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How Health Tracking Technology Became Uncanny

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von Zusammenarbeit
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1. Introduction

Digital technology is increasingly shaping our understanding of *self*. While collaborations with technology are contingent in questioning the stability of subjectivity, contemporary collaborations in the health context have become even *uncannier*. I take the position that subjectivity is a fluid and performative term that is not separate from technology to which I add a discussion on *algorithmic uncanniness* to manoeuvre new shifts that are embedded in the use and design of health technology. In a contemporary discussion on self-narrating practices of self-care, health and self-optimization, I argue that we are facing a more complex uncanniness, not only by blurring the line between technology as entangled in subjectivity, but by embedding new *material simultaneities* into their use, which I call *algorithmic uncanniness*. In particular, shifts towards self-management, or the invisible commercialisation of health data, are part of technologies advertised for health provision (Sax, Helberger & Bol, 2018; Ajana, 2018) and uncannily embedded into algorithmic applications. By instrumenting the uncanny to work out these angles, I mainly present how vulnerability of subject autonomy (Couldry & Mejias, 2018; Selke, 2016) and health data (Ruckenstein & Schüll, 2017; Kickbush, 2019) is exploited. Instead of reviving a psychoanalytic view on technology as being aesthetically uncanny, I will highlight concerning identity shaping consequences evoked through the interests intersecting in health technology.

2. The Uncanny – Revisiting Encounters with Technology

First, I move through the work of Freud and Mori, supported by the work of Ravetto-Biagioli's concept of the 'digital uncanny' (2016), to introduce a discussion on the aesthetic dimensions of the uncanny. I do this first to the material level of uncanniness that does not engage as much with encounters, but with overlapping subject/object relations which are embedded in the very technology, not in the aesthetic experience thereof. To understand the material, first, what is the *aesthetic*? The uncanny remains bound to an aesthetic experience in most of its understandings, but it is also much more. Ravetto-Biagioli (2016) points out that

> [a]esthetic experience has traditionally been understood as the condition for the emergence of new forms of subjectivity. [...] But the uncanny undermines stable subject positions and thus the possibility of stable meaning. The uncanny, therefore, poses a problem as to how we understand aesthetic experience, since it questions to whom or what we attribute such an experience if we can no longer identify a subject (p. 3).

Still, the uncanny is not just a "simple reaction to technology, the uncanny is an intentional, embodied (even if symptomatic) response" (p. 1) to what is *suddenly* revealed, but was *meant* to remain hidden; it is closely bound to subject formation. The *uncanny* is a culturally mobile term that always used to describe moments of conscious interruptions, of one's otherness, or between the animate and inanimate. It became popular through the work of Sigmund Freud in the early 20th century. In 1906, Ernst Jentsch wrote in this essay 'On the Psychology of the Uncanny' that the uncanny (*unheimlich* in German) is a word that "suggests that a *lack of orientation* is bound up with the impression of the uncanniness of a thing or incident" (Sellars, 1995, p. 18)[1]. The German translation hints to its paradox role in describing a paradox; while "un" is a negation and "heimlich" means homey, together they mean *spooky*. It is a concept that describes spookiness by denying being at home. For Schelling, the uncanny was "something that was supposed to be kept in secret [that] has suddenly surfaced" (Schelling, 1990, p. 649), which sums it up very well since the uncanny is a paradox of knowing and not knowing, or seeing and not seeing. It is more than noticing otherness or difference; it is the fluidity between these that seems to be destabilising. Freud's observations and accounts of the uncanny grew from an interest in E.T.A. Hoffmann's 'Der Sandmann' as an Oedipal narrative. In Hoffmann's story, the human man Nathanael falls in love with the automaton, Olimpia. The issue however is *not* that Olimpia is an automaton, and that this becomes *suddenly* revealed, or that Nathanael mistakes her for a human, but the uncanny shows in how the relationship between Olimpia and Nathanael destabilises his perspective on his own humanness, and that the automaton blurs the lines between human/technology – and between home/non-home in the wider sense of Hoffmann's work. This interruptive moment becomes a destabilisation, becomes *uncanny*. Especially the interplay between what is hidden/revealed is one that I will keep referring to as I explore health technology and the *algorithmic uncanniness* in health-based self-tracking.

