# MEDIATION PRACTICES OF PARENTS AND OLDER SIBLINGS IN GUIDING TODDLERS' TOUCHSCREEN TECHNOLOGY USE: AN ETHNOGRAPHIC CASE STUDY

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## ABSTRACT

The aim of this ethnographic case study was twofold. Firstly, we aimed to find out which mediation strategies parents used to regulate the touchscreen technology use of their toddlers and how these strategies were embedded in the family's everyday life. Secondly, we aimed to study older siblings' influence and the mediation practices of toddlers' touchscreen use. This ethnographic case study was carried out from September 2015 to May 2016, during which time the touchscreen technology use and parental and older sibling mediation practices of two girls (21 and 54 months old) were explored. The data gathered consists of field notes and videos recorded with a smartphone and semi-structured interviews with parents and a 4-year-old child. Our results indicate that the parental mediation strategies were in accordance with their positive or negative expectations of media effects on children. As the mother was more concerned about excessive internet use and improper online content, she was mainly engaged in restrictive mediation; in contrast, the father was more relaxed, believed in the educational role of touchscreen technologies and was thus more likely to engage in active mediation. The older sibling influenced the younger one's practices both in terms of the content used and the times of use, but also served as a role model, a playmate, gatekeeper, consoler, trustee and «window» when mediating her younger sister's touchscreen use.

## KEYWORDS

Toddlers, touchscreens, parental mediation, mediation by siblings, family media patterns

## SOMMARIO

Questo studio di caso di taglio etnografico ha avuto un duplice obiettivo. In primo luogo ci siamo proposti di indagare quali strategie di mediazione i genitori usano per regolare l'uso delle tecnologie touchscreen da parte dei loro bambini e in che modo queste strategie si sono integrate nella vita quotidiana delle famiglie. In secondo luogo era nostro obiettivo studiare l'influenza dei fratelli maggiori e le pratiche di mediazione relative all'uso del touchscreen da parte dei più piccoli. Questo studio è stato realizzato tra Settembre 2015 e Maggio 2016, periodo durante il quale sono stati esplorati gli usi delle tecnologie touchscreen e le pratiche di mediazione genitoriale e dei fratelli maggiori rispetto a due bambine (21 e 54 mesi). I dati raccolti consistono in note di campo e videoregistrati con smartphone e interviste semistrutturate rivolte ai genitori e a un bambino di 4 anni. I nostri risultati indicano che le strategie di mediazione parentale erano coerenti con le aspettative positive o negative dei genitori rispetto agli effetti dei media sui bambini. Poiché la madre nutriva maggiori preoccupazioni sull'uso eccessivo di internet e di contenuti impropri online, era più incline a adottare approcci restrittivi; al contrario, il padre era più rilassato, credeva nel ruolo educativo delle tecnologie touchscreen ed era pertanto più propenso a fare proprie strategie di mediazione attive. Il fratello maggiore ha influenzato le pratiche delle sorelle minori in termini sia di contenuti fruiti che di tempi di fruizione, ma ha anche svolto un ruolo di modello, compagno di giochi, guardiano, consolatore, persona di fiducia e «finestra» quando mediava l'uso da parte delle sorelle più piccole delle tecnologie touchscreen.

## PAROLE CHIAVE

Bambini, touchscreen, mediazione parentale, mediazione da parte di fratelli/sorelli, modelli mediali della famiglia

# 1 Introduction

Recent findings (e.g. Barr, 2014; Marsh et al., 2015) on infants' and toddlers' engagement with digital technologies suggest that the use of touchscreen technologies amongst 0-3 year olds is quickly on the rise. During the last decade, tablets and smartphones have gone from being luxury devices to being ordinary components of everyday life. For instance, according to the Ofcom report (2014), 65 percent of three to four year olds in the UK live in households with tablets in the home, in comparison to 51 percent in 2013 (Ofcom, 2014). Recent studies reveal that by the first year of life many young children have already become regular and active digital media users (Barr, 2014; Marsh et al., 2015; Suoninen, 2013). Furthermore, the findings of Ahearne et al. (2016) suggest that by 24 months children have developed a wide array of skills allowing them to interact purposefully (e.g. swipe, unlock, look for features, and identify and use features) with touchscreen technologies.

Children's ability to learn from the screen has often been linked to the active participation of parents (Krcmar & Cingel, 2014; Lovato & Waxman, 2016; Sims & Colunga, 2013). The active role of parents has not gone unnoticed among scholars, many of whom (e.g. Kabali et al., 2015; Schlembach & Johnson, 2014) have noted that a rapid growth of touchscreen use by young children has an impact on family dynamics and communication patterns. For instance Kabali et al. (2015) have stressed the importance of studying children's engagement with touchscreens in natural settings, more specifically, in home environments, so as to gain a better understanding of the role of technology in shaping children's experiences at a young age.

