”* he noted:

“In this sense imagination takes on a very important function in human behavior and human development. It becomes the means by which a person's experience is broadened, because he [sic] can imagine what he has not seen, can conceptualize something from another person's narration and description of what he himself has never directly experienced. He is not limited to the narrow circle and narrow boundaries of his own experience but can venture far beyond these boundaries,

assimilating, with the help of his imagination someone else's historical or social experience. In this form, imagination is a completely essential condition for almost all human mental activity." (Vygotsky, 2004, p. 17).

Vygotsky (1998) has argued that "imagination is a transforming, creative activity directed from the concrete toward a new concrete. The movement itself from a given concrete toward a created concrete, the feasibility of creative construction is possible only with the help of abstraction" (Vygotsky, 1998, p. 163). One possible way of offering abstraction to children early-on could be through mastering the use of concept. Vygotsky's writings as presented in Volume 5 of the collected works hints that Vygotsky was working towards a periodisation of imagination as a higher mental function. It is evident as he explicated that "the imagination of the adolescent is different from the play of the child in that it breaks the connection with real objects.... Utilizing abstract concepts, the adolescent's imagination is more varied than the child's" (p. 161).

Based on Vygotsky's conceptualization, a set of concrete features of imagination is highlighted:

- a. *the social character of imagination*; beyond an intra-psychological process, imagination is also understood as an inter-psychological process dialectically interrelated with an individual's social and cultural environment,
- b. *the transformative character of imagination*; as Vygotsky argued, imagination "has consequences in reality" (2004, pp. 13); it is an important intellectual tool that can transform the personal and the collective experience (Zittoun & Cerchia, 2013; Zittoun, & Gillespie, 2016); in this sense, imagination is dialectically related with the concept of creativity,
- c. *the historical character of imagination*; imagination is not a static mental ability but an ongoing process, a higher mental function, that is developed over time, and
- d. *the holistic character of imagination*; whole aspects of the child's development, that is intellect, affect, and act, are engaged and developed through imaginary situations.

From the above cultural-historical standpoint, imagination needs to be conceptualized as a critical and dynamic aspect of a child's development. Accordingly, collective imagining is considered essential for a child's learning and social activity in educational settings. Collective imagining is conceptualized and defined here as the essence of young children being aware of, joining in, participating in, and contributing to the same imaginary situation. Imagining as a

collective allows children to share an abstract intellectual space. Within this space children create and share new meanings and understandings, externalize and negotiate intentions to shape and reshape the imaginary situation, develop and converge motives to stay in line with the shared imaginary situation as well as follow commonly accepted rules and roles to maintain and elaborate the imaginary situation. Collective imagining is considered an advanced, more developed, and matured form of imagining. Thus, it suggests an ideal form of imagination for infants. Taken together, the above conceptualizations shape the way young children are studied through empirical research in the field as well as the way imagination is understood and supported in everyday educational reality.

The development of imagination in the early years is dialectically interrelated to the leading activity of play. In Vygotsky's writings (1966; 2004), play and imagination are understood in a unity. Vygotsky conceptualized play as the experience of an imaginary situation that a child creates and lives through. Children's imaginary play stretches, transforms, and expands the child's reality in multiple ways. As argued elsewhere (Fragkiadaki, Fleer, & Rai, 2020), during imaginary play children: a) change the meaning of the objects and give new characteristics and attributes to the surrounding objects (e.g., a blanket can be used as a cape), b) change the meaning of the space and give imaginary dimensions, characteristics and spatial relations to the surrounding space (e.g., the space under a table can act as a cave), c) change the meaning of the time by experiencing again the past (e.g., repeating again and again an imaginary situation), by living through the present (e.g., acting as if they are several characters), and by imagining the future (e.g., pretending that they are grown-up), d) use diverse forms of language, e) use diverse types of tools, signs, and artifacts such as gestures, body positioning, technological equipment, f) use their everyday knowledge and understandings to enrich their play and make connections with their everyday reality, and g) share these imaginary situations with peers and adults.

The fundamental and critical role of imagination in young children's play has been widely highlighted in the literature (Fleer, 2014; Kravtsov & Kravtsova, 2010; Lindqvist, 1995; Schousboe & Winther-Lindqvist, 2013). Most of these studies have focused on the early childhood cultural are period. However, cultural-historical empirical research about infants' imaginary play has not been undertaken yet. Only a few studies have been undertaken to explore the genesis and motivating conditions for the development of imagination through play in the early years (Fleer, Fragkiadaki & Rai, 2020a; Fragkiadaki, Fleer & Rai, in press). What we have learned from these studies is that imaginary play can act as a starting point in teaching and learning with infants in formal settings leading to dynamic learning experiences and

providing access to abstract and symbolic conceptualizations. These outcomes come in line with the broader literature about the wide range of intellectual and social capabilities of infants (Brownwell, Ramani and Zerwas, 2006; Davis and Degotardi 2015; Degotardi and Pearson, 2014; Gopnik, Meltzoff & Kuhl, 1999; Li, Quinones and Ridgway, 2017). Therefore, few empirical and theoretical insights exist into imagination as a key psychological function of the infant and its development in play-based settings. The present study seeks to explore the nature and development of imagination in infancy. Thus, the central question of the study is shaped as follows: How do infants form and develop imagination in early childhood play-based settings?

