POLITICKÉ VEDY / POLITICAL SCIENCES

DIGITAL POWER: SELF-TRACKING TECHNOLOGIES THROUGH MICHEL FOUCAULT LENS

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ABSTRACT

From a traditional political perspective, power has always been linked to force, domination, and sovereignty issues. In this article we outline the Foucauldian concept of power, (self) surveillance and the panopticon in relation to digital self-tracking devices. These self-tracking devices are supposedly designed for self-improvement and self-enhancement of an individual. As the new devices come to light, a new frontier of power emerges in the digital sphere – power that is exercised with subtlety and disguised as a voluntary. Self-tracking wearables produce a huge body of information, so that life itself is broken into data. The data claim to represent a body-related knowledge and individuals are expected to live according to this knowledge. In regards to this, we illustrated how the health and corporate sector integrate these wearables into their structures and are able to observe if citizens meet the established health norms. The presence of these devices silently coerces individuals to behave in the way the healthcare and corporate sectors desire. This shows how these sectors expand surveillance practises over the individuals and manifest a certain control over their lives, where health becomes a key mode of biopower by these enterprises.

Key words: Foucault, power, self-tracking technologies, digital health

Introduction

Michel Foucault's name has become almost omnipresent in the political, social or philosophical spheres although he never characterized himself as a political or philosophical theorist. The legacy of this French intellectual continues in the circle called "**Foucault** studies" and many seminars and conferences regarding his works are organized throughout the world, mainly in France.

In today's quantified society, power relations are changing with advances in digital technology, and we may trace the extensive spread of power in all

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directions as evidence and indeed magnification of the assertions **Foucault** made in the last century. Our aim in this paper is to analyse the concept of self-tracking technologies through the **Foucauldian** lens. The concept of self-tracking describes the activity of monitoring every aspect of people's lives through various digital wearable devices. Since the phenomenon of self-tracking through digital devices is recent and wearable digital technologies are on the rise, self-monitoring is becoming a great concern for philosophical academia (Verbeek, 2005) where the socio-philosophical interaction of human and technology have implications which must be taken into account.

To begin with, we present **Foucault**'s analyses regarding the concept of power - disciplinary power and biopower. As **Allen** points out, **Foucault** begins his analyses of power striving "*to cut off the head of the King*" (Allen, 2002, p. 132), a historical event which becomes a metaphor for **Foucault**'s sense that power in modernity not only is no longer exercised from the top down as a king lords over his subjects, but no longer needs to be organized in such a way because citizens can be persuaded to become vectors of power through which the interests of others - the state, big business - can travel. We regard his radical reconstruction of power as an important move in the political or philosophical fields. **Foucauldian** power is not power in a traditional sense, but his notion of power circulates through the networks and individuals are elements of "*articulation of the power*" (Foucault, 1980), where power and knowledge became inseparable. In **Foucault**'s view, power was clearly diffuse and relational rather than centralized and discrete (Detel, 1998, p. 16), repressive and productive at the same time (Allen, 2002, p. 134).

The directions and fluctuations of power have changed greatly. We attempt to apply **Foucault**'s analysis of power in relation to digital self-tracking technologies where we see these technologies as a digital panoptical apparatus of power. This leads us to an assumption that power operates through digital tools, where the classical concept of the panopticon transformed into participatory self-surveillance. It has become clear that this invisible power disguised as freedom becomes internalized through self-tracking practices, since responsibility for the well-being of individuals is forced back on them.

We also outline how self-tracking wearables permeate the healthcare complex and corporate systems. While the integration of wearables into this sector is only starting, we can already observe the implications it has for the individual, especially when discussing examples regarding health insurance companies that decide whether to lower or increase health expenses, thus imposing disciplinary *"rewards"*

and establishing what is effectively a *"punishment"* system for individuals. In addition, we also investigate some popular consumer electronics, such as FitBit, to see how this device permeates the workplace. Overall, this leads to a worrisome situation where data produced by these self-tracking wearables creates asymmetrical power relations between those who collect data and those from whom are the data collected.

1 Introduction into the Foucault's Writings

"What I have studied are the three traditional problems: 1. What are the relations we have to truth through scientific knowledge, to those "truth games" which are so important in civilization an in which we are both subject and object? 2. What are the relationships we have to others through those strange strategies and power relationships? And 3. What are the relationships between truth, power, and the self?" (Foucault, 1988, p. 15).

Foucault in his studies explored wide range of topics and his ideas have become important in various fields, such as social science research, sociology, political science or criminology (Powell, 2015, p. 16). **Foucault**'s history of ideas can be characterized in three distinctive forms – the *"archaeology"* of thought, "*genealogy*" (Gutting, 2005, p. 32) and his last "*ethical*" phase (Strozier, 2001).

