Chapter 6. Digital parenting and the datafied child

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Many parents of today are feeling increasingly concerned not only for the well-being and safety of their children, but also for their own abilities to take up the role of a "good" and "responsible" parent. Empirical research evidence is used in the chapter to illustrate how the data religion cultivated by tech industry, popular press, marketing discourses and general societal expectations of a "responsible parent" have created a norm for plugged-in parenting resulting in intimate dataveillance of children, both in online and offline contexts. Various digital parenting tools – from pregnancy apps and baby monitors to parental controls and tracking devices – and practices – such as sharenting – are used in the chapter to illustrate how the issues related to the digital rights and privacy of the child are almost entirely discarded against the overprotective and technologically moderated parenting stance leading to both commodification as well as datafication of childhood.

Introduction

Present day children are some of the first generations to grow up in the world immersed in digital technologies. The majority of children in Western urban societies are growing up in media-rich households (Livingstone, 2002[1]), in which they are surrounded by a wide range of digital tools and devices. In fact, digital tools and online environments have become such an intrinsic part of contemporary life that these technologies have not only started to shape the ways in which families operate on a day-to-day basis, but also to affect the dynamics of family life (cf. Carvalho, Francisco and Relvas (2015[2]) for literature review).

Parents are often concerned about their children's use of digital devices and are thus increasingly trying to manage and mediate their children's relationships and engagement with various digital technologies. At the same time, parents also tend to have many questions and concerns related to child-rearing as well as their own roles and duties as parents. Thus, scholars (cf. Dworkin, Connell and Doty (2013[3]) and Plantin and Daneback (2009[4]) for a comprehensive review) have noted that more and more parents are increasingly turning to different websites, online groups or apps when searching for information, insightful advice or practical help that could guide them in their parenting roles.

In order to refer to these different relationships that parents have with new digital technologies in child-rearing contexts, in recent years the ambiguous concept of "digital parenting" has come into use (Mascheroni, Ponte and Jorge, 2018[5]). On the one hand, the concept is meant to cover the varied practices parents adopt in order to manage and mediate their children's engagement and relationships with digital media, such as restrictive and enabling mediation (Livingstone and Byrne, 2018[6]). On the other hand, digital parenting also refers to the ways in which "parents themselves incorporate digital media in their daily activities and parenting practices, and, in so doing, develop emergent forms of parenting" (Mascheroni, Ponte and Jorge, 2018, p. 9[5]). In fact, as argued by Sun Sun Lim (2018, p. 31[7]), in the context of Western urban societies, "the digitally connected family inhabits an environment that is powered and enveloped by always on and always-on-hand mobile media" leading to "transcendent parenting" (i.e. a practice "wherein parents must transcend every media consumption environment their children enter, their children's offline and online social interaction milieu and 'timeless time' as experienced in the apparent ceaselessness of parenting duties" (Lim, 2018, p. 32[7])). Parents living in a technology-saturated society have thus needed to get accustomed to parenting 24/7, as various parenting duties can interrupt their other social roles, obligations and duties at any time or place.

While parents have always worried and watched over their children, during the last decade various labels, such as "helicopters," '"hovercrafts," "hummingbirds," "stealth fighters" or "black hawks" (LeMoyne and Buchanan, 2011[8]), have been coined both by the popular press and academics to refer to overprotective parents who tend to micro-manage their children's lives. A decade ago, scholars (e.g. Nelson (2008[9]) and Malone (2007[10])) were already reporting "a new stance of anxiety" (Nelson, 2008, p. 516[9]), emerging especially amongst middle-class parents who tend to constantly worry about the safety and development of their children. Due to this parental anxiety, which is believed to be deeply rooted in our present day risk society (Ericson and Haggerty, 2006[11]) (i.e. "a society increasingly preoccupied with the future [and also with safety], which generates the notion of risk" (Giddens and Pierson, 1998[12])), many parents have started to take additional steps to monitor their children more closely than ever before. Considering that parents often also tend to view children as at risk and thus in need of protection, it is only understandable that

parents try to do everything in their power "to protect the innocence of childhood, to shield children and the very essence of childhood from the potential evils of the world," (Malone, 2007, p. 515[10]).

Many parents are therefore feeling increasingly concerned not only for the well-being and safety of their children, but also for their own abilities to take up the role of a "good" and "responsible" parent. In fact, as argued by Howell (2010[13]), the culturally accepted level of care, as interpreted by many of today's parents, would mean keeping one's children under close surveillance at all times so as to be able to control and take care of them at the same time (Howell, 2010[13]). In contrast to previous decades, however, this continuous "parental gaze has become technologized" (Howell, 2010, p. 1[13]). In fact, Leaver (2017, p. 8[14]) has noted that we have reached a point in society where "unplugged parenting is likely to be increasingly positioned as both irresponsible and aberrant." Hence, the usage of various technological devices and apps has already started to intersect with social expectations and discourses about "good parenting" in the marketing discourse and in parents' minds.