To return to Freud, he viewed the uncanny as "processes of repression" (Ravetto-Biagioli, 2016, p. 1) rather than supporting Jentsch's assumptions about it being a response to seeing "automata to be human when they see them behave like humans" (p. 1). Freud did not ground the uncanny on a study of human behaviour, he rather considered it to be an anomaly from his personal observation. To him, it remains a neurological (internalized) form of automaticity, one that is realized as an aesthetic or affective experience, or as a déjà vu, or the appearance of a *doppelgänger*. For Freud, but also for Ravetto-Biagioli, the uncanny is driven by the compulsion to repeat, and that compulsion is automatic. Rancière (2010), for instance, rejects Freud's view on the uncanny. He rejects Freud trying to link the unintelligible, the *pathos*, with intelligible, the *logos*, through psychoanalytic interpretation (p. 28), which Rancière critiques as a way to impose a discursive practice onto an aesthetic expression.

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1   I work with the English translation of Jentsch's "Zur Psychology des Unheimlichen" originally published in 1906, translated by Sellars (1995).

3.   From the 'Uncanny' to the 'Uncanny Valley' to the 'Digital Uncanny'

Several decades after the work of Freud and Jentsch, the uncanny remains to support the exploration of subjectivity through technology, but differently. Amidst the upcoming of robots as sociable or human-like others, roboticists start asking how human-like robots have to be to be accepted and liked. One leading figure of this research was the Japanese roboticist Masahiro Mori (1970/2012) who defined an acceptance threshold between robots being too human-like and yet not animate enough – the 'uncanny valley'. He noticed that if robots resemble humans *too* much, but are still bulky and lack interactivity, or *life*, they will spook people. Hence, a clash between inanimate and animate is inevitable, but to be avoided. This happens despite us anthropomorphising objects with similar features or with which we bond (Reeves & Nass, 1996; Duffy, 2003). It is a tendency of human beings to project human traits onto human features or to animate objects with which we bond, which also happens to robots or animals. While Mori was interested in finding the common ground of a *Buddha-like* nature that the robot and the human share (Mori, 1981), his experiment led to robotic design drifting away from its ambition to design robots to perfectly resemble humans.[2] His *uncanny valley* was a moment in which the distinction blurs to such extent that, similar to Hoffmann's story, something is revealed that is supposed to remain hidden, namely, that the robot is still a robot while it illustrated new instabilities and *interruptions* by becoming animate or resembling a human, as this very humanness is also challenged. This aesthetically grounded phenomenon that destabilises the subject position still puzzles social robotic research (Breazeal, 2002; Coeckelbergh, 2009), but has fascinated automata research in performances or theatre studies for a long time (Reilly, 2011).

Moving it to the context of digital technology, Ravetto-Biagioli (2016) leaves the aesthetic element by presenting the 'digital uncanny' as a concept through which she grasps multiple functionalities, simultaneities and invisibilities of digital interfaces. While the 'digital uncanny' works as a "master trope available for appropriation in a wider variety of contexts" (Jay in Ravetto-Biagioli, 2016, p. 15), her view on simultaneity differs from that of Freud's or Mori's on the uncanny as neurological repletion, since she focuses on a digitally evoked instability and discomfort but also on a material overlap within the digital sphere. "Given that our access to the uncanny has often been through the senses, the digital uncanny only complicates this problem of instability by presenting the senses as feedback rather than conscious reflection" (2016, p. 3). This means the subject finds itself in various positions as agent, object, data, and user at the same time. These emerge out of the human's inability to be *simultaneously* locating oneself as a user, object and data while facing a non-human-centred agency of digital technology (p. 4). The *material* basically implies that it is embedded in the data structure, but this is not ontological, it is *ongoingly* fluid and performative. It always *becomes*, it never just is. As an experience arising from a confrontation with digital interfaces, it shifts from the moment of sensing to a loop of technological feedback and simultaneity in which the subject is situated. By contextualising it with the interactive artwork of Lorenzo-Hammer, her main argu-

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2   *Geminoids*, which resemble a human person almost perfectly, are popularised exceptions. See https://robots.ieee.org/robots/geminoidf/.

ment is that the *uncanny* provokes a litany of uncertainties about the status of what it means to be human, because digital technologies (which work through feedback processes) make it impossible to say where one's embodiment begins and where it ends.