3. Methodological Framework and Study Design

The methodological framework of the study reported in this paper draws from four major sources from within cultural-historical theory (Aidarova, 1982; Davydov, 1990; Hedegaard, 2008; Lindqvist, 1995) which together have inspired our educational experiment. In order to study the nature of collective imagining of infants and toddlers, our study design needed to capture over time the development of imagination within the same activity setting (Hedegaard, 2008). The activity setting of a *Conceptual PlayWorld* (Fleer, 2017, 2018, 2019a) as a collective model of practice for the development of imagination within play-based settings was implemented. Using the metaphor of skipping (Vygotsky, 1997), the implementation of a *Conceptual PlayWorld* allowed us to determine the nature of imagining of infants and look for micro-genetic signs of development within the *Conceptual PlayWorld* to address the research question. As discussed above, imagination as a new psychological formation (Vygotsky, 1998) is developing within the toddler period and is realised in role-play during the preschool period (Vygotsky, 2005). Consequently, we drew upon the method of an educational experiment to guide our study of imagination through creating imaginary play conditions for infants and toddlers within a *Conceptual PlayWorld*.

An educational experiment is a collaboration between researchers and teachers (Hedegaard, 2008) where “The educational experiment can be said to represent a form of action or intervention research, where everyday situations are systematically intervened and an educational perspective is combined with a research perspective” (p. 67). The educational experiment is not a problem of practice (Hedegaard, 2008), but rather it is a theoretical endeavour within a practice context. In our study we were interested in how imagination develops within a *Conceptual PlayWorld* and this meant bringing researchers and teachers

together to create new conditions for children's development. Different to Hedegaard (2008), our orientation was not on the double move in relation to the core concepts, but rather our focus was on how the conditions support infants and teachers to imagine together in childcare settings.

3.1 Conceptual PlayWorld as an Educational Experiment

The *Conceptual PlayWorld* formed the basis of the educational experiment. This model of practice was designed for play-based settings to support the teaching of concepts in early childhood settings (Fleer, 2017, 2018, 2019a; Fleer, Fragkiadaki & Rai, 2020b, c). There are five key pedagogical characteristics of a *Conceptual PlayWorld*. The first is selecting a story that engages children through emotionally charged scenarios. The selected story needs to be dramatic with emerging tensions and crises in the plot. What is also important is the story to be relevant to the children's cultural age, their interests, and experiences as well as to be enjoyable for both the children and the teachers. The second characteristic is planning a space that becomes the imaginary *Conceptual PlayWorld* of the chosen story. The children along with the teachers design a space, indoors or/and outdoors where imaginary play is developed. The physical space is not stable. It is transformed, extended, and expanded through children's play. The third characteristic is planning the entry and exit into that space - children and adults decide upon the role they will take in the role-play of the story. Being in role, children and the teacher are the characters of the imaginary situation. They enter and exit the imaginary play together. The fourth characteristic introduces a problem situation that needs a concept for solving the problem. At this point, children form and use concepts in order to provide answers to the problematic situations that emerge from the drama of the story and the characters are experiencing. Finally, planning by the teachers how they will support learning in the imaginary situation based on the pedagogical positioning they will take, such as being with the children investigating, or leading an inquiry, or asking children for help. The teacher joins the imaginary space and situation to support children in concept formation.

Within a *Conceptual PlayWorld* set up for infants and toddlers young children experience the drama of a story. They share the same imaginary situation with their peers and the teacher. The story becomes the starting point for joint explorations and diverse learning experiences. Searching for answers to the problem that emerge from the story infants reach conceptual understandings. In this study, the teacher used the *Conceptual PlayWorld* model for planning an imaginary situation of the children's book *'Possum in the House'* written by Kiersten Jensen and illustrated by Tony Oliver (Jensen, 1989). The story plot is based on an indigenous Australian mammal of a possum who has entered a child's house and creates havoc. The

possum runs all over the house hiding in different rooms and making mischiefs such as crunching cornflakes in the cupboard, ripping clothes in the laundry, and rustling pages in the study room till getting asleep in the child's bed. As part of the educational experiment, a problem situation was introduced by the teacher. The problem situation was based on the enquire to find the possum, gently catch it, and relocate it with safety from the house providing an alternative safe habitat for it. Through the story, children experienced the drama of the naughty possum going all over the house, felt empathy and started caring for it, and faced the challenge to find a way to relocate it out of the house. In order to address this challenge, children had to learn more about how a possum looks like (the concept of the external biological characteristics of the possum such as unique feet and footprints, a furry tale), what it likes to eat (the concept of basic biological needs), and where a possum usually leaves (the concept of habitat).

3.2 Participants

In the overall Programmatic Study, a cohort of one hundred and thirty (130) children from three childcare centres were recruited. The centres were located in the southern region of Victoria, Australia. In this paper, data were drawn from one (1) room within one of the centres. A total of thirteen (13) infants (8 girls and 5 boys) and one (1) teacher, named Mei, are reported in this paper. All participants were primarily of European heritage background, with a small number of infants and toddlers from other culturally diverse backgrounds (e.g., Chinese heritage). The infants and toddlers in the study were aged between 0.5 (6 months) and 2.3 years (2 years and 3 months). All children were familiar with the teacher, their peers as well as the educational routines in the early childhood center. Although not verbal, infants were able to express themselves and communicate to some extent through babbling, gestures, and body positioning. Infants had also developed basic motor skills such as walking that allowed them to explore the surroundings based on their pace and intentions. No children with special needs were reported by the teacher. The teacher had a Diploma qualification as well as 5 to 10 years of experience teaching in early childhood settings. Mei is of Chinese heritage background and also an Australian citizen. All participants are named in the paper with pseudonyms. Parents informed consent was given. Although other teachers supported the program on a part time or casual basis, they are not discussed in this paper.