Various technology companies and service providers have of course eagerly responded to the concerns of parents by providing a myriad of technological solutions for easing parental anxieties. Hundreds of digital devices and thousands of mobile apps have been brought to the market with an aim to enable parents to create "virtual togetherness with their children over distance" (Gabriels, 2016, p. 176[15]). In fact, Willson (2018, p. 1[16]) argues that digital devices have become so entangled with digital parenting practices of present day parents that the world where "the contemporary child is conceived and raised is one that is increasingly monitored, analysed and manipulated through technological processes".

At the same time, it is important to note, that some scholars (e.g. Bonafide, Jamison and Foglia (2017[17]), Simpson (2014[18]) and Nelson (2008[9])) are becoming increasingly concerned that this (over)reliance on various digital technologies and parenting apps has not helped to ease parental concerns, but rather has intensified them. Furthermore, researchers claim that the contemporary trend of "intensive parenting" (i.e. when a parent "actively cultivates their child, acquires sophisticated knowledge of best child rearing practices, and utilizes this knowledge to closely monitor the child's development and daily activities" (Bernstein and Triger, 2010, p. 1225[19])), has also led to the emergence of the "datafied child" (Lupton and Williamson, 2017, p. 783[20]). This is because substantial amounts of information are being collected about children's lives posing risks to their privacy and abilities to consent.

The present chapter will provide a short overview of the empirical research evidence and scholarly discussions about the different digital parenting practices that have been taken up by today's parents, all of which have led to the fact that present day childhood has become "a critical site of datafication and dataveillance" (Mascheroni, 2018, p. 1[21]). The aim is to illustrate how the data religion cultivated by service providers and enthusiastically adopted by parents has led to the (over)reliance on digital technologies, platforms and apps.

First, the chapter will give an overview of digital parenting practices and, in particular, the usage of fertility and pregnancy apps through which parents start to create "digital shadows" for their unborn child (Leaver, 2017, p. 150[14]). After talking about babyveillance (Barassi, 2017[22]) (i.e. the use of various mobile applications and baby monitors either to ease parental anxieties or to enable parents to conform to the so-called "best practices of parenting" initiated by the social and systemic pressures), the chapter will illustrate how the usage of tracking and monitoring devices and apps by parents has led to "intimate dataveillance" of children both in online and offline contexts. In the final part of

the chapter, the example of sharenting (i.e. the parental practice of sharing information and photos about one's children on social media) will be used to suggest that such digital parenting practices may jeopardise both children's rights and privacy. Furthermore, it can also lead to negative outcomes affecting both the parent-child relationship as well as the well-being of the child.

Creating digital data-shadows for the unborn child

Since the early days of the Internet, pregnant women have turned to online discussion forums and websites (Lupton, Pedersen and Thomas, 2016[23]; Chen, Aram and Tannenbaum, 2014[24]) or 'mommy blogs' (Orton-Johnson, 2017[25]; Morrison, 2011[26]) to find emotional support and information about pregnancy and child rearing. In fact, the findings of one study (Lagan, Sinclair and George Kernohan, 2010[27]), which had participants from 24 different countries, suggest that 97% of pregnant women (n=613), use the Internet to search for information about pregnancy, for pregnancy-related social networking, for support or for e-commerce. In the majority of cases (94%), women start using the Internet to supplement information already provided by health professionals and many (48.6%) report dissatisfaction with the information provided by their doctors and midwives or feel that there is not enough time to ask questions from their health professionals (46.5%). Men also have been found to use the Internet, and social media in particular, both for practicing "caring fatherhood" (i.e. communicating with other fathers for encouragement, confirmation and advice (Eriksson and Salzmann-Erikson, 2012[28])) as well as to "learn how to be a good father" (Ammari and Schoenebeck, 2015[29]).

In more recent years, the mediation of the unborn child in a technology-saturated society has reached a new dimension (Thomas and Lupton, 2015[30]). Fertility tracking apps aimed at women who either want to conceive or to avoid conceiving (Gambier-Ross, McLernon and Morgan, 2018[31]), and pregnancy apps which enable pregnant women to track their pregnancies and to access pregnancy-related information have become immensely popular both amongst first time mothers (Lee and Moon, 2016[32]) (cf. Hughson et al. (2018[33]) for literature review on the topic) and fathers-to-be (Thomas, Lupton and Pedersen, 2017[34]). In fact, this niche of the "quantified self" movement has become so popular all around the world, that Hughson and colleagues (2018[33]) even claim, "most pregnant women in high-income countries [are] now using them". For example, already in 2015, 7% of more than 90 000 apps in Apple iTunes were focused on women's health and pregnancy (Aitken and Lyle, 2015[35]), and the industry has been booming ever since. At the same time, empirical studies (cf. Hughson et al. (2018[33]) for overview) reveal that already marginalised groups (e.g. women with lower income, ethnic or racial minorities, other hard to reach populations), as well as groups that have lower English language proficiency and digital- or health literacy, are still caught up in the "vicious cycle of digital exclusion" (Baum, Newman and Biedrzycki, 2014, p. 12[36]).