Next, I will argue that the *algorithmic uncanniness* does even more, it changes the wellbeing of the subject sustainably by internalising new modes of defining such. Ravetto-Biagioli points out that if the subject's *stable* agent position (one assumed as being stable by Freud or Rancière) is shaky, so is that of technology as mere uncanny *extension*. This shifts technology into a role as a *collaborator* to one's own unstable and shifting status or consciousness, which is crucial in understanding that uncanniness is still a mode of experience that redefines hierarchies. It becomes an issue however, if such experience is not even noticed by the subject in the midst of this process. While Ravetto-Biagioli's exploration proves fruitful to understand present shifts that digital technology evokes by moving the uncanny into the digital, I go even further in expanding on a new uncanny materiality in health applications, which subverts the hidden and the revealed element, not as a dichotomy, but by making these opposing powers. While shifting to the material level, the enquiry still resembles that of Freud, or Ravetto-Biagioli, in exploring new uncertainties about the subject position as it faces, interacts or is intersected with technology.

4.   Four Levels of *Algorithmic Uncanniness* in Health Monitoring

Self-tracking has become more than a trend: health applications in particular are booming as an industry in form of "apps and devices enabling the data capturing, monitoring and analysis of one's daily activities, behaviours and habits". An increasing number of people are embracing "this growing culture of self-measurement and tracking in the spirit of improving their health, wellbeing, productivity and other aspects of everyday life" (Ajana, 2018, p. 2). This area is also referred to as "preventive medicine" and connected to a wider "Quantified Self" movement.[3] For Bode & Kristensen (2015) the ultimate goal "is to establish a ubiquitous tracking of the totality of 'materials of daily life' (Wolf, 2010) that can impact on life quality" (p. 3) and they also point out that people using these apps often seek a short-term solution for a health or wellbeing problem (like insomnia), and eventually can end up self-surveilling their bodily functions permanently. Life or health tracking technologies are critically referred to as "disruption technologies", a new "taxonomy of the social" (Selke, 2016), or as "digital amalgamation of life" (Biniok & Hülsman, 2016), which only illustrates a widely raised critique (Selke, 2016; Ajana, 2018; Couldry & Mejias, 2019). What I suggest hereby is therefore not only a critique, I offer a critique through utilising and updating the uncanny. The reason for doing this lies in the fact that the uncanny allows to raise a critique that is not only negative, but points out that technology is destabilising, which is irritating but not necessarily bad. What is problematic, however, is how new and far-reaching technologies fuse with industries or habits, which might diminish the ability to experience or reflect on health decision without numeric data. Yet, I do not condemn health technology per se, nor do I deny any positive or empowering impact that health assistants can have on the man-

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3   http://qsinstitute.com/about/what-is-quantified-self/.

agement of "obesity, diabetes, and cardiovascular disease – conditions that derive from daily behaviors of overeating, underexercising, and smoking" (Ruckenstein & Schüll, 2017, p. 262).

While there is a difference in aesthetic experience in facing a robot, operating a phone app or wearing a tracking watch (even if each of them could embed self-tracking technology), the datafication of human experiences is on the rise by these new computational psychometric technologies (Selke, 2016; Stark, 2018). Moreover, the internalisation of experience into the datafication of such in health technology evokes additional conflicts I explore under the concept of *algorithmic uncanniness*. Putting aside the privacy and surveillance issues these self-tracking or e-health applications raise (Bode & Kristensen, 2015; Couldry & Mejias, 2018; Sax et al., 2018), I discuss four layers of critique, which in my view collide with the promoted wellbeing, autonomy and self-improvement. These four levels are; commercial exploitation of data, pseudo-autonomy, self-management and self-incrimination. Each level operates with digital data, hence, the *algorithmic*. Also, each of these levels hides a level of unnoticed and unknown interests, hence, the *uncanniness*. I keep this debate generalized to discuss tendencies, not specifics, meant to adapt and renew how we think about uncanniness and about health monitoring technology. I keep in mind that the uncanny is a moment or interruption in which something gets revealed that used to remain hidden (as Schelling and Freud described it). More, I point to the destabilizing position for the subject in which object and subject roles overlap simultaneously through health apps.

Following up on Ravetto-Biagioli, I do not hold on to the aesthetic experience of the uncanny, but instead allow for an "embodied experience" to guide the uncanny (Kristensen & Prigge, 2018) and move to the material dimension which might be hard to access by subjective experience. While the technology is assisting in one's health optimization, what is hard to access, but is always embedded, is that while doing this, it is *using* the subject to optimize its own performance as well.