3.3 Data Generation

Data collection involved both digital video observations and field notes. One camera was mounted on a tripod and placed in the main area of the infant room. This camera captured the room practices and main activities the teachers and infants and toddlers. A second hand-held camera was used to follow the infants more closely as they entered into the activity setting of the *Conceptual PlayWorld*. A total of 17.8 hours of digital video observations were collected over a period of three weeks. Field notes were prepared at the conclusion of each data collection visit. A total of 5.3 hours of the professional development sessions in the centre as a whole, and an additional 3.9 hours of planning and interview sessions with the teachers reported in this paper were collected. The educators and researchers planned the content of the educational experiment as a *Conceptual PlayWorld*. The planning and the professional development associated with implementing a *Conceptual PlayWorld* were digitally recorded prior and during implementation of the teaching program. Regular support in the field was also provided, culminating in a follow-up professional learning session to consolidate understandings and give directions for the continued development of the educational experiment. Some sessions were planned by teachers without the researchers. Most of these sessions were digitally recorded.

3.4 The concepts for analysis

Following the principles of *dialectics* (Dafermos, 2018), the study seeks to dialectically interrelate a sub-set of concepts from the overall system of concepts from cultural-historical theory and use them for analysis of infants' collective imagination. Luria (1981) one of the collaborators of Vygotsky argued:

“in order to explain the highly complex forms of human consciousness one must go beyond the human organism. One must seek the origins of conscious activity. [...] in the external processes of social life, in the social and historical forms of human existence” (p. 25).

The analytic conclusion of this would be that ‘intra-mental’ functioning is emerging from participation in social processes. One of the central Vygotskian insights is the social genesis of higher mental functioning. As Vygotsky has argued “genetically, social relations, real relations of people, stand behind all the higher functions and their relations” (Vygotsky, 1997, p. 106). Emphasising this social genesis of higher mental functions, Vygotsky suggested that social

foundations of higher mental functions are best reflected in the use of the sign. The sign he elaborated “is initially a means of socializing and only later becomes a means of behaviour of the individual, then it is absolutely clear that cultural development is based on the use of signs and that including them in the whole system of behaviour occurred initially in a social, external form” (Vygotsky, 1997, p. 103).

Processes of imitation were considered as one of the “basic paths of cultural development of the child” (Vygotsky, 1997, p. 95). Imitation in Vygotsky’s system of concept is not considered as the mechanical transfer to explain behaviour. Challenging a rather simplistic understanding of the behaviourist position on imitation, he recognized “imitation as a substantial factor in the development of higher forms of human behavior” (p. 96). A coherent understanding of the concept is offered in Volume 5 of Collected works where Vygotsky has argued that:

“we do not have in mind mechanical, automatic, thoughtless imitation but sensible imitation based on understanding the imitative carrying out of some intellectual operation. In this respect, on the one hand, we restrict the meaning of the term, using it only in the sphere of operations that are more or less directly connected with mental activity of the child.” (Vygotsky, 1998, p. 202).

This idea of intellectual imitation extends Vygotsky’s basic argument about the social foundation of mind and learning as a collective activity. The term ‘collective’ in this study emphasises that all higher mental functions like imagination, problem solving, logical thinking are first socially shared in their nature. This challenges a neat categorisation of individual and collective (or socially shared). Following this sociogenesis argument with respect to development of mental functioning, we “must study not individual development of the child in the group, but the transformation of group relations into individual, personal characteristics of the child” (Vygotsky, 1997, p. 271).

Vygotsky (1994) elucidated that “the environment’s role in the development of higher specifically human characteristics and forms of activity is as a source of development, i.e. that it is just this interaction with the environment which becomes the source of these features in children” (Vygotsky, 1994, p. 351). Highlighting the dialectical interactions between the ideal and the primary form from the very beginning of a child’s life, Vygotsky (1994) argued that “the very end of development, somehow influences the very first steps in this development” (p. 348). This, he further explains, is very peculiar to child development. Environment thus is not

a context but the “source of development” (p. 349). This would then also mean that “if the appropriate ideal form is not present in the environment, then in the child the corresponding activity, characteristics or trait will fail to develop” (p. 350). The ideal form as Vygotsky argued is present in the child’s social situation which interacts with the child’s real form and through these dialectics emerge “a certain form of activity which then becomes a child’s internal asset, his [sic] property and a function of his personality” (p. 353). Thus, it also highlights the dialectical relationship between inter-psychological and intra-psychological functioning.

We consider this neat categorisation of internal (mind) and external (social) has been one of the big impediments in studying higher mental functioning like imagination. Furthermore, it is worth mentioning that intra-psychological functioning is not a mere reflection of the social world. As Vygotsky mentioned in the context of children’s play that:

“a child’s play is not simply a reproduction of what he [sic] has experienced, but a creative reworking of the impressions he has acquired. He combines them and uses them to construct a new reality, one that conforms to his own needs and desires” (Vygotsky, 2004, p. 11-12).

