

# 'I keep a close watch on this child of mine' : a moral critique of other-tracking apps

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## **'I Keep a Close Watch on This Child of Mine': A Moral Critique of Other-Tracking Apps**

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### **1 Introduction: From Quantified Selfhood to Quantified Otherness**

Smartphones, mobile applications, and computing devices are omnipresent in our lives. Mobile and wearable computers interact wirelessly with numerous sensors from a distance. Their omnipresence makes sure that we are never unconnected from the network of ubiquitous information and, via that network, from others. Our situation is hence one of 'continuous connectivity'.

Thanks to the miniaturization and affordability of computational devices, individuals can self-track their movements and behavior. This self-tracking through automated wearable devices has become known as 'the quantified self' (QS) (see e.g. Swan 2013). Self-analytics and self-measurements are not new, as humans have always found ways to measure bodily data (Crawford, Lingel, and Karppi 2015). Yet, the automated and networked manner in which Information and Communication Technologies (ICTs) gather the data opens unexplored territories. Self-tracking makes the individual's body more transparent and calculable, because the technology allows "to measure, model, simulate, monitor, and manage our bodies ever more deeply" (Floridi 2014, p. 75). QS technologies, which are ultimately small computers that record data, confront the individual with detailed information, including sleeping habits, calories burnt, and how many steps one has walked. These devices act as a 'surveilling other' in order to screen, evaluate, and even discipline the self to stimulate positive behavioral changes.

The quantified self is seamlessly connected in the data-driven informational network. Logging one's bodily data by self-tracking devices such as a wrist-wearable device might seem like an individual act at first sight; yet, the wearable is connected to the internet where data is stored and can be accessed in order to have a detailed look at the statistics. All this individual data can be joined together to reveal information about a group of people. A well-known example is the earthquake in Napa, California, in August 2014. Jawbone revealed a graph of Jawbone wearers, living in the Californian area. The graph gives insight into how the earthquake affected their sleep: the time of the wearers' waking up and how close they were situated to the earthquake's epicentre (Mandel 2014). In addition, social networking websites have made the act of sharing personal information a daily routine. In doing so, the self becomes ever more transparent to the other, who is dephysicalized and distant but nonetheless present in the network (Lanzing 2016).

The advent of mobile and wearable technologies has not only led to new manifestations of seeing *yourself* but also of seeing *the other* through technology. Recent developments make other-tracking within reach, often without us even realizing it. What used to be the exclusive reign of a hypothetical Big Brother has become an activity we can all take part in. Surveillance no longer only takes place in a top-down manner: we can control each other and ourselves with contemporary ICTs in private and public settings. This practice has become known as 'sousveillance' (see e.g. Mann, Nolan, and Wellman 2003). With smartphones, we make pictures and videos of others that can subsequently be distributed over the internet. In addition, devices allow us to

remotely track and monitor people with whom we have a close relation, such as children and partners. For example, GPS-enabled, location-based services (LBS) connect us to the other, albeit in a *hidden* – i.e. without demanding our constant attention – and *distant* manner. Still, this hiddenness can be partly breached, as we are able to trace the other through these technologies. This constant, remote tracking of the other's data, either covertly or with consent, engenders a situation of 'quantified otherness' in which the other is approached through data.

An interesting case, which will be at the heart of this article, is offered by 'other-tracking apps', i.e. mobile applications that make it possible, via location technology, to track and monitor others. '1TopSpy', for example, "secretly records and logs SMS messages, Call history, Contact list, Photo, Web visited history, Apps usage history; tracks GPS locations of the phone in real time and displays all recorded locations" (1TopSpy web). The holder of the target phone is left unaware that the app has been installed on his or her phone. This particular app is designed for tracking children, employees, and partners, to find out if one's spouse is cheating. This obviously raises compelling moral questions, among others about privacy and trust violation.

The question to what extent ICTs alter our moral condition has preoccupied moral philosophers since the wider dispersal of computer-mediated virtuality in the 1980s (see e.g. van den Hoven and Weckert 2008). Other-tracking apps give new ground to these moral queries. In this article, focus lies on apps designed for parents to remotely track the movement and whereabouts of their child(ren). It is our contention that these apps raise considerable concerns, which should be recognized as they are implemented. Their development fits within the broader Western societal trend of intensive parenting (Bernstein and Triger 2010; Clark 2013 - cf. *infra*). Designers respond to parental concerns by creating safety devices that allow parents to have virtual togetherness with their children over a distance. Since the wider dispersal of the mobile phone, parents can more easily stay connected with their children. In this context, the mobile phone has been referred to as "the world's longest umbilical cord" (Shellenbarger 2005, web). Contrary to the mobile phone, other-tracking apps no longer demand response or participation from the children's side: parents can exercise control from a distance without interaction. A controlling effect is established because the tracked children are aware that the parent can access the data and graphs about their whereabouts. As they reduce uncertainties, these apps have been referred to as "truth-making machines" (Gregg 2013, p. 307). The case of parents tracking their children can be considered as one particular example of broader reflection on what continuous technical connectivity means in terms of moral connectedness.