The latter is also the reason why on many occasions (e.g. Lauricella, Wartella, & Rideout, 2015; Takeuchi, 2011) the ecological system theory of Bronfenbrenner (1979) and techo-microsystem theory of Johnson and Puplampu (2008) have been used as the theoretical basis when studying children's development affected by their social relationships and the world around them.

In the context of this article, we also proceed from the assumption that, through the different natures of their social relationships with children, parents and siblings play distinct roles in guiding young children's use of digital technologies. In fact, parental mediation strategies have been found to be crucial for ensuring positive impacts of technology on child development (Sims & Colunga, 2013); older siblings often have been viewed as media instructors and role models «in terms of the way they behave and in their content choices based on personal interests» (Vinter, 2013, p. 166).

Unlike a number of studies on parental mediation of young children's touchscreen use (Nevski & Siibak, 2016; Nikken & Schols, 2015; Mascheroni, 2014; Sims & Colunga, 2013), there is still a considerable gap in literature regarding the role of siblings as mediators of young children's use of digital technologies, despite the fact that the important role of siblings has been emphasised by vari-

ous scholars (Nikken & Schols, 2015; Vinter, 2012). In the current study, we aim to fill this gap in research and explore the combined effect of parents and older siblings as mediating agents of toddlers' touchscreen use. Furthermore, we will rely on the work of Kalmus (2012), who proposed four main roles — 1. gate-keepers (or filters), 2. guides or interpreters (or signposts), 3. «windows», and 4. consolers or trustees — that parents and older siblings can play when mediating young children's computer and internet use.

Considering that the majority of studies tackle young children's use of touch-screen technologies (Chaudron, 2015; Cristia & Seidl, 2015; Kabali et al., 2015; Marsh et al., 2015; Neumann, 2015; Rideout, 2013; Suoninen, 2013), as well as parents' beliefs and attitudes regarding the practice (Schlembach & Johnson, 2014; Vaala, 2014), through quantitative methods, and that there is a general lack of qualitative, especially ethnographic, studies on the topic (Agarwal, 2014; Geist, 2012; Thompson, 2016), we decided to carry out an ethnographic case-study to find out which mediation strategies parents employ to regulate the touchscreen technology use of their toddlers and how these strategies are embedded in the family's everyday life. In addition to parents, we also looked at the interaction between the children — two-year-old and four-year-old sisters — to explore how the older sister shaped the younger sister's experiences with touchscreen technology. Our analysis is based on field notes and videos recorded with a smartphone from September 2015 to May 2016, as well as semi-structured interviews with the parents and the four-year-old child.

## 2 | Theoretical Background: Ecological Systems Theory and the Techno-microsystem

Bronfenbrenner (1979) developed the ecological systems theory to explain how everything in a child and the child's environment affects how a child grows and develops. He divided the context of child development into five nested environmental systems (micro-, meso-, exo-, macro- and chronosystem), each of which contains the next smallest. Bronfenbrenner's contribution and importance to youth and Internet studies has been studied in detail by O'Neill (2015).

As ecological systems theory emerged prior to the Internet revolution, Johnson and Puplampu (2008, p. 178) proposed an extension to Brofenbrenner's theory by adding an ecological techno-subsystem, a dimension of the microsystem that «includes child interaction with both living (e.g. peers) and nonliving (e.g. hardware) elements of communication, information, and recreation technologies in immediate or direct environments» (figure 1). The techno-subsystem also mediates bidirectional interaction between the child and the microsystem. However, as the ecological techno-subsystem failed to provide precise descriptions of the mechanisms of influence, Johnson (2010) proposed to also include