Intra-psychological functioning thus has an important role in developmental of higher mental functions. While studying an idea like collective imagination, as Vygotsky (1997) argues, instead of conceptualising imagination as innate, natural or individual, we need to study:

“higher mental functions and complex cultural forms of behaviour with all their specific features of functioning and structure, with all the uniqueness of the genetic path from inception to full maturing or death, with all the specific laws to which they are subject usually remain outside of the field of vision of the researcher” (Vygotsky, 1997, p. 2).

Three different levels of data analysis, as formulated by the holistic approach (Hedegaard & Fler, 2008; Hedegaard, 2012) were followed. The first level of analysis was common sense interpretation based on the researchers’ comments on infants’ and teachers’ experience. The second level of analysis involved situated practice interpretation based on the emergence of conceptual links and correlations between the results obtained from the analysis at the first level. The third level of analysis was the interpretation in a thematic level based on the use of the theoretical concept of the interrelation between inter and intra-psychological functioning

as well as the concept of the interrelation between the real and ideal forms of development as analytical tools. At this level, a theoretical analysis was carried out in order to find a conceptual pattern that explains the early development of collective imagination within the new practice tradition of the *Conceptual PlayWorld* in early childhood settings. As described above, the concepts of the dialectical interrelation between inter-psychological and intra-psychological functioning, as well as between ideal and real form and the concept of imitation were selected to illustrate the interpretation of the data in this paper. The methodological choice of selecting this set of concepts allowed us to study the nature and the characteristics of the early genesis of collective imagination in early childhood settings. The concepts gave an insight into how infants form and develop imagination during everyday educational reality. The social and cultural character of collective imagining become evident and was efficiently unpacked within this conceptual framework.

4. Findings

The overall findings revealed the inter and intra- psychological functioning of imagining in infants' everyday educational reality. The study found that a) being in the imaginary situation as a play partner, teachers introduced an advanced form of imagining to infants' environment and invited infants to join collective forms of imagining, b) infants recognized and responded to the invitations for collective imagining coming from the teachers and their peers through imitation and the use of diverse signs, c) infants developed a motive orientation to the collective imagining through experiencing the same imaginary situation within the activity settings, and d) infants' collective imagining with the adult was enriched and extended as well as was developed in dialectic interrelation with the transformation of the group relations within the activity settings. To illustrate the findings of the study, four (4) indicative case examples of diverse forms of infants' imagining within the *Conceptual PlayWorld* are presented.

Vignette 1: The teacher introducing collective imagining



Figure 1. The teacher is introducing collective imagining

In vignette 1, Mei, the teacher, sets up the *Conceptual PlayWorld* space while the infants are having their afternoon nap. The room is set up with possum footprints made of paper. The footprints form a pathway ending at a tent set as a possum nest. A set of possum puppets (Mummy Possum, Aunty Possum, and Baby Possum) is placed in the tent. Waking up from her nap, Anna immediately spots the possum prints and follows them one by one to the tent to find the possum puppets. Mei follows Anna moving on her knees and arms as being a possum. Mei encourages Anna's searching "*Where do they go (the footprints)? Oh, you find more! Well-done!*". Anna goes into the tent pointing at the footprints. Mei gets Mummy Possum out. She places the puppet on the footprint comparing the foot of the possum to the footprints on the ground. Being in the role of the Mummy Possum she says "*Does it look like my footprints? If I put my foot next to it does it look the same? Screech, screech!*". Anna is carefully watching Mei's imaginary play. She points to each footprint and Mei responds to her by stepping on the possum, making the possum noises (e.g., "*Screech screech!*"), pretending that the possum smells something, speaking to Anna as being a possum as she moves the puppet (e.g., "*Hi, Anna!*", "*Are we going back? This way?*"). Anna brings a horse toy from a table nearby and places it on the possum footprints. Mei encourages her to see the differences between the two animals' feet. Mei gets out from the tent the smaller possum (Aunty Possum) and invites Anna into the imaginary play by saying "*You can hold her if you want to!*", "*Would you like to take*

her for a walk?”. Anna holds the Aunty Possum. Then, she takes the sensory bags that Mei uses when reading the “*Possum in the house*” story to make the sounds that the possum does when walking in the house. Mei encourages Anna to “*Rip, rip!*” the sensory bags to hear the sound. Anna watches Mei ripping the bags and listens to the sound. Megan, a younger infant, joins the *Conceptual PlayWorld* and tries to chew one of the footprints. Anna goes into the tent again and finds the possum book and takes the possum puppets to Mei as if requesting from her to read the story and handle the puppets. Mei continues pretending to be a possum by saying “*Oh, this smells like my footprint!*”. Mei encourages Anna to read the book together “*Do you want to read it? We always read it!*” and continues talking with a “possum voice”: “*This is a book about me!*”. Anna brings the other possum puppet, too, and turns the book pages. Then, she returns to find the possum footprints around the room. Mei gives Anna one puppet and she takes the other. Mei starts placing her puppet on the footprints and Anna follows her putting her puppet on the footprints, too (Figure 1). Together they move as one being possums. Mei directs Anna and Megan to the kitchen play corner [which is what happens in the story]. She handles the puppet and makes sounds with the objects at the play kitchen relating the sounds to the story such as the sound the possum made in the kitchen (e.g., “*Clattered, clattered the saucepans!*”). Megan opens the pantry to find the cornflakes. Anna uses the saucepans to make the sound too. Anna and Megan stay engaged in the kitchen corner for a while. Mei suggests continuing to follow the footprints to find the baby possum. Anna and Megan collect the footprints and give them to Mei and they both begin to make sounds with the cornflake sensory bags. The infants stay close to each other and Mei having stable eye contact. They smile at each other and Anna babbles towards Mei. Anna gives the possum book back to Mei and continually taps the cover. Mei begins reading the story to the two infants.