While acknowledging that the specific use of other-tracking apps is context-dependent, this article seeks to demonstrate that a critical stance towards other-tracking by parents and a reflection on its desirability is required. The article unfolds further into two parts and a conclusion. In the next section, 'Continuous Connectivity in an Algorithmic Culture', the notion of 'algorithmic culture', of which other- and self-tracking by means of ICTs are an intrinsic part, is enlarged upon. The subsequent section, 'Other-Tracking Apps for Parents', is the core of this article and consists of moral critiques. For the purposes of this article, the discussion is confined to early adolescents (11-14 years) who are being tracked by their parents. Throughout early adolescence, teenagers begin to strive for more autonomy and self-determination. This is an important transition period to prepare for separation from the parent in order to become self-reliant. Furthermore, early adolescents seek to avoid parental control (e.g. Barron 2014; boyd 2014). Even though there is little doubt that many parents might implement these technologies with good intention to extend care and responsibility

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over a distance, our concern is that they mistake control for care. It is therefore particularly important to give attention to the active role that adolescents have, as they are no passive receivers of technology (cf. *infra*). This clash between adolescents who seek to avoid parental control and parents who might consider control by means of ICTs as a form of extended care, demands for a thorough analysis in order to reflect on potential costs and problems. Even though parental involvement is undeniably important for parenthood, we will argue that parents should maintain a proper distance. A preliminary framework for maintaining the critical distance is therefore provided. We conclude the article with some final thoughts.

## 2 Continuous Connectivity in an Algorithmic Culture

Wearable and mobile computing engenders a situation of being 'always on'. This continuous connectivity manifests itself in three interrelated ways: *first*, the connectivity between technological artifacts, e.g. by way of sensors; *second*, subjects who are connected with each other through these artifacts; and *third*, the connectivity between artifacts and subjects. The general theoretical conceptualization of that connectivity traces back to the earliest theoretical analyses of the internet in the 1980s and 1990s. Theorists started out framing virtual space as a realm in itself, ontologically or at least structurally distinguished from and parallel to actual space (see e.g. Tomas 1991). These first-generation theorists wrote in terms of an ontological dualism, i.e. "a dichotomy of spirit and matter, with matter fixed firmly in the familiar world of the body" (Shields 2003, p. 78). At the end of the 1990s this idea was gradually disproven by empirical research and phenomenological approaches, showing a merging or hybridization between virtual and actual spaces, heralding the second phase in the conception of the virtual-actual dialectic.

Presently, we are entering a third phase in the theorization of an alleged demarcation between the virtual and the actual: contemporary times are characterized as the "Age of Context" (Scoble and Israel 2014) because sensors make use of context in order to gain and interpret information about one's location (place), what one is doing (activity), and so forth. We are never cut off from the network; we are in fact always and already in it. Due to contextual technologies we have also entered into a situation of being 'always there'. The example of mobile apps serves to illustrate the issue: in opposition to more classic websites that still require a conscious act of browsing or logging-in in order to access them, smartphone apps such as those constructed around LBS may be present and working in the background while escaping our attention. Whereas previous forms of the internet had a *deterritorialized* character (Lévy 1998, p. 56), weakening the meaning of time and place, the Age of Context has a *territorialized* character that demands for a return to the physical location and context.

By being 'always on' and 'always there', self- and other-tracking devices are inherently part of a data-driven 'algorithmic culture', i.e. a society in which we have come to approach and understand ourselves, others, and our environment increasingly through data and algorithms (see e.g. Pasquale 2015; Striphas 2015). It may not surprise that companies, from economic and marketing viewpoints, aspire to connect as many people as possible in the network. What is perhaps more surprising is that people are so easily convinced to disclose their selves online. Many people avidly share details of their personal lives on social network services. Companies gain profound insight into users' behaviors thanks to the gigantic databases that are being produced this way. These networking sites meet our social demands since they allow us to stay connected with our friends; yet, we should be attentive to their underlying and often hidden