4.1 Commercial Exploitation of Data

Commercial interests and data mining are ingrained in self-tracking apps, this forms the first level in *algorithmic uncanniness*. Health apps and self-tracking being algorithmic data processes throughout, what remains often (explicitly) hidden are the commercial structures of how the data and the *idea of* health are exploited. Preventive medicine and health applications refer to "digital technologies such as apps and wearable devices to generate detailed personal information about their bodies and elements of their everyday lives" (Lupton, 2017, p. 1), and yet, the commercial aspect of health-technology is not simply invisible. Users/clients of health apps, or health assistants, often pay for the service or this *assistance*. Hence, they can be aware of the usage, and their support thereof, contributing to an industry. But many aspects are not as openly communicated. Lupton (2017) points out that the personal health and medical data gained in "biovalue in the digital data economy […] are commonly used for commercial purposes: for instance, developers on-sell them to advertising, medical device and pharmaceutical companies" (p. 4). The interplay of technology and industry is not the uncanny though; the wider intentions behind *what* is bought

and *what* is sold, is. The data is often sold without the customers' knowledge, even if the application is bought knowingly. Even if Braidotti (2016) stresses that technology and subjectification processes are by now heavily infiltrated by capitalist interests, it has become hard to distinguish or draw lines. One has to remember, as Ajana (2017) mentions, that "in economic terms, measuring the body has always been a profitable industry" (p. 3). Prior to these apps, people also engaged in self-tracking using non-digital forms of recording their details, such as pen-and-paper or even just relying on their memories (Fox & Duggan, 2013). However, recently, "a vast array of digital technologies have come onto the market that can be used for highly detailed and often automated self-monitoring" (p. 1). More, the commercial side adds to further concerns on how health monitoring contributes to socioeconomic disadvantages and marginalisation; first, by discriminating marginalised groups by lack of access and by biased data, and second, by raising the possibility that low paid workers could be told to track their health so the companies can monitor their health and movements, for instance, for insurance reasons (Lupton, 2017).

4.2   Pseudo-Autonomy

The second level within the *algorithmic uncanniness* is on the autonomy around health provision and maintenance that appears to increase, but turns out to be a *pseudo-autonomy*. Couldry & Mejias (2019) state that some people reported that after canceling self-tracking technology they had lost their ability to self-regulate. So, on the one hand, numbers reveal the hidden health/disease/issue, and on the other, the *felt* self-experience is diminished unnoticeably, until the regulation is not possible without numerical data. What appears to endorse autonomous acts in providing and counting one's health parameters or maintaining one's *shape*, as it requires effort and discipline, might not be as empowering as it seems. According to Couldry & Mejias (2019), the self-quantification implies an "illusion of autonomy" (p. 168), which they assign to the data relations one keeps feeding, but which are vice versa controlled and regulated throughout by those who designed the applications. The process moves hereby *uncannily* between empowering and manipulative (Sax et al., 2018), since by tracking of one's health, not only do the parameters of one's 'health identity' change, but one's behavior towards being healthy gets shaped subtly, potentially inducing an eternal optimisation endeavor. One can go further and align this to what Yeung (2017) calls *hypernuding*, which implies that technology is designed in such a way as to influence and engage the behavior of individuals, which appears as an endorsement of personalization and autonomy, but such loop is, in fact, maintained through huge amounts of data these devices or applications collect from many users or clients.

4.3   Self-Management

Algorithmic uncanniness also grounds in an unnoticed shift from self-optimization towards self-management, which links to the previous point on autonomy, but adds the angle on the subtle but powerful formation of a collective health identity that

compromises one's individual well-*feeling* capacity. What begins as a so-called optimization process, or as a goal to fight insomnia or following new fitness routines, can also transform the perception of one's subject position (which is never fixed or stable in the first place). Linked to self-formation and identity, Kent (2018) is concerned that health apps are shaping and mediating self-representation and, with it, 'personal health identity'. The moment this becomes concerning is pointed out by Kristensen & Prigge (2018). For them, self-monitoring leads to a merger of technology and self, fusing these into a "new experiencing entity" (p. 48).