However, such technologies are starting to redefine their understandings of parenthood, health and identity (Barassi, 2017[22]). Pregnancy apps targeting fathers have also been found to serve as "pedagogical agents" (Thomas, Lupton and Pedersen, 2017, p. 762[34]), which aim to provide advice and information on how to behave as partners of pregnant women and fathers-to-be (e.g. how to prepare a nursery or build furniture for the baby), as apps often portray parenthood as a learned practice. Analysis of Thomas, Lupton and Pedersen (2017[34]), however, indicates that strong ambiguities and conflicts exist in the apps in the portrayal of expectant fatherhood. On the one hand, such apps are often based on neoliberal "figurations of middle-class responsiblilised fatherhood" (2017, p. 767[34]),

that at times can be viewed as progressive and innovative. On the other hand, these apps oftentimes still reinforce heteronormative assumptions of fatherhood, and reproduce stereotypical gender roles. For example, foetal size is sometimes compared to the size of beer bottles or footballs (2017[34]) or using metaphors of hiking and camping to compare pregnancy as a journey through the woods (for example, the Daddy Up App).

Although the discourses of ideal parenthood that are constructed in these apps "rest on middle-class neoliberal assumptions about the individual's capacity and responsibility of educating themselves" (Thomas, Lupton and Pedersen, 2017, p. 766[34]), content analysis of pregnancy apps conducted by Womack, Anderson and Ledford (2018, p. 7[37]), indicated that the recommendations apps provide are often conflicting and given without any credible source of evidence. Thus, although these apps are often viewed as indicators of both competent and successful mothering (Thornham, 2019, p. 181[38]), the health-related decisions mothers are to make based on these apps often reveal conflicting recommendations regarding issues such as consuming alcohol, eating fish or cheese, taking medicine, dyeing one's hair or planning a scheme for immunisation (Womack, Anderson and Ledford, 2018[37]). Thus, the information which might start to influence health and well-being of both the mother and her child could be unreliable and not medically sound. Considering that currently there is no regulatory body required to check and approve apps before they enter the market (Gambier-Ross, McLernon and Morgan, 2018[31]), such problems of reliability are unfortunately only to be expected. Furthermore, in this context it also important to note that similar lack of clarity exists also outside of the digital realm, as clinical guidelines all over the world also tend to recommend slightly different approaches and contradictory evidence on vaccination schedules (MacDougall and Halperin, 2016[39]), alcohol use during pregnancy (O'Leary et al., 2007[40]), postpartum physical activity (Evenson et al., 2014[41]) and many other health-related topics.

The popularity of such apps, however, is not only built on advice and recommendations for expecting parents who are targeted as eager "health conscious subjects" (Johnson, 2014[42]). In fact, in addition to advice and recommendations, pregnancy apps also provide women with an opportunity to track their pregnancies by inserting intimate health data and personal identifying information both about the mother and the unborn child such as diet before conception, conception date, parents' thoughts, medical history, number of kicks in the womb and potential due date (Barassi, 2017[22]). Thus, as criticised by Barassi (2017, p. 2[22]), such apps "not only exploit very personal information about users such as bodily functions, behaviours, and social relationships but also impact and influence notions of the pregnant body and the relationship between the body and the self".

In fact, Helen Thornham (2019, p. 179[38]) argues that the "datalogical construction" of pregnancy and motherhood is often "a clean and simple, 'scientific' and atomized metric", rather than a subjective experience full of different kinds of emotions, anxieties and everyday frustrations, but also joy or pain. For example, although these apps enable one to track the duration and frequency of sleep and to count intentional attempts to breastfeed, they do not enable one to measure the quality of sleep, or count all the unsuccessful attempts to breastfeed. Hence, Thornham (2019, p. 179[38]) claims that pregnancy apps do not take into account "maternal subjectivity", but rather silence the everyday mundane and personal experiences mothers have. The findings of Thornham's (2019[38]) small ethnographic study suggest that rather than easing the anxieties of expecting parents, mobile pregnancy apps can often actually increase and normalise them to an unhealthy degree.

Furthermore, as these apps collect, manage and share a lot of personal identifying information about both the parent as well as the unborn child, they pose a considerable risk

to privacy. It appears that the users often do not think about the topic of privacy and tend to brush it off as something not that relevant in comparison to the potential opportunities and new knowledge the apps are providing. Many parents simply may not be aware of the potential privacy risks associated with using such apps, as the data policies drafted by the service providers do not generally address the issue of privacy as clearly as they should, and tend to direct all the responsibilities related to privacy to the users (Bert et al., 2016[43]; Barassi, 2017[22]) (also see Chapter 10).