Vignette 1 showcases how the teacher can initially lead collective imagining in the *Conceptual PlayWorld*. What is important here is the way the teacher introduces in the infants’ environment the *ideal form* of collective imagination and how this *ideal form* leads infants’ *real form* of imagination. Being in the role of a possum, Mei is showing the ideal form of imagining being a possum and makes this form present in the environment for the infants from the very beginning. Mei uses a wide set of means that lead infants to experiencing an imaginary situation. For example, she changes the tone of her voice, uses vibrant body language and dramatic body positioning as well as several props, and importantly, she consistently crafts a narrative around a new way of conceptualizing actual actions and concrete objects and materials through imagination. These actions could be seen when Mei introduces imaginary processes such as searching for the Baby Possum, imaginary spaces such as the Possum kitchen,

imaginary sounds such as “Screech, screech!” or when crawling takes the new meaning of moving like a possum and the tent takes the new meaning of the possums’ nest. The overall means that are used are indicative of a matured and advanced form of imagining. That is, the *ideal form* of imagination is present in the environment for the infants.

Then, Mei orients infants towards collective imagining and steps them through the imaginary situation. She consistently stimulates them, responds to their initiatives, and extends their imaginary play. This is evident when Mei acknowledges each time and responds through diverse ways to Anna pointing to the footprints such as “Does it look like my footprints?” and when she encourages Anna to compare the horse's feet with the possum footprints. This is suggestive of the way Mei goes beyond the storyline of the book and opens up a broader abstract space of collective imagining for the infants. It seems that the infants recognize that Mei is introducing a new practice within the imaginary play and together they develop an understanding of the dynamic of this practice. They both respond and accept the teacher's invitation. Their responsiveness could be seen when Anna joins Mei and together they move as possums, when Megan is searching for the cornflakes package to create sounds as the possum does in the story, or when both infants search for the possum footprints. The overall experience is structured like a back-and-forth interaction between the teacher and the infants within the imaginary situation. This suggests that the ideal form of imagining that Mei introduces is dialectically interrelated with the real form, that is the present form, of infants’ imagining within the Conceptual PlayWorld. What is also important here is that the teacher is following a two-positional perspective (Fleer, 2019) by shifting roles and being alternately inside (as a possum) and outside (as a teacher) the imaginary situation during the activity settings. This dual positioning allows the teacher to stimulate infants’ imagining and at the same time to keep the storyline going as well as to support infants’ learning through the imaginary play.

Vignette 2: The infant leading the collective imagining



Figure 2. The infant leading the collective imagining

Being in the same imaginary situation (Vignette 1), Mei asks Anna if she wants to help her prepare a picnic for the possum. Anna is stimulated by Mei's suggestions. She takes the lead and starts shaping and expanding the imaginary situation. She picks up the possum puppets from the ground and places them next to Mei to invite her within the imaginary play with the puppets. Anna takes the possum puppet and puts her hand in it. She then moves the puppet and tries to stimulate Mei by touching her with the puppet while Mei is talking to Olin, another infant. Mei follows Anna and puts her hand in her puppet too. Mei begins talking as though she is a possum "*Screech, screech! I am glad you had a good sleep!*". Anna makes her puppet meet with Mei's puppet. They both make their puppets look like they are interacting with each other. Anna stays close to Mei. She faces her and has stable eye contact with her. She keeps smiling at her as they are handling the puppets. Mei suggests finding some food to feed the possum. Together, Anna and Mei, explore a range of pretend foods for the possum to eat such as oranges and watermelon. Mei is handling the Baby Possum puppet. Anna takes some food from a basket and starts feeding the possum (Figure 2). Mei responds as though she is a possum "*Oh, yummy, juicy!*". Anna picks up the Mummy Possum puppet and starts feeding her too. Anna keeps choosing diverse fruit from the basket and feeding the possum for a while. Mei shows Anna how a possum holds food and mentions that the possums do not like some food such as garlic because of the strong smell. Anna continues feeding the possum. This is extended

to other toy animals in the room that Anna searches, collects, and brings to Mei, such as cows, ducks, sheep. Mei mentions “*This is going to be a big picnic!*”. Anna and Mei are placing all the animals, including the possums, together and start feeding them. Megan and Olin also join the imaginary picnic. Anna, Megan, Olin, and Mei feed animals with different kinds of pretend food.