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structures. When we disclose online information about our lives, we make ourselves more transparent. The fact that we leave a digital trace often retreats to the background of our everyday awareness. An interesting example is the negative *New York Times* review of an electric Tesla car, written by John M. Broder (see Scoble and Israel 2014, pp. 59-60). As Tesla stores all data in an Event Data Recorder, Tesla's CEO Elon Musk subsequently made the logs of Broder's test drive public, which disclosed the contradictions between the review and the car's recordings. Much ink has flowed on another interesting example, namely how data analytics on purchasing behavior can disclose a woman's pregnancy. In 2012, Charles Duhigg reported that the American discount retailer Target knew that a teenager was pregnant, based on data of the customer loyalty card, before her family was informed, and started to send her advertisements about baby products (Duhigg 2012).

Since the wider dispersal of computer-mediated virtuality throughout the 1980s and 1990s, the other is increasingly encountered at-a-distance through algorithms and data. Affordable present-day other-tracking technologies such as apps and smart living sensors make the other ever more transparent to the self. In the following part, we focus on other-tracking possibilities for parents; throughout this part, we will raise a number of substantial concerns.

### 3 Other-Tracking Apps for Parents

There is no doubt that parental involvement and control are necessary to teach and direct children and adolescents towards adulthood. Hans Jonas (1903-1993) (1979/1984, p. 130) framed the parent-child relation as "the archetype of responsibility"; it is the parents' task to protect their children from harm. Parental monitoring is, of course, not new and does not have to be technologically mediated (Stattin and Kerr 2000, p. 1072); parents can also closely follow their children by having frequent conversations with teachers, amongst other things. Social interactions in childhood and adolescence underwent profound changes due to the internet and the mobile phone. Nowadays children in primary school often already carry their own phone. Mobile phones give parents opportunities to monitor by calling or sending a text message. Even if the school does not allow the use of mobile phones, parents still want their children to carry them in cases of urgent situations (Barron 2014, p. 407). Other studies show that parents keep their mobile phones in close proximity if their children are not with them (Palen and Hughes 2007, p. 343). In addition, mobile internet technologies provide ample opportunities for parents. With the smartphone they can easily e-mail their son or daughter, follow him or her on social media, and so forth. This way, parents can keep a close and real-time watch on their child(ren) even if they are not together.

The advent of GPS-enabled mobile apps allows parents to potentially continuously monitor their children. There is a plethora of mobile applications available such as 'SafeT' children tracker (SafeT web) or 'Life360' (Life360 web). These apps can be easily installed and many of them are free of charge<sup>1</sup>. 'Life360', for instance, is a free app; its developers claim that 50,000,000 families make use of it (Life360 web). The app is intended for the whole family; thus it is also possible that children can track their parents. In case of an emergency, there is a panic button, and the app also, amongst other things, alerts the parent when his or her child safely arrives,

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<sup>1</sup> Some of these apps also offer additional features, such as the web pages your child has visited, their call logs, text messages, and so forth.

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for instance at school. The online promotion video (see Life360 web) uses catchphrases such as “stay together even when you are not” and “it brings you closer to the people you love”. Since we have entered into the Internet of Things (IoT) era, i.e. everyday objects are increasingly becoming part of the internet, technologies already make it possible to monitor newborn babies. ‘Mimo’ (Mimo web) is smart baby clothing that records bodily data in real-time, such as sleeping habits and body temperature. The device is connected to the smartphone of the parents.

Several theorists observe a remarkable and “increased protection of children by monitoring them in time and space”, facilitated by contemporary ICTs (Barron 2014, p. 406; see also Nelson 2010; Bernstein and Triger 2010; Clark 2013; boyd 2014). This observation goes together with the Western trend of intensive parenting since the mid-1980s (Bernstein and Triger 2010, p. 1221; Nelson 2010). Other-tracking apps and devices are “technologies of care” that allow parents to extend their responsibility across the network (Thumala, Goold, and Loader 2015, p. 17). Even though parents are often well-intended in their use of the devices, these technologies deserve critical and profound reflection because they are not innocuous or neutral instruments. It is understandable that parents worry and express concerns; yet, intensive parenting, which has the potential to become over-involvement and overprotection (see Clark 2013), might hinder adolescents to separate from their parents. Concerning the regular internet, scholars were worried that the ethical commands of the distant, mediated other could be easily disregarded (see e.g. Introna 2001). In the case of other-tracking apps, our concern is that they bring parents *too close* and, this way, in a Levinasian understanding, they do not respect the other’s heterogeneity, autonomy, and privacy.