At the same time, it is important to acknowledge that in addition to sharing one's own medical and private health data with service providers and their potential third parties, parents are also creating and commodifying a data footprint for their unborn child. Hence, as argued by Barassi (2017, p. 2[22]), we are witnessing not only the "commodification of the lived experience of expectant parents but also the politics of exploitation of the data flows of the unborn", contributing to the emergence of the datafied child.

Easing parental anxieties through babyveillance

Parental anxieties created by the need to keep their child under loving, constant care intensify with the birth of the child. Although there are no "medical indications for monitoring healthy infants at home" (Bonafide, Jamison and Foglia, 2017, p. 2[17]), many parents have started to make use of baby monitors or smartphone apps. These can be integrated with sensors built into leg bands, diaper clips, socks or onesies not just to monitor the baby's health (e.g. checking heartrate, skin temperature, oxygen concentration; generating alarms for apnoea, tachycardia, bradycardia and/or oxygen desaturation), but also to alert parents in case the baby has rolled over, woken up or just peed in their diaper. In short, present day parents have a myriad of different technological options to choose from – some of which transmit both sound and light, some transmit videos, some detect movement and some even can be used as walkie-talkies.

The findings of a qualitative study by Margaret Nelson (2010[44]) carried out among 96 families across the United States suggest that there are quite sharp class differences in the way parents explain and justify their use of baby monitors. Her research indicates that while professional middle-class parents (i.e. people with graduate degrees) are foremost motivated to purchase these products as these enable them to establish desired closeness and attentiveness with their children, helping them to obtain better control over the child, working-class (i.e. no college degrees) and middle-class parents (i.e. people who have attended college) value baby monitors as they help to ensure safety (Nelson, 2010[44]). However, similar to pregnancy apps, rather than reassuring parents and easing their anxieties, "these experiences may generate anxiety and a false assumption that their infant is at risk of dying" (Bonafide, Jamison and Foglia, 2017, p. 3[17]). Furthermore, as baby monitors are sold as consumer rather than medical devices, none of the service providers are actually required to carry out observational studies or randomised trials to find scientific evidence for backing up their claims (King, 2014[45]), leaving parents with information that is not medically sound.

In spite of the fact that there is a shortage of publicly available evidence supporting the safety, accuracy and effectiveness of such baby apps and monitors, this market has been expanding in the last few years (Bonafide, Jamison and Foglia, 2017[17]). In fact, market-research firm Technavio has projected that the global market of baby monitors will expand from 561 million in sales up to nearly 943 million in the next four years (Jargon, 2019[46]). Much of this success has probably also been built upon the aggressive marketing jargon the service providers use which is believed to "stimulate unnecessary fear,

uncertainty, and self-doubt in parents about their abilities to keep their infants safe" (Bonafide, Jamison and Foglia, 2017, p. 1[17]). The findings of a content analysis of more than 1 000 consumer reviews of baby monitors in Epinions.com suggests that when using these devices, parents encourage the usage of such consumer goods but also "participate in the "selling" of anxiety and of attitudes toward the appropriateness of careful monitoring — or surveillance — of children" (Nelson, 2008, p. 519[9]). In fact, Nelson's (2008, p. 533[9]) analysis suggests that parents using baby monitors seem to believe that "they have both a 'right' and a moral obligation to know what is going on with their own child". In short, anxious parents do not view parental anxieties or the spread of surveillance as a problem, but rather embrace these as widespread and normalised parts of the digitalised society and present day parenting practice.

Intimate dataveillance: The use of tracking apps and devices

The above sections illustrate that present day parents have adopted a "philosophy of protectiveness" (Simpson, 2014, p. 275[18]), which is so deep-rooted in their parenting practices that these parental concerns and anxieties do not ease up even when children are growing older. Rather, it is the other way round. As there are so many new risks children may face in their online and offline encounters, parents have increasingly started to make use of various technological devices, mobile applications or parental controls (e.g. content filtering software, Internet blockers, add-on monitoring software) for monitoring children's whereabouts both in the online and offline worlds.

Regardless of the fact that the effectiveness of parental controls is not clearly demonstrated (Zaman and Nouwen, 2016[47]), recent empirical studies suggest that the popularity and usage of parental controls has increased in the last few years. For example, in comparison to 2010 when only 16% of Estonian parents engaged in technical mediation of their children's Internet use, in 2018 technical mediation was used by 37% of Estonian parents (N=1020 parents of 9-17 year-olds) participating in the EU Kids Online survey (Sukk and Soo, 2018[48]). Similarly, the usage of parental controls has been reported as growing in other countries, such as in the United Kingdom (Ofcom, 2017[49]).