a techno-microsystem that contained the bio-ecology of the child (i.e. cognitive, social, emotional and physical development). Thus, older siblings and parents as mediators should be viewed in the context of the child's techno-subsystem.
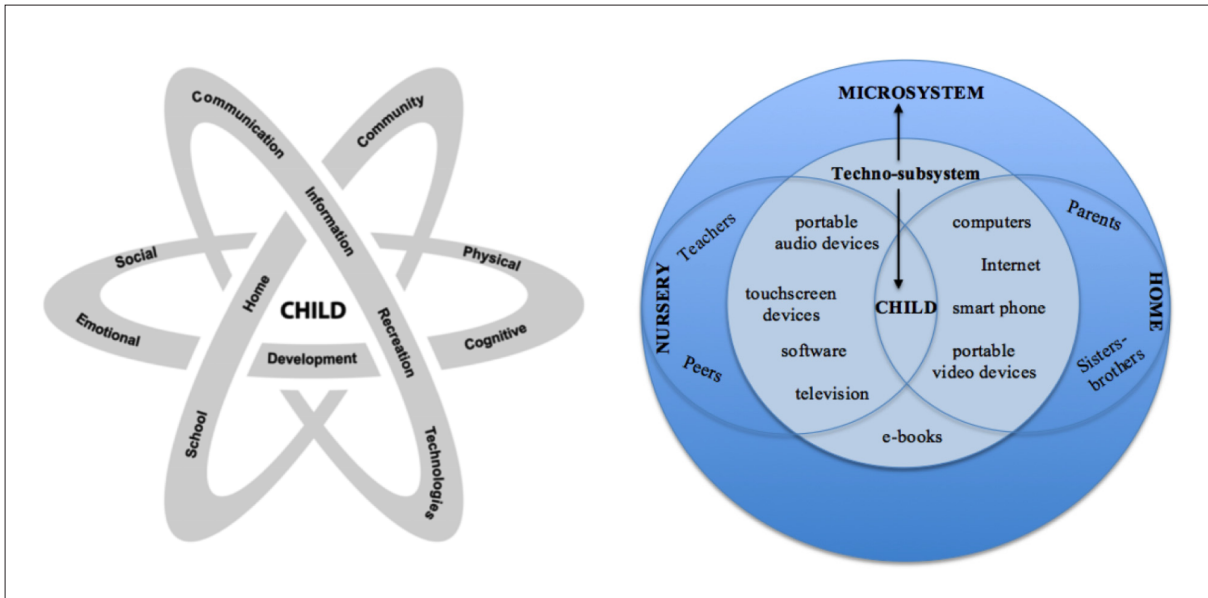


*Fig. 1* Techno-subsystem (an adaptation by the author on the basis of Bronfenbrenner, 1979; Johnson & Puplampu, 2008; Vinter, 2013) to Techo-microsystem (Johnson 2010).

## 2.1 *Parents and older siblings as important role models and mediating agents*

The extent to which children are made familiar with and influenced by touchscreen technologies is likely to depend on the attitudes of the parents. Parents' views of devices, especially their opinions regarding the educational potential of the technology, largely determines how children access and use these devices (Chiong & Shuler, 2010; Nikken & Schols, 2015; Schlembach & Johnson, 2014).

Research has shown that there are several reasons why parents allow their toddlers to access touchscreen technologies. First of all, empirical findings (Harkness et al., 2015; Plowman, McPake, & Stephen, 2010) suggest that parents are often guided by the desire to equip their children with the newest technological devices because they believe that these technologies will give their children opportunities that they themselves did not have and by doing so they become «good» or at least «good enough» parents. In short, parents' attitudes to technology are affected by parental ethno-theories, i.e. the cultural beliefs that parents hold regarding children, families, and themselves as parents (Plowman, McPake & Stephen, 2010). Secondly, parents justify the usage of digital technologies as having educational and entertainment purposes (Kabali, 2015; Marsh et al., 2015). Most importantly, many parents believe that the screen medium is an

important learning tool for children (Schlembach & Johnson, 2014) and that toddlers can learn from screen content (Vaala, 2014).

Parents also use technology as a tool for managing daily life and let their children often or sometimes play with mobile devices when they are making dinner or doing chores and want to keep their child busy (using screens as «babysitters») (Chaudron, 2015) or calm (using screens as «shut-up» toys) in public places (CMHD, 2014; Lewin, 2011). Furthermore, the findings of Kabali et al. (2015) indicate that parents also allow toddlers to use touchscreens due to the fact that they want to watch their own preferred TV shows or they want to put the child to sleep. Chaudron (2015) suggests that touchscreens are also used as rewards for good behavior and withholding them is used as a consequence for bad behaviour: both of the strategies reinforce the desirability of the digital object.

Researchers emphasize that parents and electronic screens can scaffold the child's development when parents apply developmentally appropriate types and amounts of mediation (Clark, 2011; Nikken & Schols, 2015). In fact, according to Nikken and Schols (2015), parental mediation is the key factor not only for fostering positive outcomes and preventing negative media effects but also for supporting children' skills in using and interpreting media.

Studies have identified four main strategies of parental mediation of the Internet and mobile media: restrictive mediation, active mediation, technical mediation and monitoring (Livingstone et al., 2015). Sometimes, parents also combine housekeeping activities with supervision and co-use with children's media use (Nikken & Schols, 2015; Nikken & Janz, 2014). In short, authors often suggest that parents should act as positive role models when using digital devices and employ strategies to create a conscious approach to child digital technology use (Neumann, 2015).