Further, the data one keeps feeding into the technology is never just one's own (Kent in Ajana, 2018). What emerges is a public 'health self' which is a constructed self-surveillance practice. Bode & Kristensen (2015) speak of how self-tracking creates a *doppelgänger*, which aligns well with the exploration of uncanniness that Freud undertook. They describe such as "a phenomenon of living with-in self-tracking systems" (p. 6). However, I highlight that what these apps challenge is not simply a new collaboration with technology (technology has always been a collaborative force), but *how* the activity of self-formation is transformed by a technological exploitation of self-constitution undermining one's autonomy to ever *opt out* (Couldry & Mejias, 2019). Even if the *self* should not be misunderstood as a stable agent, but rather as an ongoing performative process of subjectification, the *doppelgänger* becomes another version of *self*, which expands on the control mechanisms which Foucault (Rabinow & Foucault, 1984) has elaborated on in detail.

More, the reflexive powers of self-constitution are challenged in the process of outsourcing these or disembodying them into data feedback loops. This merger of embodiment and data, of optimisation and management, or of suggestion and instruction, makes it harder to distinguish between technology as *authority* or as an *assistant*, which hijacks the very constitutional of self-autonomy and experience as something non-guided or non-measured, but as something felt, and worse, it redefines the idea of well-*feeling* to one of well-*measuring*. Hence, one does not explore *one's* health *better*, but outsources the management of the numeric details of that very health to the devices and companies to decide. The newly internalised, and yet outsourced, health identity would not exist without the algorithmic self-management producing it. The blurring and therefore uncanny line between appearing to be only an assisting technology (as technologies are) and constituting a collective version of a health-self that is detached from the experience of *felt* health. The process of trusting one's body and actions gets compromised as one starts to feel guilty for not walking the steps the app suggested, and guilty for not following the instructions, but not for not taking care of one's actual, embodied or experienced wellbeing.

Uncanny is hereby more than the disbalance between hidden/revealed, uncanny is that of the reversal of autonomy being not really one, or of the individual level being deeply collective etc. Uncanny is also where authoritative but internalised self-management begins, and well-meant health assistance ends. Self-tracking then shifts from individual health provision to a 'governmentality' in the Foucauldian sense, as "the regulatory activity that shapes the self as well as public beliefs and behaviours towards health maintenance and self-management" (Kent, 2018, p. 71). Self-tracking apps have complicated, as a *hidden* process, the experience of health which not only outsourced into a measurement or feedback process, but might compromise the individual reflexivity to *feel* healthy. At the same time, it moves it into the bureau-

cratic sphere which links data from individual to the collective; all this this without one's awareness. In this context, the individual subject does not really exist, it is always contextualised in a wider context of parameters fed by one's experience and well-*feeling*, but also feedbacked by others in these technologies – entangled into data assemblages (Bode & Kristensen, 2015). This aligns with what Matzner (2019) describes as 'algorithmic subjectification' (p. 109) in democratic processes, or Lyon (2014) famously coins as 'data double' (p. 7) to describe how surveillance networks play with different layers of subjectivity and what is revealed, and what hidden, within their digital unfolding.

Ultimately, health does not happen virtually and online, it is *experienced*. This would not prevent uncanniness, but in these new examples, one could ask if this material uncanniness is sustainable as a productive force for the subject at all, or if it is in fact, only opening up various ethical issues. Yet, health identities were never fully individual nor self-governed formations. Health and subject formation has always been subjected to wider governmental or medical authorities (Rabinow & Foucault, 1984). This new interplay or subversive structure between what is *revealed* and what is, in fact, *reversed* and not only hidden, infiltrates individual wellbeing to collective well-*measuring*, and this deserves even more attention as health data become a lucrative commodity and its link to big data a concerning exploitability (Knoppers & Thorogood, 2017).

4.4 Self-Incrimination

Coming to the last, and often neglected aspect making self-tracking technology uncanny: the *hidden* and subverted side of autonomy, self-incrimination. Health technology increasingly leads to a juridical vulnerability. While the data and security aspect of health apps is widely discussed, the level of legal vulnerability is just increasingly raising red flags. I argue this reaches a new form of harm, not only in uncanniness. A common legal issue around health data is the data vulnerability of this kind of data within health technology (Knoppers & Thorogood, 2017). Health and medical data are especially vulnerable considering its access by cybercriminals and hackers, who could use the data for fraudulent and illegal activities (Ablon, Libicki & Golay, 2014). But there is another concern in which the companies are involved themselves, which I see as *uncannier* because it violates the trust of the client or customer in the company or application directly. Health applications open the door towards a potential self-incrimination, which is extremely concerning on practical and democratic levels. In 2014, the data from the fitness application *Fitbit* was used in a courtroom to assess how fit a person *could* be to decide on an injury claim (Parmy, 2014). In another case, a woman claimed to be assaulted while she was sleeping, but the extraction of data from her *Fitbit* application showed that she was walking around and must have been fully awake (Ajana, 2018, p. 136). These two examples are not only problematic, and might not be legal in the European context, they are concerning considering the intersection of (individual) health and (legal) harm. This concern is being debated in the context of the *de-identification* of health data that could secure people's anonymity (Narayanan & Shmatikov, 2008). The question remains: what does it mean if health identities violate the right to one's data but give