In archaeological phase, **Foucault** attempted to reveal the unconscious limits of thought and knowledge and investigated the structure that underlie thought and makes particular types of knowledge appear at specific historical periods. Genealogical phase was focused on dimensions of power focused on practices as well as discourses. In **Foucault**'s last ethical phase is noticeable that he turned his attention to subjectivity – where he examines the active constitution of subject (Strozier, 2001).

Interesting to note is that his key fourth book was published – History of Sexuality IV.: Confessions of the Flesh which was released posthumously in 2018 in the French language. **Elden** reveals that this book deals with such themes as marriage, subject of desire or subject of law and still remains unfinished despite its appearance (Theoryculturesociety.org., 2018).

For a better overview we created a table of his phases, published books and the object of his academical endeavours.

Table no. 1: A brief overview of Foucault's works:

I. Archaeological phase (early)	*Madness and Civilization, The Birth of the Clinic, The Order of Things, The Archaeology of Knowledge*	OBJECT: Knowledge
II. Genealogical phase (middle)	*Discipline and Punish, The history of Sexuality volume I.*	OBJECT: Power
III. Ethical phase (late)	*The History of Sexuality Volume II.* *-The Use of Pleasure* *The History of Sexuality Volume III.* *-The Care of the Self; essays and interviews*	OBJECT: Subject

Source: Strozier, 2001

2 Foucault and Power

How do we understand the term "*power?*" Usually what comes to our mind is a traditional one – the overt and coercive exercise of power over the people under threat of severe consequence up to and including physical harm and death by the state; almost as if we were talking about a king and his subjects. Let us note that **Foucault**'s analysis of power is very specific and completely differs from most other conceptions of power that came before, with the exception, perhaps, of **Nietzsche** whose work undeniably influenced **Foucault**[1], where the link between knowledge and power plays an important role for both of them. **Foucault**'s "*bottom-up*" analyses of power are not about domination, authority, or coercion. It is important to emphasize that Foucauldian power is impersonal, neither possessed nor exerted by individuals, groups or institutions (Prado, 2000, p. 68).

Nonetheless, power can be approached from different angles. For instance, traditional concept of power may be **Weber**'s definition of power (Macht), that lies in the distributive approach – an increase of A's power would imply decrease in B's

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[1] Foucault inherited Nietzsche's view on the notion of "force", as a substantial element of the world that creates strategies of relations of forces and develops its own theory of power upon the dynamics of this force, where he examined how knowledge is formed under this force as well (Fujita, 2013, p. 127-128).

power and vice versa (Heiskala, 2001, p. 242). As **Detel** notes, modern approaches to power developed in the 1950s which produced narrative of power in behaviourism as an "*ability to produce casual effects in the world*" (Detel, 1998, p. 11). For instance, political scientist **Dahl** defined power as: "*A has power over B to the extent that he can get B to do something that B would not otherwise do*" (Dahl, 1957, p. 202-203). On the other hand, a realistic approach to power sees it as a "*disposition to casual influence*" where power operates by social roles of individuals. Finally, rational choice theory brings about the idea that power does not necessarily lie in the premise that where there is power, benefit follows (Detel, 1998, p. 12). As **Cisney** and **Morar** (2015) point out, this older notion of power is strictly delimiting, operating in a top-down manner. Primarily, the conceptual model of the classical notion of power consists of the sovereign who rules over their subordinates with a greater or lesser degree legitimacy and severity.

According to **Sawicki**, **Foucauldian** power is "*exercised, productive and analyzed from bottom up*" (Sawicki, 1991, p. 21). Unlike many theorists, **Foucault** rightfully points out that power operates at all levels of society, not only between ruler and the subject, but also between parents, lovers, teacher and students, etc. (Cisney and Morar, 2015). First, **Foucault**'s analysis of power may be divided into microlevel studies of power – an exploration of power on the local level and "*micropractices*" that emerge out of those relations. Simply put, he engaged in the studies of power in everyday life, which he called as "*microphysics of power*". He did not put focus on the legitimate or illegitimate uses of power from the state perspective. Rather, he gave an account how power circulates through the social body and the microlevels of society (Allen, 1996, p. 271-272). As **Bura**j notes, we come across power that operates more on these microlevels – either as men, or women or as a patient in the hospital. Stemming from his historical analyses, **Foucault** examined how these "micro" powers penetrate through secret techniques into language, knowledge, consciousness, and create "*regimes of truth*" which govern our daily lives (Buraj, 2006, p. 534). Second, he further explores how power operates at the macrolevel – how power operates through cultural discourses, social practices and institutions (Allen, 1996, p. 272).