However, as many scholars have tried to implement or adapt parental mediation of children's television experiences to new technologies, a number of different wordings and varied mediation types and roles have been proposed. In our analysis, we draw upon the work of Kalmus (2012), who, following the studies of Livingstone et al. (2015) and Nikken and Janz (2014), has proposed a framework which considers the potential roles of the three main mediating agents: parents, teachers and peers. According to Kalmus these mediating agents can assume the following four roles:

– gatekeepers (or filters), who select and decide what content children will access, what activities they will be allowed, and what activities, platforms, and topics will be restricted;
– guides or interpreters (or signposts), who help children through the «jungle» of the Internet and help them to make sense of the online experience, paying attention to what seems to be puzzling or difficult to cope with;
– «windows», who extend children`s vision of the online world, new media, and the scope of online opportunities;
– consolers or trustees, who are there for children to turn to after having experienced something harmful online (related to retroactive mediation).

It is, however, important to note that social mediation, and thus also the roles mediators can take on, are dependent on the age and gender of the child (Nevski & Siibak, 2016), the child's skills in handling media and preferences for specific types of content (Nikken & Schols, 2015).

As young children often learn through mirroring the behaviour of others, researchers (e.g. Holloway & Green, 2008; Holloway, Green, & Livingstone, 2013) have noted that older siblings also play important roles as mediators in guiding, supervising and influencing younger children's digital technolocy use. Nevertheless, only a few studies have actually empirically looked into the matter. Furthermore, the majority of those studies (e.g. Lieberman, Fisk, & Biely, 2009) have been focused on older children (older than six).

Empirical studies suggest that older siblings play significant roles in acquainting younger ones with new technology (Stephen et al., 2008; Vinter & Siibak, 2012). In fact, according to Vinter & Siibak (2012), sometimes parents tend to delegate their roles as mediators to older siblings. For instance, older siblings have been found to encourage and mediate younger siblings' use of digital media either by showing them how to use the Internet, access virtual worlds and use social networks (Stevens, Satwicz, & McCarthy, 2008), or how by pressing scrolling icons they can download and use apps (Marsh et al., 2015). By doing all of the above, older siblings also have an important impact on younger children's content preferences (Teuwen et al., 2012). Furthermore, studies indicate that although sometimes older siblings play cooperatively with younger ones (Marsh et al., 2015; Teuwen et al., 2012), they can also dominate the use of digital devices and thus prevent their younger brothers and sisters from playing games or watching videos (Plowman, 2014).

## 3  Methodology

In order to study the roles parents and older siblings might take on as mediators of young children's digital technology use, we carried out a qualitative ethnographic case study. We decided to take this approach as the method allows the researcher to immerse herself in the family and «through extensive and prolonged interaction with research participants... able to understand the way the individual expresses values, beliefs, and actions in and through culture» (Liamputtong, 2009, p. 4). As we aimed to study the interaction between parents and children and the mediator roles this interaction might contain, we decided to use a case study method that makes it possible to focus on a single instance or social unit to study small group behavior (Yin, 2014); the researcher can retain the holistic and meaningful characteristics of real-life events or situations by using this method (Luck et al., 2006; Yin, 2003). We applied the unstructured participant observation approach suggested by Gillham (2000), which contains three main elements: 1. watching what parents and children do while using touchscreens, 2. listening to what they say, 3. and asking them clarifying questions. We gathered data through field notes

and video recordings and, since the observation was of a toddler's use of a touch-screen, a naturalistic observation was the age-appropriate and suitable approach. Naturalistic observation was unstructured and made it possible to observe participants' activities without previously specified or described characteristics. As researchers (e.g. Allison, 2007; Kotilainen, 2011) have also emphasized the need for and importance of hearing children's own voices, especially when it comes to their daily media use, we decided to explore their perspective of touchscreen use through a digital «toy-tour» (Plowman, 2014).

## 3.1 Research design and data collection

Elyna, the leading author of this article spent nine months (from September 2015-May 2016) in London as part of her doctoral studies. While looking for a place to stay a childhood friend advised her to contact her sister Laura (a pseudonym[1]) who had been living in London for 11 years with her family – husband Glen (a pseudonym) and their 21- and 48- month-old daughters, and might have a room to rent. Although Elyna knew Laura personally from childhood, she had never met her husband or daughters as Laura had been living and working abroad for a long time and they had not been in touch for ages.

After Elyna had moved in with the family, established good and trusting relationships with all of the family members, she also noticed that the two small girls were often enthusiastic users of touch screen technologies. As Elyna's doctoral thesis is focused upon the usage of touch-screen technologies amongst 0-3 year olds and their parents' mediation strategies, living in a family with two energetic toddlers provided an excellent opportunity to observe this topic on first hand.

Elyna informed both of the parents about the general aim of the study and both Laura and her husband gave their consent to carry it out. Elyna explained to the parents that she was interested in their children's use of media and would like to map it, that she would also like to know the parents' opinions and that from time to time there would be short informal conversations, as well as one formal interview. The parents signed a consent form allowing Elyna to film and document (through notes, videos etc.) all family media activities. A babysitter also lived with the family but, considering the aim of the study and the fact that her role in mediating children's media use was primarily related to the TV and computer screen, her actions were less often analysed in the course of the study.