a company a self-given authority as data provider leading to self-incrimination *without* one's awareness? Of course, this issue might apply to various applications, such as the widely discussed COVID-19 tracking apps (Bowcott, 2020). Still, the intersection between technology and juridical system (ideally) should be regulated better to guarantee that citizens know what *package* they get, when they install or use applications or track their own physical activity (with or without them knowing), so that no one *accidently* gets into legal trouble while companies profit and remain unaccountable for the legal consequences for their customers.

5.   Conclusion

The *algorithmic uncanniness* enabled me to do serval things; to adapt uncanniness to a contemporary debate on health data; to reinterpret the existing critique on self-tracking newly by revisiting the history of the uncanny; and to ultimately point to concerning implications in which technology is not only collaborative, but through an involuntary collaboration it becomes *exploitative* and diminishes the subject's autonomy, and the non-technological *experiencing* of health (further). I hopefully amplified that the uncanny can help us to understand concerns in emerging technology such as health tracking applications.

   With the historical overview on three moments in which the *uncanny* relates to technology differently, I pointed out how the uncanny can be utilised not only as an aesthetic emergence or interruption, but that it is more complex than that. As I transformed it to a contemporary and material critique on health applications by utilising Ravetto-Biagioli's work, I scrutinised identity shaping disturbances within 'preventive medicine' or self-tracking which shape new norms around wellbeing, autonomy and self-improvement. Putting aside privacy and surveillance issues, I paid the most attention to the reinforcement of a (pseudo-)autonomy; the enabling the commercialisation of health data; an increasing self-management as an internalised authority; and the detachment of health formation from self-regulation and of health from being an embodied and *felt* experience.

   The reason for the newly presented uncanniness, however, is *not* technology *as such* being problematic, but that technology is a socio-political, cultural and economic network of various interests. This is not a new realisation in the philosophy of technology (Coeckelbergh, 2020), nor in media studies (Couldry & Mejias, 2019), but it is one still viewed rather instrumentally in health studies or engineering (Kohn, Corrigan, Donaldson & America, 2000). At the same time, health data economies grow and intersect with big data structures (Knoppers & Thorogood, 2017), which makes data a hugely valuable good.

   Clearly, maintaining one's health or fitness, or tackling unwanted unhealthy habits, are all legitimate goals. Hence, I do not conclude that medical technology or techno-assisting medicine is per se uncanny and always hijacking one's health identity; this paper looked only at moments in which self-formation is endangered in relation to a *promoted* health optimisation. Further, the uncanny is a productive and fascinating concept that enables to scrutinise technological experiences as these keep transforming us. It does not have to be a negative concept, nor to be avoided as an experience or simultaneity, even if I utilised it to form a critique. If we remind

ourselves that Freud already saw the uncanny as an aesthetic and yet neurological predisposition beyond one's control, then the uncanny remains a concept that inherently challenges individual autonomy and the lines between the individual, collective and technological. The difference I aimed at in this paper was to present new levels, which have worsened this destabilisation because they move the uncanny to the exploitative and yet invisible. Hence, one reason why the *algorithmic uncanniness* might be even *uncannier* might be that it seems harder to remove oneself from something that becomes intrinsically linked to one's well-*feeling*. While conflicts between technology and human are never dichotomous or distinct, and health has never been simply felt or uncontrolled, the entanglement of the *digital* with the *private* and the *commercial* has created a new network that co-shapes wider experiences (or *non*-experiences) and narratives of *self* and *health*. These networks are fluid and performative, but these are not extractable from commercial and collective data spheres, and even if they might have never been, raising an awareness, not creating a panic, remains an ongoing and crucial task to which the uncanny proved useful.

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