In sum, **Foucault**'s notion of power can be understood as primarily focused on the relations between subjects. He develops this main concept of power – "*power institutions and state apparatuses*"– where he speaks of power operating on the global level (Detel, 1998, p. 16 -22). Simply put, **Foucault** showed us how people have always been focused on trying to understand themselves, trying to "know

themselves" (Kool, 2016, p. 24). **Foucault** brought us very unique concept of power where it is important to grasp his definition of power together with his critical approach to society, politics, culture, history and science (Buraj, 2006, p. 538).

2.1 Disciplinary Power and the Panopticon

"Disciplines are the bearers of a discourse, but this cannot be the discourse of right. The discourse of discipline has nothing in common with that of law, rule, or sovereign will. The disciplines may well be the carriers of a discourse that speaks of a rule, but this rule is not the juridical rule deriving from sovereignty, but a natural rule, a norm. The code they come to define is not that of law but that of normalization" (Foucault, 1997, p. 44)*.

From **Foucault**'s perspective, discipline is a distinct, subtle type of power, which produces subjected *"docile bodies"* (Foucault, 1997, p. 138). Disciplinary power is imposed on the body and soul the of individuals (Foucault, 1997). In his book the Society Must be Defended he states: "…[*power] is never appropriated in the way that wealth or a commodity can be appropriated. Power functions. Power is exercised through networks, and individuals do not simply circulate in those networks; they are in a position to both submit to and exercise this power. They are never the inert or consenting targets of power; they are always its relays. In other words, power passes through individuals. It is not applied to them*" (Foucault, 1976, p. 29). This implies that power circulates through the individuals, "*they are elements of articulation of the power"* (Foucault,1980, p. 98). Disciplinary power is efficient since it operates in a modest or "friendly" manner, instruments of normalizing judgment and hierarchical observations are still present, or their combination take place (Foucault, 1997, p. 170).

How is disciplinary power related to knowledge? In order to answer this question, we contend that it is important to note that disciplinary power has spread through society via the production of certain forms of knowledge and through the gradual development of disciplinary techniques. These techniques, which are focused on obtaining knowledge about individuals, include examination, discipline, and surveillance (Lilja, Vinthagen, 2014). Therefore, knowledge is associated with the ways of exercising power over individuals. In a similar tone, **Johnson** describes disciplinary power as a system of knowledge in which the individual is an object to be known in relation to others who can be known (Johnson, 1991, p. 149-69).

   Sawicki underlines that disciplinary practices constitute the divisions between the mad and the sane, the ill and the healthy, the legal and the delinquent which can be used as a means of social control and normalization (Sawicki, 1991, p. 22). As **Taylor** contends, the norm is tied to disciplinary power to train subjects to be efficient and obedient. **Foucault** examines how norms function within a disciplinary context- a context in which subjects are under the techniques of power which presuppose and constitute the norm, and are construed as an ideal (Taylor, 2009, p. 50). This suggests that power is circulating through normalization where the standards are set, and individuals should act on or be corrected upon (Elden, 2016, p. 25). Consequently, individuals are controlled according to norms and thus power can have an effect on individual and the population as well. The norms within relationships of power produce fields of knowledge, where *"knowledge things"* became *"knowing norms"* (Hewett, 2004, p. 7). Hence, the power over subjects can be performed through various normalizing institutions by merging together the identity of people to specific norms including the population's well-being (Kool, 2016).

   Regarding the concept of panopticon, **Foucault**'s name is still most cited one within the surveillance studies. To disciplinary society, the concept of surveillance is strongly related to **Foucault**'s notion of "*panopticism*". **Foucault** provides us with an analysis of panopticon in his book Discipline and Punish: The Birth of Prison, where he tackles the disciplinary understanding of surveillance (Haggerty, Ericson, 2006). "*Supervision, control and correction*", as **Foucault** states, are the substantial features of society (Foucault, 1994, p. 70). This concept derives from English social reformer **Jeremy Bentham**'s term of the panopticon, which can serve as an introductory footnote for further surveillance studies. In **Bentham**'s panopticon the prisoners do not see the watchman, so they are supposed to behave as if they are being watched (Ming, 2016, p. 36).

   Foucault's panopticon represents a new political anatomy, where discipline is replacing the sovereign power – which is replaced by a subtle authority. Disciplinary power comprises of constant reports, testing, regulation, etc. This machinery of "eternal watching" ensures the control of the individual (Foucault, 1997). This power exercises its power only through the gaze – *"the all-seeing eye"* (Jespersen et al., 2007). In other words, power goes beyond the prison and people are regulated to behave and govern themselves in a certain mode (Ming, 2016, p. 37). **Bentham**'s panopticon can be described as a patriarchal regime of surveillance, it is automated from the centre. On the contrary, in **Foucault**'s panopticon, we are being watched and the prisoners, not the tower, are at the centre of panopticon (Elmer, 2003).