Hennink, Hutter, and Bailey (2011) have noted that establishing rapport with study participants can take some time as it involves building a trust relationship with them. Therefore during the first few months (September-December 2015) marked the period when thefamily, and children in particular, got used to the presence of Elyna in their home. Elyna got into the daily rhythm of the family, participated in many household duties, such as washing dishes, doing laundry,

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[1]    Pseudonyms were used to ensure the confidentiality of the children and the family.

cleaning and shopping, took part in different family events (birthdays, Halloween etc.), and occasionally recorded those events, so that the children would become familiar with seeing the researcher with a digital device (filming and taking photos of all of the family members). Although Elyna lived in a separate room, the children were frequent guests in her room who were could enter so as to invite Elyna to have dinner with the family or just to play. Thus during the period of the study, Elyna became part of the ecological system of Laura's family with an aim to «develop close interpersonal relationships with key informants based upon mutual respect and shared understanding» (Gray, 2014, p. 444; Hennink, Hutter, & Bailey, 2011).

Whenever touchscreen devices were used by the children or their parents (Sept-Dec. 2015) Elyna made some notes after these events occured. She made the main video recordings in January, February and May 2016. By that time, the whole family had become accustomed to her presence and, since she had previously filmed and photographed the children and parents in the context of family events, filming their touchscreen usage did not lead to any extra interest or novel reactions.

Elyna used her smartphone (Samsung Galaxy A3) to record family media patterns and made all notes in an Evernote app (an application that exists on both the computer and the smartphone). At the end of May, interviews with the parents to elicit their opinions and attitudes towards the children's touchscreen use and mediation practices were carried out. In order to explore the children's thoughts about and experiences with touchscreens, Elyna also initiated a child-led tour of the digital devices with the four year old. The «toy tour» strategy, recommended by Plowman (2014, p. 6), enabled us to «establish young children's preferences and experiences as they might find it difficult to sustain attention for more than a few minutes in conversation with a researcher». The digital «toy tour», however, helped to create a relaxed atmosphere for conversation between the child and the researcher and provided necessary insight into the child's thoughts and opinions on touchscreens.

## 3.2 | Respondents and media in the home

The family who participated in this study consisted of four members: two-year-old Mia (a pseudonym), four-year-old Lily and their mother and father. The mother was Estonian (34 years old), had a vocational secondary education, worked as a chef and moved to London in 2005. The father had a secondary education, also worked as a chef and moved to London in 1994. The whole family spoke English, Estonian and Spanish.

Based on Livingstone's (2002) description of media-rich homes, i.e. homes that contain a wide range of old and new media (books, magazines, personal computers, telephones, televisions, smartphones, tablets, Internet connections, etc.) and provide the children a variety of media choices, we can state that the family lived in a media-rich home environment. All of the family members had their own personal tablets: an iPad mini for the mother, an iPad Air for the father and personal

Samsung Galaxy tabs for both of the girls. Furthermore, in April 2016 the father bought a new smartphone and received Alcatel One Touch Pixi tablets as gifts, both of which were also mostly used by the girls. In addition to tablets, there was also a laptop computer (Lenovo) in the living room and the mother also had a personal smart-phone: an iPhone 5C. Sometimes the children were allowed to use their mother's smartphone and iPad, but they were not allowed to use their father's smartphone and the home button of the father's tablet was broken, making the device unusable for the girls. The girls mainly used their personal tablets and all of the other devices were used when the batteries of their own devices were drained.

Technological devices are widespread in the UK and buying smartphones or touchscreen tablets for children has become as a marker of good parenting (Harkness, Johnston et al., 2015; Plowman, McPake, & Stephen, 2010). According to the parents who participated in the case-study, they did not have such opportunities (both economic as well as technological) when they were growing up so they are happy to be able to afford and offer such additional educational, communicative and recreational opportunities these devices bring to their children. For instance, the father believed that children are able to learn new words and phrases both in Estonian and in Spanish on-screen; and that the devices were especially handy on long flights from London to Estonia or to Spain which the family takes several times a year. None of the parents though, viewed the touchscreen as a necessary tool that all «good parents» must have.

Despite the variety available, the children usually used only one device at a time and on those occasions they had to share the tablet. The reason for this was quite often practical: very rarely were all of the devices fully charged.

In addition to the variety of digital devices and a TV set in the living room, the children were also surrounded by print media: a lot of books, magazines and newspapers could also be found in their home. Furthermore, the children also had a number of electronic toys: a singing Barbie, talking bear, interactive cash machine, gaming phones and tablets (plastic toys with batteries).