In what follows (3.1-3.4), four concerns about other-tracking by parents are discussed, and a preliminary framework on proper distance is provided (under 3.4). The analysis will be confined to early adolescence, i.e. 11 to 14 year olds (Steinberg and Silverberg 1986)<sup>2</sup>. Early adolescence is an important transition period to move away from childhood. Early adolescents strive for more autonomy and individuation, by seeking to operate agentially, by making more choices autonomously, and by negotiating the parents’ rules (Steinberg and Silverberg 1986; Zimmer-Gembeck and Collins 2003; Fleming 2005). Furthermore, relational changes are critical: although the family remains important, the peer group and circle of friends gain more prominence. This transition goes together with attempts to resist parental control and to strive for additional rights (Carlo et al. 1999, p. 134).

### ***3.1 Increased Discomfort***

Only very recently have parents been given the choice to opt for other-tracking technologies; the marketing campaigns promise them increased peace of mind and comfort. MIT Media Lab instructor David Rose touches upon this in his book *Enchanted objects* (2014): “To be safe, to feel protected from harm, is one of our deepest, most basic human drives, and over the centuries much of our tech innovation has focused on this drive” (p. 100). Rose suggests not looking upon observance technologies as intrusive or spying but simply as monitoring: “I have personal experience with living under surveillance every day, and I can attest that I find it far

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<sup>2</sup> Literature on adolescence often distinguishes between early, middle, and late adolescence (see e.g. Zimmer-Gembeck and Collins 2003, p. 14). There is no clear-cut consensus on the age ranges of early adolescence: others demarcate the age range between 12 and 13 years (e.g. Fleming 2005) or between 13 and 15 years (e.g. Fabes et al. 1999).

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more reassuring than discomfiting” (Rose 2014, p. 104). However, although it might be tempting to use other-tracking technologies to reduce concerns, there are reasons that demand us to be critical about the promise that they will reduce those worries.

It is not unlikely that being ‘always on’ and ‘always there’ could increase extreme discomfort. If one is continuously connected to someone with whom one has a relation of care, one is constantly responsible, also from a distance. Up to this point, there are no data on the effects of being monitored by other-tracking apps, but there is an interesting analogy to draw upon with research conducted within home care. Contextual technologies can make the care receiver’s house ‘smart’ by means of sensors. In cases of emergency, the technology automatically alarms the caregivers. Research results, however, indicate that caregivers do not *always* want to be aware of the situation, exactly to avoid discomfort and anxiety: “Being continuously aware of the activities of a person one is closely related to and takes care of, might in fact result in more worries, rather than bring comfort” (Duysburgh et al. 2015, p. 5). It might be better to work with a rotation system, to temporarily relieve the caregiver from this burden. In this context, Fahlquist (2013, web) writes about the right not to know, exactly because knowing that you can have constant access to this information might increase concerns and fear. These technologies, intended to induce concerns, might actually nurture anxiety.

Furthermore, even if parents are continuously connected to their son or daughter, the question can be raised as to what extent parents can intervene from a distance. Even though it is statistically rare that someone will do harm (cf. *infra*), a harm-doer probably will remove the smartphone in order to reduce digital traces. Although these apps facilitate parental control, for instance by giving parents access to their child’s whereabouts and movements, the technology also gives appearance of control, because the tracking can be broken off. It is our contention that these apps give both control and appearance of control to the tracking parent. The forms of control that other-tracking apps establish have real effects, amongst other things because the tracked child knows that the parent can always access and inspect the data.

This appearance of control can also be linked to the observation that children and teenagers are not passive receivers of technology. Barron (2014) conducted an ethnographical study on parental surveillance via mobile phones with 9-12 year olds in Ireland. The children involved in her study found inventive strategies to escape the (remote) attention of their parents, by not answering their phones, by lying that their phone had ran out of battery, that they did not have enough credit to ring back, or by giving false information about their whereabouts (Barron 2014, pp. 408-409). boyd (2014) also observed in her study on the networked lives of contemporary teens that, if the phones of the teenagers involved in the study rang, it was mostly the parents calling to check in. The teenagers reacted to this as “an unwanted interruption” (boyd 2014, p. 3). With regard to other-tracking apps, it is not unlikely that the monitored child will give his or her phone to someone else to (at least temporarily) escape parental control and to find more autonomy and privacy.