There is a wide variety of parental controls on the market, which allow for monitoring, but also provide different safety and restrictive measures. For example, an overview provided by Zaman and Nouwen (2016[47]) suggests that some parental controls enable parents to set place, time and content restrictions. Parents can therefore have control over where, how long and what kind of content their child can access online (e.g. no screen time one hour before bedtime; no Internet access in the bedroom or in school, etc.), or with whom they can interact online (e.g. limiting the list of friends with whom their child can interact online). Some other parental controls may help to set limits on various online activities, such as entertainment, social media and online games (e.g. disabling features for sharing content). Findings from a recent EU Kids Online survey carried out in Estonia, for instance, reveal that 21% of parents made use of some monitoring programmes to monitor what kind of websites and platforms their children were using. Alternatively, parents used some apps or platforms that enabled them either to block some online content or limit the time their child spent online (Sukk and Soo, 2018[48]).

In addition to online surveillance that parents may exercise through various technological means, parents would also like to protect and to keep their children safe in the offline world. In fact, similar to the use of pregnancy apps or baby monitors, the use of offline tracking apps and devices has started to "be defined as being consistent with the actions of a good parent" (Simpson, 2014, p. 279[18]). In fact, these tracking devices and apps are advertised

as being able to "empower users, improve efficiency, and make the world a better — and in this case, safer — place" (Hasinoff, 2017, p. 497[50]) by helping them make the right kind of consumption choices.

In comparison to children of earlier generations who were used to playing outside with their friends, walked alone to school or biked around the neighbourhood while being completely out of reach of their parents, today's children are rarely able to enjoy such freedoms and independence. Although the mobile phone has been referred to as "the world's longest umbilical cord" (Shellenbarger, 2005[51]), since the beginning of the 20th century, the newest technological advancements have enabled parents to "exercise control from a distance, without interaction" (Gabriels, 2016, p. 176[15]). Most of these devices offer real-life tracking opportunities, which enable the parents to pinpoint the exact location and whereabouts of the child; some even provide the child's transit speed. Many devices also come with an SOS or panic button, so that when in trouble, the child can immediately contact their parents through either a two-way voice communication or a video-option.

The most recent technological advancements, however, have become so discreet that their usage might go totally unnoticed by the child. For example, 2019 Edison Award winner in the area of "personal protection system", B'zT, comes in the form of a washable tracker patch and chipset that can be re-embedded in clothing, like a T-shirt, with an alarm that goes off every time the child wanders away to notify the parents. Some tracking devices even provide a geo-fencing option, which enables the parents to mark concrete locations on the map and turn them into so-called safety-zones (i.e. specific locations where the child is allowed to tread), and in case the child has wandered outside of the safety zone, the parents will be immediately notified. Some apps also alert parents when the child is visiting some new place or when they are arriving home too late. More expensive ones, such as the Amber Alert GPS Locator, even tap into the United States National Sex Offender Database and alert the parents when the child is within 500 feet of a registered sex offender's home address.

All of the above examples indicate that parents can choose from a wide variety of "other-tracking apps" (Gabriels, 2016[15]) which enable tracking and monitoring of children via location technology, without the consent and knowledge of the child. The EU Kids Online survey findings from Estonia also suggest that children (9-17 year-olds) are often unaware of the intimate dataveillance practices their parents are undertaking - although 22% of Estonian parents reported making use of some tracking technologies to monitor their child, only 13% of the children from the same families were aware of such surveillance (Sukk and Soo, 2018, p. 58[48]) (see Figure 6.1).

These findings indicate that parents not only tend to avoid talking about this topic but also seem not to consider such technical mediation and intimate dataveillance practices from a child rights and privacy perspective. Thus, regardless of the potentially good intentions these technological tools offer, it is still important to consider potential repercussions, such as diminishing trust in the parent-child relationship.

Trust in the parent-child relationship can also be broken due to parental oversharing of private information related to their families, of their children in particular. Thus, the following section will give an overview of a practice referred to as sharenting through which parents are creating digital footprints for their children.