Vignette 2 illustrates how the infant can lead the imagining in the *Conceptual PlayWorld*. What is important here is the initiatives that Anna took to shape and expand the imaginary play. This could be seen when Anna puts her hand in the puppet and starts moving it like a possum, when she stimulates Mei to follow her within the imaginary play with the puppets, or when she brings in more animal toys to expand the imaginary play and go beyond the storyline of the book. In this example, Anna and Mei interact with each other in the imaginary situation. Anna uses the puppet as a means to engage with Mei in their imaginary play. Anna also uses non-verbal actions such as gesturing through the puppet to share with Mei her aspirations for the imaginary play such as feeding the Baby Possum. Mei notices and acknowledges physically as well as verbally Anna’s intentions and actions within the imaginary play such as her will to feed the possum. The overall interaction is led by Anna. In this vignette, Anna steps Mei through the *Conceptual PlayWorld* in the way Mei stepped her in the previous vignette (Vignette 1). This example is also indicative of Anna and Mei experiencing imagining as a collective practice.

Vignette 3: Joint imagining in the collective imaginary situation



Figure 3. Joint imagining in the collective imaginary situation

During the same imaginary situation, Mei, Olin, and Megan are engaged in the kitchen corner. Mei asks the three infants if they would like to make something for the possum to eat, suggesting preparing a picnic for the possum. In this way, Mei orients the infants to the imaginary situation (e.g., *“They love fruits! If you find some apple, they would love it very, very much!”*). Olin responds to Mei’s suggestion and begins looking for some play food from the play food set to feed the possum. He picks up a slice of play bread, directs it to the mouth of the possum puppet, and pretends to feed it. As he feeds the possum he makes a sound like gnawing (e.g., *“Um, um, um, um...”*). Being in role, Mei responds to Olin’s initiative by putting her hand into the puppet and moving the puppet while she makes a sound to show the possum’s enjoyment of the food (e.g., *“Miam, miam, miam!”*). Megan laughs and she comes closer to the puppet (Figure 3). She grabs the puppet and tries to put the puppet in her mouth. Mei suggests to Megan, instead of “eating” the possum, to prepare something for it to eat. In the meanwhile, Olin pretends to eat some play food himself and then throws it to the possum to eat it. He then takes a play plate and puts it in the play toaster. Mei asks what else could they prepare for the possum to eat. Olin takes the possum puppet close to him as Megan engages in the play kitchen, too. Megan and Olin stand side by side in the play kitchen preparing some food for the possum. Olin holds and moves the possum saying repetitively *“Um, um, um...”*. He holds the possum puppet upside down putting the possum’s mouth onto the kitchen plates

as if eating. Megan shows Mei the possum tail and keeps holding the Baby possum puppet. Megan laughs with excitement shaking the possum. Olin continues to look through the kitchen cupboards. Mei starts reading a book Anna brought to her.

Vignette 3 illustrates how joint imaging is developed within the collective imaginary situation of the *Conceptual PlayWorld*. As in the above vignette (Vignette 1), the teacher invites the two infants into the imaginary situation and the two infants recognize and respond to this invitation. What is important here is the way the two infants are orienting themselves to the collective activity by sharing the same imaginary situation of preparing some food to feed the possums. This could be seen when Megan is joining the activity after watching the possum puppet enjoying the food Olin made for her or by the way that the two infants are sharing the play kitchen as well as the puppets to prepare the picnic. This is also evident in the way Olin uses the play food to engage with Mei as he suggests a couple of options for feeding the possum. What is also important is the way that the two infants are taking forward the teacher's invitation. For example, Olin begins a meal preparation routine (e.g., toasting), he is gesturing (e.g., *as if calling the possum*), he uses diverse sounds (e.g., "Um, um, um..."); in line with Olin, Megan stands in the play kitchen, she holds the puppet, she moves the puppet around the kitchen and shares it with Mei. This suggests that following a collective imaginary practice, the two infants and the teacher are aware of and share, shape, and contribute to the same imaginary situation of preparing a picnic for the possum.

Vignette 4: Collective imagining in the group activity setting



Figure 4. Collective imagining in group settings

A couple of days after the above set of vignettes (Vignettes 1, 2, & 3), infants are still engaged with the *“Possum in the House” Conceptual PlayWorld*. Mei reads once more the story to the four infants, Anna, Amy, Sarah, and Dan. The infants are listening to the story as they are holding the puppets, pointing to images in the book, and turning the pages. Mei introduces a set of artificial furry possum tails and asks the infants if they want to put them on and pretend to be possums in the house. Mei enters the imaginary situation putting on a tail herself (e.g., *“We have tails now!”*). She invites the infants to enter by tickling them with her tail. She then introduces to the infants the problem scenario of finding the possum (e.g., *“Do you want to come and help Mummy Possum find her baby?”*). Being in the role, Mei stimulates the infants by moving the Mummy Possum puppet and talking ‘as if’ she is the Mummy Possum (e.g., *“Screech, screech! I’ve lost my baby somewhere! Come!”*). She suggests following the footprints to try to find the possum. The infants follow Mei. Being in role, Mei is giving them the cornflakes packages, the saucepan, the sensory bags as they pretend to visit the rooms of the house as possums (as occurs in the story). The infants together with Mei follow the footprints. They stay close together for a while. They are collectively engaged with the materials and objects Mei introduced. They start making different sounds together using diverse materials. Mei then makes a sound like snoring. Being in the role, Mei asks the infants *“Who is sleeping in there?”*. She leads the infants to a soft climbing construction which is

usually placed at the center of the classroom where she has hidden the Baby Possum. The infants come closer to the construction to have a look. Anna takes out the Baby Possum. Mei says “Hi!” to Anna as though she is a possum. Anna now tries to move her possum tail to say “Hi!”. Mei encourages her to do so (e.g., “*Shake your tail possum, Anna!*”). Amy and Sarah join Anna and Mei. They sit down together and continue producing sounds using the materials and objects. Mei starts a peek-a-boo play at the soft construction using the possum puppets. The four infants join her trying to catch the possum. They move together through, on, and around the construction (Figure 4). The infants appear to be oriented to each other and to the imaginary situation. Amy and Sarah continue making sounds with the objects. Anna searches for more footprints. Amy plays with the possum puppets at the side of the construction. They all continue being engaged with the construction, the objects, and the materials for a while, having a collective focus on exploring diverse aspects of the imaginary situation.