Based on observation, it was apparent that, on average, the family used smart devices between 6-10 p.m. during the weekdays, a time slot when all of the family members were at home. On weekends the use of smart devices was rather chaotic and largely dictated by the parents and dependent on the daily schedule of the children and whether the children were healthy or ill.

The usage of smart devices also varied between the children. In comparison to the older sister Lily, who used a touchscreen two or three times a week and one to two hours on average, the younger child (Mia) used a smart device mainly just once a week and 20-30 minutes on average.

## 3.3 Data Analysis

The data analysis was carried out by the leading author of this paper to identify common themes by thematic networks (Attridge-Stirling, 2001). Through this process, the researcher reviewed observational field notes, identifying ba-

sic themes from the textual data. Then basic themes were summarized and the main ideas were grouped by several basic themes. Finally, global themes were determined by summarizing the main claims, arguments and assumptions. The researcher decided to code the global themes (reasons, strategies, help and information, attitudes, content, technical skills and behaviour) into three main categories based on research questions: parental mediation strategies, the parents' role as mediating agents, and the older sibling's role as a mediating agent.

# 4 Results

## 4.1 Taking the role of interpreter or guide

Similar to the findings of Suoninen (2013), who found that toddlers' use of touchscreen devices usually took place while parents or other adults were present or near-by, the findings of this case study also revealed that typically smart devices were used by the children in the presence of their parents, so that the children would not be alone with them. However, in contrast to Mia, who was never alone with the device, the older sister Lily used the touchscreen alone quite often. There were several reasons for this. First of all, the parents believed that the four-year-old Lily was smart enough to know how to use the device and was thus not in need of as much assistance as the younger child. Secondly, according to her mother, Lily generally concentrated on certain activities while using the tablet and did not surf around, so the mother did not have to check constantly on what she was doing. Both of these reasons reveal trends similar to those in Nikken and Schols's (2015) findings, which indicated that older children are seen as more self-reliant and capable of using media devices on their own. At the same time, our observations suggest that sometimes the mother believed herself to be not knowledgable and skillful enough to play the games her daughter played on the tablet.

*Lily:* «Mommy, mommy. I can't. Help me»

*Mother:* «What's wrong?»

*Lily:* «It doesn't work. Help me Mommy. Please»

*Mother:* «Lily, you know that Mommy doesn't know how to play these games».

During the above conversation (in English), the mother did not take the device into her own hands and encouraged the child to find the solution on her own. At the same time, the mother said to herself (in Estonian): «Oh God, God, I do not know all these technical nuances. I haven't delved into these games in detail».

Mother: «Lily you are a smart girl, and you know how to play this game. Mommy really doesn't know how to help you».

*Lily:* «Mommy, please. I can't»

*Mother:* «Ok, show me, let's try together. What do you have here?»

Now the mother takes the device but the child simultaneously starts to try random things in the game.

*Mother:* «Lily, please. Let me try. I can't help you if you don't let me».

In the extract above, it is apparent that the mother first relied on the age of the child and her previous knowledge of the child's skills, abilities and preferences regarding content, believing Lily to be «smart enough» to handle it all by herself.

At the same time, the mother took on the role of guide when the younger child watched children's song clips, such as *Twinkle-Twinkle Little Star*, *Wheels On The Bus*, *Five Little Monkeys Jumping On The Bed*, and *Masha & The Bear,* on YouTube. She encouraged Mia to repeat the letters and numbers and, pointing at the screen, asked her what she saw. She sang along with Mia and watched the clips several times with the aim of helping the younger girl make sense of the online experience. Furthermore, the mother paid attention to aspects that seemed to be difficult to cope with for the child and thus guided her through the «jungle» of the Internet (Kalmus, 2012). One of the reasons for such careful and thoughtful assistance was that, as with many other parents (Schlembach & Johnson, 2014; Vaala, 2014), the parents in this household believed that Mia would learn from cartoons and music. For instance, the mother believed that Mia would learn numbers when watching online content and the father thought that she would pick up new words in Spanish and English quite quickly by using the screen.

Lily also acted in the role of guide or interpreter when she used the tablet with Mia. When the two played together with apps (e.g. general TocaBoca and Disney games), the older sister often showed the younger one how to open apps and what to do with them. Thus, similar to the findings of Marsh et al. (2015), the older sibling acted as a guide and helped the younger one with gaming apps. Nevertheless, as suggested by Vinter & Siibak (2012), the older sibling's ability to act as a full mediator was questionable. Although Lily tried to explain and teach her sister, she lacked patience and if no adult was around such occasions often ended in arguments.

## 4.2 *Playing the role of gatekeeper*

When analysing the materials from observations and combining them with the information gained during the interviews, it was apparent that both parents had various concerns about the content their children might encounter on the Internet, especially on YouTube, and thus often took the role of gatekeepers who decided what content the children would access and which topics would be restricted, providing rules and regulations (Kalmus, 2012; Chiong & Shuler, 2010).