Figure 6.1. Children's awareness of technical mediation
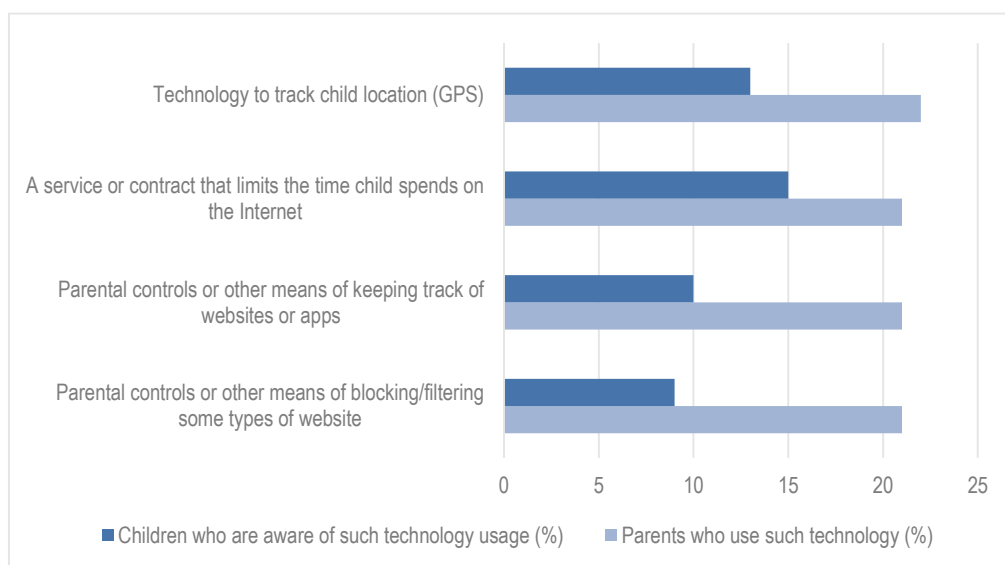
Note: Estonian children's (%) awareness of technical mediation, (N=1020).
Source: Sukk and Soo (2018[48])

Sharenting: Creating digital footprints for the child

Many scholars (Clark et al., 2015[52]; Blum-Ross and Livingstone, 2017[53]; Lipu and Siibak, 2019[54]) have noted that sharing the joys and challenges of parenthood and documenting children's lives publicly has become a norm in the social media era. In fact, as argued by Blum-Ross and Livingstone (2017[53]) present day parents are actually encouraged to share images and stories of their own experiences as parents. In fact, numerous recent empirical studies (Lipu and Siibak, 2019[54]; Wagner and Gasche, 2018[55]; Muge Marasli et al., 2016[56]) indicate that a significant number of parents engage in sharenting, that is, sharing information and photos of their children on social media, without considering issues related to the privacy of their children.

Previous research has identified several underlying motives for sharenting. Recent EU Kids Online survey findings from Estonia suggest that in the majority of cases, parents engage in sharenting to communicate with their family and friends (Sukk and Soo, 2018[48]) (see Table 6.1). As also suggested by Duggan and colleagues (2015[57]), parents tend to justify their sharenting with a wish to involve their family members and close friends in the growing up of their children, and thus social media platforms have become "mediums for pictorially sharing family news" (Lazard et al., 2019, p. 7[58]). However, as claimed by Ouvrein and Verswijvel (2019, p. 8[59]), sharenting can also be seen as "a form of indirect self-presentation" as parents often aim to demonstrate their parental competences through online content creation.

Parents also engage in sharenting in order to be able to collect precious memories (Blum-Ross and Livingstone, 2017[53]), receive social support (Duggan et al., 2015[57]), or both seek and share advice about the parenting challenges they face (Clark et al., 2015[52]; Archer and Kao, 2018[60]). In fact, as suggested by Lazard and colleagues (2019[58]), sharenting enables mothers to portray "good mothering" identities and thereby to ease a bit the social expectations placed on mothers while raising children.

Table 6.1. Estonian parents' sharenting practices

	% of the parents	N
I did it to keep in touch with family and friends	63	426
My child asked me to post the photos/videos online	5	34
My child asked me to remove something I posted about them online	4	29
I regretted something I shared about my child/children online	1	10
I asked my child if it was OK in advance	38	257
I never ask my child in advance if it is ok to post photos or videos of him or her	8	51
I didn't show my child's face clearly in photos	5	34
I don't see anything much to worry about when sharing the photos of my child online	10	70
None of these	12	83
I don't know	3	22
Prefer not to say	1	5

Note: N=672. Number of parents who have shared photos or videos of their children online. Respondents could choose multiple choices.
Source: Sukk and Soo (2018[48])

The emergence of celebrity baby accounts on Instagram, (a platform where users below the age of 13 are not allowed to have personal accounts), has also helped to normalise the practice of sharenting (Davidson-Wall, 2018[61]). Many celebrities have created personal accounts for their infants and toddlers with hundreds of thousands of followers. Some notable examples include accounts on Instagram for Boomer Phelps, son of Michael Phelps and Nicole Johnson with 707,645 followers (boomerrphelps, 2019[62]), and Alexis Olympia Ohanian, the daughter of Alexis Ohanian and Serena Williams with 561,041[1] followers (olympiaohanian, 2019[63]).

All of the above suggests that sharenting really has become a ubiquitous digital parenting practice, and as pointed out by Blum-Ross and Livingstone (2017, p. 122[53]), parents have 'yet to find an approach to representing relational identities in ways that deal fairly with both parents and their children'. For example, the findings of a recent qualitative study amongst Estonian mothers of 0-3 year-olds (N=20) suggest that mothers are feeling increasingly uneasy when posting photos of their children on social media and thus do not make sharenting decisions lightly (Siibak and Traks, 2019[64]). Similar to the findings of other researchers (e.g. Autenrieth (2018[65])), the majority of the young mothers in Siibak and Traks's (2019[64]) sample claimed that they have consciously decided not to share images of their children on social media. However, when they do share, they limit not only the number of posts but also the audience of such posts.