Vignette 5 showcases how collective imagining is developed within the *Conceptual PlayWorld*. The way that the infants come together and share the abstract intellectual space and the concrete material environment of the imaginary situation is illustrated. What is important here is that the infants join, contribute, and shape the experience collectively. That could be seen from a wide variety of indicators such as the physical proximity to each other, the eye contact, the joint attention, interest and enthusiasm, the attempts of verbalization, the comfortable way that the infants interact with each other and the teacher or the long engagement as a group. These are evidence of infants being aware of their joint participation in the imaginary situation (e.g., *Anna tries to move her possum tail to say “Hi!”*) as well as of the shared meanings, understandings. This suggests that being together within the *Conceptual PlayWorld*, a collective form of imagining is developed between the infants as well as between the infants and the teacher.

In the above four vignettes it was shown how the emergence of collective imagining forms through diverse ways of imagining within the *Conceptual PlayWorld* practice tradition.

5. Discussion

The study reported in this paper has focused on the diverse forms of imagining that is possible for infants, the qualities of these forms as well as how these forms lead to the development of collective imagining between the infants and between the infants and the teacher. The overall findings of the study have shown a set of key points about the nature of imagining during

infancy and the development of imagination in group settings. These key points are discussed in turn.

First, the teacher appeared to create the conditions for the dialectic interrelation between the *ideal* and the *real form* of infants' collective imagining. Collective imagining was firstly introduced in the infants' environment as an *ideal form* (Vignette 1). By introducing an *ideal form* of collective imagining the teacher invited infants into the imaginary situation and oriented them towards the collective imagining. What was also found was how staying consistently engaged with the imaginary situation as a play partner, the teacher kept the *ideal form* of the collective imagining present in the infants' environment across the activity settings. Oriented towards this *ideal form*, infants were stimulated to express and develop their early attempts of collective imagining, that is their *real form* of development. That comes in line with Vygotsky's (1994) conceptualization of the way the ideal form '*acts as a model for that which should be achieved at the end of the developmental period*' (p. 347). The consistent interactions between the teacher and the infants kept the *real and ideal form* of collective imagining in a dialectical interrelation within the *Conceptual PlayWorld*. The result of this interaction allowed infants to move through diverse forms of imagining such as the guided imagining, imagining led by the infant, joint imagining, and finally, the collective imagining. As the infants were shaping and developing their *real forms* of imagining, the teacher was stepping back providing the space and the support for the infants to take initiatives and to orient themselves towards more advanced forms of collective imagining.

Second, infants appeared to recognize and respond to the invitations to diverse forms of imagining coming from the teachers as well as from their peers. Observing the teacher's imaginary play, infants appeared to make sense of collective imagining as a cultural practice. This understanding seemed to orient infants to start forming group relations with the teacher and with their peers within the imaginary situation. This could be seen for example through the back-and-forth exchanges during the imagining between Anna and Mei (Vignette 2) or through the exchanges during the joint imagining between Megan and Olin (Vignette 3). Infants responded to the many invitations for imagining together. In order to join the imaginary situations, infants used imitation along with diverse signs. This could be seen when Anna started imitating Mei in the search of Baby Possum by using the puppet or when Olin pretended to eat some food while preparing lunch for the Baby Possum. Vygotsky (1997) had suggested that "*imitation is one of the basic paths of cultural development of the child*" (p. 95). The overall outcomes of the study are indicative of the way that infants use imitation as a key part of the cultural development of collective imagining. The use of a system of signs had been

critical in this process. The diverse signs such as language and gestures had led infants' imitation. It was through the signs that the teacher and the infants built a shared meaning for the imaginary situation. In line with Vygotsky's perspective (1997), the signs were used by the adults in this external level as a means of socializing and building a social relation. This could be seen for example through the way Mei pretended to be a possum using her body positioning, gesturing, and her embodiment of the overall experience and importantly, through making objective connections between signs and words. It was also through the signs that infants joined and shaped the imitation process. This was evident for example when Anna was collecting the footprints to find the possum (Vignette 1) or when she was pretending to feed the Baby Possum with play food along with Mei (Vignette 2). As Vygotsky argued (1997), the signs were used at this stage as a means of socializing. Infants appeared to use the signs as a means to interact with each other and the teacher and create group relations within the imaginary situation. At the same time, during the social interactions within their imaginary play, infants seemed to master these mediated processes that were semiotically charged (Wertsch & Stone, 1985). This allowed infants to enter, shape, and transform the collective imaginary situations in a way that was meaningful for them. In line with Vygotsky's (1978) conceptualization of the mediating role of tools and signs, the vignettes have shown how diverse signs and tools allowed the interrelation between the internal and the external forms of infants' imagination.