*Mother:* «Sometimes Mia randomly types letters on the iPad and when she types p and o then Google automatically gives the word «porn». I don't know, maybe I have to change some browser settings or something… mh… but I don't know how. Or maybe it's somehow related to browser history? God, maybe we have a naughty father here…»

*Father:*   «We have to be extra careful with those pop-music videos. There is always naughty content in the videos. Maybe the children don't realise it, but I don't like those dance moves they learn; they're not appropriate for young children. Unfortunatelly, in this case I don't agree with my wife that Katy Perry videos are not naughty. I don't like this American teen pop-culture they learn on these videos. I don't like it at all».

The mother's deep concerns about the possibility of their children accessing inappropriate content online, especially pornography, was one of the main reasons why she tried to actively take on the role of gatekeeper by combining three different mediation strategies, none of which were performed by the father. The main mediation strategy undertaken by the mother was restrictive mediation. In addition to content restrictions, she also applied strict control over device access, usage time and frequency. Furthermore, due to the concerns the mother had, she also engaged in technical mediation (Mascheroni, 2014) to regulate the time and block some content, as well as to set and change the passwords. In fact, as Lily described during the digital toy-tour, only *mommy* knew the passwords necessary to access the girls' tablets and *papi* did not.

In addition the mother also used monitoring, i.e. checking up on the children's activities, covertly or overtly, after use (Livingstone & Helsper, 2008). The latter type of mediation quite often means checking browser history.

Lily also acted as a gatekeeper in terms of the content the younger one was able to access because generally Lily was the one to choose (on Youtube) what kind of videos they were going to watch. When the older sister wanted to watch her favourite videos (Katy Perry's *Last Friday Night* and *California Gurls*), she explained to her sister that Katy Perry's videos were naughty (e.g. *Roar* and *This Is How We Do*) and that Mia was not allowed to watch them because she might have bad dreams if she did.

*Lily:*   «My mommy told me if you watch naughty videos you see naughty dreams and start to cry».

Both of the parents however acted as gatekeepers when there was a need to intervene so as to prevent the children from getting hurt and helping them to reconcile after quarreling over a tablet. Observations revealed that quarrels were likely to happen because Mia desired to play with the tablet only if she saw her older sister was playing with it or when she saw her parents were using their devices. The latter was also a reason why the mother sometimes tried to hide her tablet or smart phone usage. For example, when the mother was reading emails or paying bills she sometimes hid the device behind a newspaper, magazine or book so that the children would not be able to see it and want to use it. It was evident that the parents were well aware of their role model status and the fact that the children's media habits developed on the basis of their parents' media behaviour (Takeuchi, 2011). They were also aware that they occasionally did things which they were not proud of.

When the children used the same device, they quite often quarreled and started

taking the device from each other. This was more likely to happen when the parents were not sitting next to them. If the parents did not intervene, then the older sister used her physical strength to push the younger one away. Thus, as previously noted by Plowman (2014), older sisters and brothers can dominate the use of devices, preventing their younger brothers and sisters from participating in games or watching videos. However, on those occasions Mia often used her voice to get the device back, starting to cry very loudly and thereby notifying her parents.

During quarrels the parents explained to both of the children that they had to share and unless they did, the device would be taken away from them. In this context, sharing the device meant who held the device. For instance, if Mia was holding the device, Lily was able to wait up to a few minutes for her turn, especially if she found some substitute activity to turn her attention to. Usually this substitute activity meant playing with her hands, her sisters' legs or hair. When the older sister found some other game (e.g. doing a puzzle), Mia often put the device away and joined the game.

However, if the older sister was holding the device, the younger one could only wait her turn if she was encouraged to do so. For instance, if Lily explained to Mia that she had to wait and also described what she was doing, Mia was able to wait for a while for her turn. In this respect it was evident that older siblings can sometimes be «regarded as a convenient source of help in the eyes of parents» (Vinter & Siibak, 2012, p. 90). However, if there was no instant feedback or clarification about what was being done, or what was expected of her, Mia only managed to wait for a few seconds before she tried to grab the device back. Thus, the need for active mediation: explanations and justifications are crucial for a toddler to see and understand activities in a meaningful way (Nikken & Janz, 2014; Livingstone & Helsper, 2008).

The same applied when a parent took the device away without any explanation. On those occasions, usually tears and negative emotions followed. When the parent explained the reasons why the children had to put the device away, then the situation was much more peaceful and using the device was not so dramatic, whereas a lack of communication and engagement on the part of the parents led to greater misunderstanding and strife.

## 4.3 | *Taking the role of «window»*

In comparison to the mother, who mostly engaged in the role of gatekeeper and guide, the father mainly used active mediation and played the role of «window». He played with the children, downloaded new games for them and discovered, together with the girls, how to play these games. He gave feedback to the children by laughing with them, helping to maintain order between the sisters and encouraged and taught them where to press, tap, scroll or stretch and for how long, etc. Thus, he also used more active co-use mediation than the mother.