### ***3.2 Exploiting Fear***

Technological developments reflect what a society values and deems important. Other-tracking apps for parents are not an accidental or isolated development. Parental fears are real. Because there now are technological solutions to respond to these concerns, it only takes a small step for developers and marketers to monetize them (see e.g. Schneier 2015). Marketers respond to parents’ fear, which might be irrational anxiety

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(cf. *infra*), by developing safety devices. These apps promise parents to exercise care in a more effective way.

'Life360' was designed in 2008 in the aftermath of hurricane Katrina to locate family members in all circumstances (Madison 2014). A hurricane is a disaster and an exceptional situation; yet, the app is developed for an *everyday* context. Parental concerns relate to a broader societal issue, namely that of the 'construction of fear' or 'culture of fear' (see e.g. Furedi 2002; Gardner 2008; Simpson 2014). This culture of fear ignores scientific studies that indicate that the Western world has become safer (see e.g. Pinker 2011). In our media-saturated world, dramatic stories, among others about abducted or sexually abused minors, are magnified, leading to moral panics about strangers, pedophiles, and sexual predators (Jewkes and Wykes 2012). Yet, most instances of sexual violence against children and teenagers occur by people that are trusted by them (boyd 2014, p. 110).

Although the following example is not a form of other-tracking, it is nevertheless an interesting illustration of how developers seek to meet parental concerns, even if there is a very unlikely statistical chance for abduction: in 2015, there was a test case in Belgium to attach ankle monitors to babies on the maternity floors of hospitals. If a baby would be taken away from the maternity floor, the alarm would be activated. The test case was heavily critiqued, because it instilled fear. Ironically, in the very unlikely case that something would go wrong, the ankle monitor creates a false feeling of safety: the GPS-tracking can be stopped if one wraps aluminum foil around the monitor (Mienema and Post 2006). Ankle monitors are generally used to discipline ex-prisoners; the baby's electronic tag reveals how control can be mistaken for 'care' within a culture that, while seeking to erase uncertainties, overemphasizes fear.

In addition, several academics observe that the development of safety devices enforces intensive parenting exactly because the technology allows close monitoring in an easy and affordable manner (see e.g. Bernstein and Triger 2010; Nelson 2010; Clark 2013). Overprotective and anxious reactions of parents have led to the phenomenon of "bubble-wrapping children" (Malone 2007, p. 523): parents take exaggerated precautionary measures to reduce uncertainties (see also Fahlquist 2013). The notion of 'bubble-wrapping children' connects with other terms that have gained public and academic attention such as 'overparenting', 'parenting out of control', or 'helicopter parent' (Nelson 2010; Locke, Campbell, and Kavanagh 2012). Parental fears might hinder trust, both from the viewpoint of being trusted and setting trust in others, which might be thwarted by "stranger danger" (boyd 2014, p. 103). It is essential to take the perspective of the person who is being tracked in order to reflect on the message that is being conveyed to him or her. The young person's wellbeing could be affected, because fearful parents are likely to increase anxiety. Many of the teenagers involved in boyd's research (2014, p. 86) "believed that danger lurked everywhere"; their narratives echoed anxieties expressed by their parents. By being overprotective and anxious, parents neglect that their son or daughter might miss significant experiences that teach them to be more careful, and to set trust in others (cf. *infra*, 3.3). If parents believe marketers and anecdotal claims instead of scientific facts, this is an error that has ethical implications, such as intruding into private spaces. The United Nations Convention on the Rights of the Child (1989) explicitly states that children and minors have a right to privacy (United Nations web). Even if parents have the freedom to track and even though fears are understandable, it is essential to consider and evaluate the potential costs of their actions.

### ***3.3 Decreasing Self-Reliance***



The association of surveillance with care and responsibility traces back to Jeremy Bentham (1748-1832), who considered the panopticon as “a new principle of construction applicable to any sort of establishment, in which persons of any description are to be kept under inspection; and in particular to penitentiary-houses, prisons, houses of industry, work-houses, poor-houses, manufactories, mad-houses, lazarettos, hospitals, and schools” (Bentham 1995, p. 29). In his writings of the panopticon, the connotations of surveillance as care (e.g. hospitals, schools) and as control (e.g. prisons) are intermingled<sup>3</sup>. With regard to schools, the panopticon, an efficient and “simple idea in architecture” (Bentham 1995, p. 95), could constrain children through its design, especially during the hours of study: “All play, all chattering - in short, all distraction of every kind, is effectually banished” (Bentham 1995, p. 86).