Third, infants develop a motive orientation to the collective by experiencing the imaginary situation within the group activity settings. That means that children's personal motives changed in relation to the institutional practices introduced by the teacher as well as to the motivating conditions created by the activity setting. Infants appeared to enter the activity setting in order to play with the possum puppets. Gradually, through their participation in *the Conceptual PlayWorld*, they oriented their intentions, actions, and their play towards the collective. This suggests that infants started developing new motives. This comes in line with Hedegaard's (2008, 2014) argument that a child's motive has to be seen as part of the social situation the child is experiencing and as a social relation. As also shown in previous research (Fragkiadaki, Fleer & Rai, work in progress), within the *Conceptual PlayWorld*, infants appeared to form group relations between each other and the teacher and a sense of the group was established. Infants were aware of, participating in and contributing to the reality or the activity setting in a way that reflected shared meanings and understandings, converging intentions and motives as well as commonly accepted rules and roles. This study goes one step further showing the development of imagination as an inter-psychological function of the group of infants through the new practice tradition of the *Conceptual PlayWorld*. What was learned

about the higher mental function of imagining is that before becoming an intra-psychological function of the child, it appears in the infant's social environment at an inter-psychological activity and thereby as a cultural and collective form of behaviour (Vygotsky, 1998).

Finally, it was shown that infants' imagining was developed in dialectic interrelation with the transformation of the group relations within the *Conceptual PlayWorld*. Infants took initiative and started developing more independent forms of imagining as the teacher stepped back. Initially, the teacher introduced the imaginary situation to the infants (Vignette 1). At this phase, the teacher appeared to guide and step the infants through the imaginary situation while the infants entered and joined the imaginary play. As the infants' imaginary play continued, the infants appeared to be able to participate in more advanced forms of imagining. In the second phase (Vignette 2), the infant's imaginary play showed evidence of autonomy as the infant led the imaginary situation. A joint imagining situation followed (Vignette 3) when the infants contributed together in the imaginary play and the teacher had a supportive but at the same time peripheral role. In the next phase, evidence of forms of infants' collective imagining was noted (Vignette 4) as the infants imagine together being possums and going for a possum search. Infants' collective imagining with the adult was enriched and extended. The transitions from one form of imagining to another mapped the emergent process of infants' collective imagining, transformed, and developed within the group activity settings. This transitioning course had been a result of the transformation of infants' social interactions and relations within the *Conceptual PlayWorld*.

6. Conclusions

The present study sought to explore the early development of collective imagination during infancy within the new practice tradition of a *Conceptual PlayWorld*. What was found is that a) being in the imaginary situation as a play partner, teachers introduced an advanced form of imagination into infants' environment and invited infants to join collective forms of imagining, b) infants recognized and responded to the invitations for collective imagining coming from the teacher and their peers through imitation and the use of diverse signs, c) infants developed a motive orientation to the collective imagining through experiencing the imaginary situation within the activity settings, and d) infants' collective imagining with the adult was enriched and extended as well as was developed in dialectic interrelation with the transformation of the group relations within the activity settings.

The findings of the study provided important evidence about what has been assumed but not yet researched and empirically documented in the field: the social and cultural genesis and development of collective imagination in the infant period. The study captured in motion an emerging collectiveness of imagining between infants and the teacher as well as between infants. It can be argued that imagination becomes present in infants' environment first as an ideal form through the adult at the inter-psychological level. In our study, we show how imagination develops as an intra-psychological function during the process of social relations between the teacher and the infants and later as occurring between infants - which together show the dialectical unit of inter- and intra-psychological function of imagination during the infancy period. The collectiveness became evident in the process of developing through complex forms of imagining such as guided imagining, imagining led by the infant, joint imagining, and then collective imagining. These understandings add to the literature providing new ways of thinking about the social and cultural nature of imagination and the process of its development. This new conceptualization addresses certain gaps in Vygotsky's (1998) periodization of the development of the higher mental function of imagination providing evidence that collective imagining is possible for infants, begins during infancy, and develops over time in social relations.

The overall outcomes of the study open a new space for theorizing the development of collective imagination in the early years. From this theoretical standpoint, an insight into the complexity and the dynamics that is critical for understanding a child's development of higher mental function is gained. The outcomes of the study also inform practice about the critical role of imagination in infancy. Introducing and reinforcing the early development of imagination within everyday educational reality in early childhood settings is critical given that it provides infants with a dynamic intellectual means to transform, extend, and expand their learning experiences. Imagining, collectively or independently, allows infants' thinking to go beyond actual actions, concrete objects, and "here and now" understandings and move towards an abstract intellectual space with unlimited learning opportunities and possibilities. From the early childhood teachers' perspective, pedagogical practices that support infants' imagination allow teachers to create amplified learning conditions for infants. At the same time, promoting infants' imagining, early childhood teachers advance the complexity in infants' play actions paving the way for the infants to make the most of these amplified conditions. However, further research is needed to understand the whole pathway of the development of collective imagination as infants grow up becoming toddlers and pre-schoolers. Our research continues

towards illustrating a longitudinal and a deeper understanding of the nature, the qualities, and the external and internal changes of imagining and collective imagination in early childhood.

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