Furthermore, some of the young mothers in the sample had started to engage in a practice Authenrieth (2018, p. 226[65]) referred to as "anti-sharenting", that is, engaging in 'specific practices of (un)-showing' which place the focus on the photographic and spatial contexts of the image, rather than the child. For example, the findings of an EU Kids Online survey in Estonia report that 5% of respondents who had shared children's photos or videos online had engaged in anti-sharenting (see Table 6.1). Qualitative interviews with young Estonian mothers suggest that in such occasions, post-production (e.g. digital stickers of emojis) is most often used to 'replace' the facial expressions of their child in order to preserve their privacy (Siibak and Traks, 2019[64]). By doing so, on the one hand, the mothers were trying to find the right balance between the perceived societal expectation of portraying oneself as a loving mother, while on the other hand, also respecting their children's right to privacy (Siibak and Traks, 2019[64]).

Furthermore, mothers in the sample seemed to be determined to steward their children's privacy and identities online, and took up responsibilities to decide 'what is appropriate to share about their children online' as well as to ensure that their family and friends also 'respect and maintain the integrity of those rules' (Kumar and Schoenebeck, 2015[66]). Regardless, we still have to take into account the fact that when parents are afforded the right—and the responsibility—of making all those decisions on behalf of their child (Moser, Chen and Schoenebeck, 2017[67]), oversharing information may also have a darker side (cf. Lipu and Siibak (2019[54])).

One such problem is related to the embarrassment, annoyance and frustration children often feel because of sharenting (Levy, 2017[68]). For example, the findings of recent research amongst 12-16 year-olds (N=1 000) in the United Kingdom suggest that the majority of young respondents (71.3%) thought their parents did not respect their privacy online, and over one-third (39.8%) had experienced parents sharing embarrassing photos of them (Levy, 2017[68]). Teenagers emphasise that embarrassing photos, such as photos in which a child "behaves weird or looks weird" or in which the child is naked (Ouvrein et al., 2019, p. 16[59]), are especially the ones that parents should not be sharing online as such images can distort the self-image of the child. Future research needs to explore younger children's views on sharenting as well, as currently younger children's voices are still silenced from the academic debate on the topic.

In general, parents and children have very different attitudes about how often parents should ask for permission to post about their child on social media (Moser, Chen and Schoenebeck, 2017[67]; Hiniker, Schoenebeck and Kientz, 2016[69]). For example, the findings of Hiniker, Schoenebeck and Kientz (2016, p. 1385[69]) suggest that 'children were twice as likely to report that parents should not "overshare" by posting information about their children online without permission'. Similarly, interviews with pre-teens (9-13 year-olds) and their mothers in Estonia (N=14) indicate that pre-teens often feel annoyed and frustrated by their parents' sharenting choices and the fact that they are either unable to voice their opinion when those images are selected, or that their comments are often ignored by their parents (Lipu and Siibak, 2019[54]). In fact, several of the pre-teens in this study claimed that their parents were not used to asking children's permission before sharing their images on social media. Furthermore, even if pre-teens had voiced their concerns about the choice of photos, especially in those cases where parents had uploaded images that the pre-teens considered to be embarrassing or unflattering (e.g. 'ugly photos', 'where my hair is messed up') and asked the parents to remove them from their profile, these requests were oftentimes not responded to (Lipu and Siibak, 2019[54]).

In many respects, these perceptions of pre-teens are accurate. Even though some mothers expressed the need to consult with their child before uploading an image or tagging them on social media, the majority of the mothers in this sample rarely considered the child's opinion on the matter (Lipu and Siibak, 2019[54]). Most of the time these mothers justified their stance by claiming that parents have a right to decide and to control which information they share about their children on social media, especially if children are still quite young.

These findings thus suggest that there is a considerable discrepancy between the views of pre-teens and those of their mothers regarding sharenting, all of which might lead to the 'privacy boundary turbulence' (Petronio and Durham, 2015[70]), that is due to emerge when a child's intended privacy levels are inconsistent with how their parents treat their information. This inconsistency might also cause distress in a parent-child relationship.

Another potential risk to which sharenting practices might lead is referred to as digital kidnapping (Friedman, 2015[71]; Whigham, 2015[72]). In this context, digital kidnapping

refers to instances when a stranger steals a photo of a child from social media and uses it in a different context, often inventing new narratives around the persona of the child, or claiming the child as one's own. Sometimes a set of hashtags, such as #babyrp or #adoptionrp, are used together with the stolen photo to indicate that the poster is roleplaying; on other occasions, however, digital kidnapping may also lead to a real cybercrime such as identity theft of the child, or potentially lead to online grooming.