The panopticon is often referred to as a present-day metaphor for the command society (see Foucault 1975). Present-day ICTs facilitate surveillance in relations of care and responsibility, “promoted as a required tool of responsible and caring parents” (Barron 2014, p. 402). Clark (2013/2014, p. 227) questioned American families from diverse backgrounds about how they negotiated media technologies in their family and home lives; in total, 343 people (children and parents) were interviewed and observed over the course of eleven years. Clark found that present-day ICTs enable helicopter parenting, especially in middle- and upper-middle classes, because these parents were more involved in the lives of their preteens and teenagers (2013/2014, p. 205). She furthermore observed that late adolescents (i.e. post-high-school), who grew up in middle- and upper-middle classes, regularly made use of mobile devices to count on their parents in order to actively seek for support and guidance instead of relying on themselves (2013/2014, p. 205).

Interestingly, most of the parents in Clark’s study did not want to hover, but nonetheless this turned out to be hard to resist. Their impulse to monitor was “not always rooted in a desire to be intrusive” but as an expression of care and responsibility (Clark 2013/2014, p. 41). There is empirical evidence that values on what it means to be a ‘good’ parent are shifting in Western societies. boyd (2014, p. 72) found that “there is significant pressure for them [*parents*] to engage in acts of surveillance to be “good” parents”. We have to be particularly attentive to this shift, especially if parents would somehow start to feel obliged to monitor their children by means of ICTs. Schiffrin et al. (2014) found, in a quantitative study that focused on college students, that helicopter parenting was “related to higher levels of depression and decreased satisfaction with life” (p. 554). The authors explain this finding in terms of limited autonomy and competence (Schiffrin et al. 2014, p. 555).

Although these studies do not focus on other-tracking specifically, their findings are nonetheless interesting, because other-tracking apps enable parental involvement. This way, other-tracking devices might strengthen harmful, pre-existing parenting styles, performed by parents who already hover over their children. Additionally, Clark’s empirical findings reveal that, although most of the parents involved in her study did not want to hover, their controlling behavior nonetheless had a hovering effect on the children and teenagers. Other-tracking possibilities might thus affect non-helicopter parents - or parents who would not self-report their parenting styles as ‘hovering’ - as well, especially if the notion of being a ‘good’ parent is shifting towards control as a form of care, as boyd’s findings illustrate. Early adolescence goes together with a striving for autonomy that prepares the young boy or girl for separation from the parent. These

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<sup>3</sup> I am grateful to an anonymous referee for pointing this out.

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technologies might hinder autonomy, self-reliance, and trust, which are all important to become a conscientious adult.

Research indicates that poorly monitored adolescents are inclined to show more antisocial and even delinquent behavior (Stattin and Kerr 2000). Parental involvement is necessary and parents should give a clear set of rules and control to a certain degree. In doing so, an essential factor is to establish communication. Studies suggest that bad behavior can be prevented by parent-child relationships that facilitate dialogue (Stattin and Kerr 2000, p. 1082). Parental monitoring should thus be a two-way process, in which the active role and participation of the minor is acknowledged: parental attempts to find out about their child's behavior must be matched with the son's or daughter's attachment to the parent and willingness to share and disclose information about themselves (Stattin and Kerr 2000, p. 1083).

None of this is to say that problems with these other-tracking technologies cannot be overcome. The reasons and circumstances under which the tracking takes place are vital. As aforementioned findings already disclosed (cf. e.g. Barron 2014; boyd 2014), children and teenagers find ways to resist parental control and it is important to acknowledge their active role. A healthy moral development means that they internalize the set of rules and principles, i.e. that they understand what they mean (Zimmer-Gembeck and Collins 2003, p. 14). Instead of experiencing fear for being punished if they do not abide by the rules, they should also attain an internal viewpoint of the rules. If the technology is forced on them without room for deliberation or negotiation, the process of internalization might be hindered. Co-regulation is an important first step for early adolescents in their search for more autonomy and separation from the parents, before they get complete responsible autonomy and self-regulation (Zimmer-Gembeck and Collins 2003, p. 20). If their first attempts for increased mobility and freedom outside the home justify surveillance by other-tracking apps, then one should be reflective about how the benefits can be maximized, for instance by increasing freedom and mobility in a sensible manner instead of reducing it because of fear or overprotection, or by only using the devices on a temporary basis. Situations in which teenagers become overly dependent on their parents instead of learning to rely on themselves and to think their way out of a situation should be avoided.