The mother's lack of active mediation was affected by everyday activities, such as cooking, cleaning and doing laundry, during which the father's task was

to play with the children and keep them occupied. The father's and daughters' shared digital play usually occurred when the father was too tired to do household activities and didn't want to watch TV, or when the girls were too upset to play traditional games together (e.g. they weren't sharing their toys). The father also allowed the children to use the touchscreen when he wanted to watch something on TV (e.g. sports broadcasts) and on those occasions touchscreens were used to help keep the children busy (as «babysitters») or calm («shut-up» toys). On those occasions the father usually directed the girls to YouTube to watch music videos, as playing with the apps would require additional attention and concentration, which would take away from his time watching TV. In short, similar to the findings of Chaudron (2015) and Kabali et al. (2015), touchscreen technology in this family was used to manage daily life.

Lily also played the role of window, as she often introduced her favourite games and music videos and other clips on YouTube to Mia, and thereby clearly impacted Mia's content preferences and opportunities, as suggested by Teuwen et al. (2012).

## 5 Conclusion

The aim of this ethnographic case study was to find out which mediation strategies the parents used and which roles they played to regulate the touchscreen technology use of their toddlers. We were also interested in finding out how an older sibling might shape a younger child's experiences with touchscreen technology.

Our ethnographic case study results revealed that toddlers communicate and interact through both living (parents and siblings) and nonliving elements, e.g. touchscreen devices, and thus the techno-subsystem helped to coordinate their learning experiences across the home environment (Johnson, 2010, p. 35). Lily and Mia lived in a media-rich household (Livingstone, 2002) and were surrounded by a wide range of old and new media, which provided the children with a variety of media choices. Still, the children were allowed to use only one touchscreen at a time and on many occasions they had to share the use of a smart device.

The findings of our case study suggest that parents use different parental mediation strategies and combine these strategies to fulfill their roles as mediators of young children's touchscreen use. In particular, the mother of the family was mainly engaged in restrictive mediation and played the roles of guide and gatekeeper, whereas the father, who tended to use more active mediation, often acted as a window, whose role was to introduce the children to new opportunities that a touchscreen could offer. The father's active role, however, should also be seen as a result of the practical arrangements in the household: when the mother was busy with such everyday activities as cooking, cleaning, and doing laundry, the father had to keep an eye on the children and keep them occupied. Therefore, unlike the father, the mother was more focused on setting technical restrictions (e.g. passwords), monitoring (checking browser history) and establishing rules

http://riviste.erickson.it/med

about content and time so as to keep her daughters safe online. Both of the parents, however, were guides or interpreters who gave feedback to the children's touchscreen activities, explained information that the children did not understand and helped to cope with difficulties on the touchscreen.

Although previous studies have suggested (Kabali et al., 2015; Nikken & Schols, 2015; Plowman, 2014) that parents' educational background, ethnicity and income affect their attitudes and decisions regarding their child's engagement with technology as well as the mediation strategies the parents apply to mediate children's digital play, our study is based on the practices of one family and thus we are unable to make any far-reaching conclusions on the topic.

In addition to the parents, the older sister played a huge role in mediating the younger one's touchscreen use. Lily took on the role of gatekeeper by directing at what times and which content Mia was allowed to see. For instance, when choosing the content, e.g. music videos and games, Lily often used her stronger will on Mia and dominated the use of the touchscreen (Plowman, 2014), whereas the parents were much more reluctant to adjust their recommendations between the girls. However, Lily also introduced new apps and videos to Mia, thus introducing her to new opportunities the touchscreen provided. Furthermore, she also acted as an active guide by giving explanations and feedback, which also led to more peaceful and shared play between the sisters.

Although this study provides some new and interesting insights especially regarding the possible mediator roles older siblings can take regarding toddlers' touchscreen use, it also has some notable limitations. Firstly, one of the main drawbacks related to ethnographic research has to do with the reliability and validity of the research. As our case study was carried out in a natural setting, it cannot be reproduced. Furthermore, due to the characteristics of the method and the small sample size, our findings can be considered only in reference to this particular case study and cannot be generalized. Despite these limitations, we believe the ethnographic method to be useful for studying young children's interactions with touchscreen technologies.

We also believe that additional research is needed on the topic. There is especially a need for qualitative research, for instance interviews with older siblings in order to explore how they position themselves regarding younger siblings' touchscreen use.

Future studies should also focus on the experience of babysitters who spend considerable time with toddlers and thereby affect their media use. Furthermore, studying babysitters might provide a different perspective on families' media patterns and provide new insights on both parental and sibling mediation practices.

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