Findings of a recent qualitative study amongst the mothers of 0-3 year-olds in Estonia (N=20) reveal that digital kidnapping is a rare but nevertheless real threat that mothers have noticed while communicating on social media, and particularly on moms' groups on Facebook; some have even had their own children fall victim to it (Traks, 2019[73]). For example, one mother from the sample described how a stranger had stolen photos of her children from her blog and uploaded them on a dating website, claiming that the children could be bought as sex-slaves (Traks, 2019[73]). On other occasions, the interviewed mothers reported instances when strangers had posted photos of digitally kidnapped children on different mommy groups on Facebook accompanied with a narrative which stated that the child in the photo was seriously ill and in need of expensive medical care that the parent, in this case the digital kidnapper, was unable to cover. In these occasions, the kidnappers were hoping to find sympathisers from the community with the hopes of raising money to "cure" the child (Traks, 2019[73])

Although the above examples reveal the gloomiest potential scenarios sharenting could lead to, raising the awareness of parents on the topic is crucial. Despite popular press covering the topic of digital kidnapping to some extent in recent years (cf. Friedman (2015[71]); Whigham (2015[72])), scientific research on the topic is slowly starting to emerge.

Conclusion

In the technology-saturated society of today, where almost all aspects of life are transformed into quantifiable data, it is becoming increasingly important for social scientists to scrutinise how the processes of datafication affect our everyday lives such as our understandings of society, human behaviour, conduct and social interaction. It is also important to acknowledge that this era of datafication has an important effect not only on adults, but also on children. Furthermore, present day children's personal information is being collected, monitored, stored and shared in such a myriad of ways, and in many respects, as argued by Barassi (2018, p. 169[74]), "parents' digital practices are directly related to this transformation". Alternatively, as ironically noted by others, in an era of "transcendent parenting" (Lim, 2018[75]), spying has become "an enhanced parenting tool" (Marx and Steeves, 2010, p. 205[76]).

This overprotective and technologically moderated parenting stance has been largely caused by the competing demands of social-, work-, and family life and the desire to be a good parent, or to do parenting right. More and more parents have fallen victim to the moral panic initiated by the parents and voiced by public media, anxiety-heavy marketing jargon and mom-shaming discourses on social media, all of which have made a mark on the societal expectations about "good parenting". In fact, similar to Tiidenberg and Baym (2017[77]), who argue that when performing pregnancy (i.e. sharing content) on Instagram, pregnant women are expected to "learn it, buy it, and work it".

Present day parents in general are increasingly disciplined into a specific plugged-in parenting routine. This chapter has explained how expecting parents are first turning to social media and various websites to learn the tricks about responsible parenting, and later

feel that various mobile apps and digital devices need to be bought and used, so as not to appear as an irresponsible and careless parent.

Caring for children's well-being and safety has always been one of the cornerstones of parenting philosophies. However, it seems that it is becoming increasingly important to remind today's parents that "parenting issues will not be solved just because 'there is an app for that'" (Zaman and Nouwen, 2016, p. 6[47]). Rather, it is important to acknowledge that various digital parenting tools – from pregnancy apps and baby monitors to parental controls and tracking devices – tend to one-sidedly focus on the protective and preventative features (Zaman and Nouwen, 2016[47]) while almost entirely discarding the issues related to the digital rights of the child.

Various policy documents (e.g. Recommendation CM/REC(2018)7 of the Committee of Ministers to Member States (Council of Europe, 2018[78])) emphasise the role of parents and caregivers in protecting children's privacy, personal data and online reputation and the need to respect the confidentiality of their correspondence. However, parental awareness and public opinion on the topic needs to become more nuanced.

Furthermore, there is not only a need to empirically study and "document the diverse surveillance imaginaries and practices that are enacted in different families" (Mascheroni, 2018, p. 10[21]), but also a growing imperative for a child-oriented approach to dataveillance (Lupton and Williamson, 2017[20]). As there are currently no empirical studies on children's views and experiences related to intimate surveillance exercised by parents, future research should aim to fill this gap in the literature. This could provide important insight for parents and policy makers alike. In fact, there is not only a growing need both on the national and international policy level for initiatives that would help to foster the accountability and responsibility of industry players, there is also a strong need for an ethics-based conceptual approach for the tech industry that has helped to commodify parental anxieties.

Note

[1] Follower counts as of May 2019.

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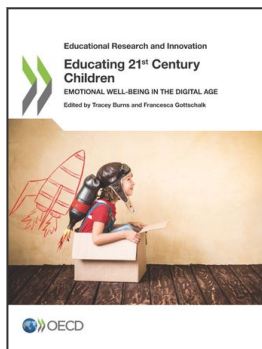
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