Technologies transform everyday realities and experiences. Surveilling technologies configure the experience of the people under control by shaping "their understanding of the social context" and by potentially undermining their agency (boyd 2014, p. 74). Technologies actively shape our actions and "help specific relations between human beings and reality to come about and co-shape new practices and ways of living" (Verbeek 2011, p. 4). By giving parents insights into their child's whereabouts and behavior, these apps have the potential to become 'moralizing' machines that discipline and potentially restrict self-development. Of course, technological mediation and moral agency are not mutually exclusive; it becomes problematic when technological mediation fully determinates free choice (see Verbeek 2011)<sup>4</sup>. Barron's research (2014, p. 401) disclosed that minors could use the mobile phone as a "device to enable them to both negotiate and resist surveillance thus increasing their autonomy and independent mobility". In order for other-tracking to hold more liberating - instead of purely controlling - possibilities, minors should be given the ability to

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<sup>4</sup> There is, of course, an important difference between knowing that you are being tracked versus being tracked or monitored in a secret, hidden way. For instance, users of 'Life360' have given their consent, whereas the app '1TopSpy' (cf. supra) is secretly installed in the target phone.

negotiate and deliberate. In doing so, parents should find the right balance between protection and independence to avoid intrusion (cf. 3.4).

### ***3.4 Over-proximity: The Need of a Framework to Safeguard the Critical Distance***

As we have illustrated throughout this article, autonomy and self-reliance are necessary for young people to become conscientious adults; hence parents should maintain a distance in order to give them enough room for self-development. Drawing upon the observations that, first, other-tracking technologies have the potential to enable over-involvement that might thwart self-development; second, that minors have a right to privacy that might be violated if parents intrude through continuous connectivity; and, third, that parents mistakenly interpret care in terms of surveillance and control, our concern is that other-tracking brings parents too close.

Starting from the philosophical foundation of the notion of 'alterity' or 'otherness', being in a moral relation with someone means to maintain a proper or critical distance. With regard to the question concerning what continuous technical connectivity means in moral terms, it cannot be disregarded that the emergence of 'quantified otherness' problematizes our ethical orientation towards each other. In his seminal work *Totalité et infini - Essai sur l'extériorité* (1961), Emmanuel Levinas (1906-1995) defines otherness or alterity in terms of "l'hétérogénéité radicale de l'Autre" (1961/1971, p. 25). To quantify the other, i.e. to approach him or her through data and algorithms, might hinder a sincere moral understanding. In all cases, thus also in the particular case of other-tracking apps, this means that we have to respect one another's heterogeneity by maintaining a distance.

Albeit in a different context, media theorists such as Jean Baudrillard (1929-2007) and Roger Silverstone (1945-2006), who are influenced by the writings of Levinas, have also touched upon this. Concerning virtual technologies, Baudrillard did not argue that the other, whom we 'meet' through these technologies, is kept at a distance but, on the contrary, that he or she is being brought too close. The others appear instantly present in real-time. As a result, the other is always too immediate and transparent. In a Levinasian understanding, there must be a minimal distance between self and other in order to create meaning and a sincere ethical relation (Baudrillard 2000, p. 71). Yet, these technologies have the potential to surpass this minimal distance. In the case of other-tracking for parents, one risks ending up in a situation of 'over-proximity' that might be driven by irrational anxieties and/or wrong presuppositions as to what it means to be an involved parent. In addition, even though there are, to the best of our knowledge, no research data on this, it is likely to assume that abuse is possible. For instance, divorced parents can use these apps to spy on their ex-partners in order to check if the ex is doing his or her parental duties on time, since the monitoring parent can see at what time the child arrives at school. This engenders a situation of over-proximity and trust violation with the ex. Spouses can also use the app to spy on their 'significant other', which has been framed as 'adultery apps' (see e.g. Gregg 2013). In addition, these apps raise compelling questions with regard to personalized marketing and monetization of logged data. As several cases have already disclosed (see e.g. Schneier 2015), data is often sold to third parties. If, for instance, a fast-food restaurant or a particular shop receives information, based on GPS-tracking, that a minor is approaching the area, marketers can send out personalized advertisements.

Silverstone (2002; 2007) offers a valuable ethical framework that addresses the problem of over-proximity. Information technologies connect us and bring us together,

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but we stay at a physical distance, while our “moral task is to create manageable social closeness” (Silverstone 2002, p. 12). Silverstone attempted to rediscover a proximity that is intrinsically linked to care and responsibility for the other. To this aim, he introduced the concept ‘proper distance’ to call for a new analytical space in which one’s ethical duty is to strive for an ethical proximity with the other, while always remaining at the proper distance: that is, neither too proximal nor too distant. Silverstone’s approach offers an interesting angle to establish a framework for other-tracking apps for parents, to balance between care and appropriate control and to reflect on potential costs. This framework has to incorporate a number of dimensions. In what follows, we offer a preliminary framework, which integrates our moral concerns.

### **(EARLY) ADOLESCENT**

<b>Privacy/intrusiveness</b>	<ul style="list-style-type: none"> <li>- The right to privacy</li> <li>- The right to know who controls the data</li> <li>- Related to open dialogue: the right to know that he or she is being tracked</li> </ul>
<b>Self-reliance</b>	<ul style="list-style-type: none"> <li>- The right to agency, in order to become a responsible adult</li> <li>- The acknowledgement of his or her active role in order to negotiate and deliberate</li> </ul>
<b>Freedom</b>	<ul style="list-style-type: none"> <li>- The right to learn by trial and error and to make mistakes (important for self-development)</li> <li>- The right to autonomous decision-making</li> </ul>
<b>Potential costs</b>	<ul style="list-style-type: none"> <li>- Benefits, such as increased experience of freedom and mobility, should outweigh potential harms, such as coercion; lack of communication; hindering of self-reliance, wellbeing (e.g. increased anxiety), and trust; psychological distress (related to the mediation, e.g. constant monitoring might lead to constant evaluation)</li> </ul>

### **PARENT**

<b>Parental task</b>	<ul style="list-style-type: none"> <li>- To give care</li> <li>- To be responsible</li> <li>- To be protective</li> <li>- To be involved, which includes control and establishing sets of rules and norms</li> <li>- To avoid instilling fear</li> <li>- To foster self-reliance</li> <li>- To trust</li> <li>- To foster communication through dialogue</li> <li>- To (co-)regulate their son or daughter in order for him or her to become a conscientious and self-reliant adult</li> </ul>
<b>Overreliance on technology</b>	<ul style="list-style-type: none"> <li>- Parents cannot do much from a distance</li> <li>- The technology and connectivity could be distractive</li> </ul>
<b>Potential costs</b>	<ul style="list-style-type: none"> <li>- If the right balance is not found, i.e. involvement becoming over-involvement or lack of involvement</li> <li>- Increased discomfort, stress, anxiety</li> <li>- False feeling of being in control</li> <li>- Might destabilize the parent-child relation especially in case of coercion (denial of autonomy)</li> <li>- Also in terms of abuse: divorced parents; data abuse;</li> </ul>

This preliminary framework is open to discussion. The omnipresence, affordability, and easiness to install, amongst other things, might motivate parents to install these apps, either covertly or openly, without (properly) considering the consequences. Within a broader societal context, technologically mediated parental monitoring - from smart baby clothing for new-born babies to devices like 'RookieDongle' (RookieDongle web) to monitor the driving skills of young adults - can be linked to other forms of sur- and sousveillance that we have gotten used to, such as surveillance cameras on the street. The wide dispersal of pictures and videos made with our smartphones no longer necessarily feels as if we are intruding into other people's private spaces. Numerous people embrace a "track-and-share mentality" (Morozov 2013/2014, p. 241) and diffuse personal information on the internet. In a world in which sensors and cameras are always within reach, respecting the proper distance towards the other is becoming ever more problematized.

#### 4 Concluding Thoughts

The guiding concern of this article has been to identify moral concerns about other-tracking technologies for parents. Even though parental monitoring, control, and involvement are important parental tasks, it has been argued that the existence of these apps raises a number of concerns that should be borne in mind as they are implemented. These apps might create a situation of over-proximity, which deceives the parent into mistaking control for care. In addition, they have the potential to enable over-involvement, which might hinder developmental processes towards autonomy and self-reliance. In response to these concerns, a preliminary framework has been proposed in order to maintain a proper and critical distance. Moral concerns with other-tracking apps link up with broader questions and concepts, such as quantified otherness, continuous connectivity, transparency, and our algorithmic culture.

The problematization can be extrapolated to a plethora of other-tracking apps that are available for partners, employers, and so on. The question if and when other-tracking is justified as a means of care is most pertinent. Public and philosophical debate also needs to focus on how technological developments might lead to unethical practices such as instilling fear and secretly selling data for marketing aims, especially if minors are involved. Where we as a society want to draw the line is a matter of contention; however, we need to discuss and debate this publicly. In doing so, it is essential to emphasize the importance of increasing and stimulating critical awareness, digital literacy, and user empowerment throughout research, education, and public debate. In a world in which mobile and wearable technologies are continuously increasing, it is our moral task to reflect on the implications of big data and algorithmization, especially if these technologies problematize moral relations. To put it more bluntly, just because you *can*, does not always mean that you *should*.

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