2.2 Emergence of Biopower

Biopower denotes what **Foucault** calls "*history of the present*"[2] (Cisney, Morar, 2015). This term is introduced in the first volume of The History of Sexuality. In the chapter titled "Right of Death and Power over life" he states: "*For millennia, man remained what he was for Aristotle: a living animal with the additional capacity for a political existence; modern man is an animal whose politics place his existence as a living being in question*" (Foucault, 1976, p. 166). This form of power began to emerge since the 18th Century, which began to penetrate the social order and shed light on the vitality of the body and the biological existence of the population as its existence of primary preoccupation (Ajana, 2018, p. 5).

Foucault proposed a bipolar diagram of biopower. One pole of biopower arising in the seventeenth century deals with "*anatomo-politics of the human body*" (Foucault,1999, p. 162) and seeks to maximize its forces and integrate it into efficient systems. While biopower is oriented on control of a population, on life itself, disciplinary power works specifically at the site of the individual producing docile bodies. Disciplinary power "*centers on the body, produces individualizing effects, and manipulates the body as a source of forces that have to be rendered both useful and docile*" (Foucault, 1977, p. 249). A second pole deals with regulatory controls of "*biopolitics of the population*" (Foucault, 1999, p. 139) focusing on: birth, morbidity, mortality, longevity (Rabinow, Rose, 2003). As he contends, this bipolar technology seeks to *"invest life through and through"* (Foucault, 1999, p. 139). This new form of power is subtle (Foucault, 1977) and seeks not so much to discipline or to produce docile subjects, but this power operates on the levels of normalization and control in the name of the freedom (Ajana, 2016, p. 5). That is to assert that the mechanisms of disciplinary power and regulatory mechanisms of the population can be regarded as modern incarnation of power relations (Cisney, Morar, 2015). Moreover, a related term to biopower is "*biopolitics* ", which is linked to exertion of biopower not only by government but mainly commercial and research enterprises (Lupton, 2016). Put simply, biopolitics means the state control over lives of its subjects (Johnson, 2017).

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[2] In the book Discipline and Punish, **Foucault** clarifies: "*I would like to write the history of the prison with all the political investments of the body that it gathers together in its closed architecture. Why? Simply, because I am interested in the past? No, if one means by that writing a history of the past in terms of the present. Yes, if one means writing the history of the present*" (Foucault, 1977, p. 35).

Furthermore, it is necessary to look at a brief distinction between disciplinary power and biopower in **Foucault**'s writings. While biopower is oriented on control of a population, on self-promotion and self-regulation, disciplinary power works specifically at the site of the individual producing docile bodies. Disciplinary power "*centers on the body, produces individualizing effects, and manipulates the body as a source of forces that have to be rendered both useful and docile*" (Foucault, 1977, p. 249). As per **Han**, disciplinary power penetrates into the system of norms, prohibitions and commandments, thus disciplinary power can be defined as a normative power. In this context, he also defines biopolitics as the governmental technology of disciplinary power that constitutes a politics of the body (Han, 2017).

3 Self-tracking Technologies: Panopticon as (Self) Surveillance and Knowledge

"If Socrates lived today, would he wear smart watches or any other wearable technologies to measure consumed calories, walked distance or blood pressure?" (Belliger, Krieger, 2008, p. 26)

The notion of self-tracking or to monitor the body and its activities is not a new concept. Already for millennia people have tracked their food intake, their performance, and kept diaries. With the development of the digital technologies self-observing has become easier in terms of collecting and analysing of the gathered data. According to **Lupton**, self-monitoring experiments are connected with the names such as **Gordon Bell**, **Steve Mann** who in 1970 began research regarding various wearable digital devices (Lupton, 2017, p. 4). The concepts as "*self-tracking*" or "*quantified self*" are used to describe any forms of self-monitoring activities (Ajana, 2018). Different terms do describe self-monitoring are used as "*lifelogging*", "personal analytics" or "personal informatics" (Lupton, 2014). These devices mainly served health professionals and now are accessible to the general public since the sensors and overall technology has become smaller for everyday use (Ajana, 2018). Nowadays people who are devoted to these practices might wear little devices on their bodies such as watches or rings, which are connected to the internet and can easily generate data all the time.

Furthermore, statistical data could be considered as they would possess normalizing nature since they were used to make rendered bodies more manageable and could be used for comparison by constructed norms (Lupton, 2016). This normalizing nature of the data of self-tracking would obviously concern **Foucault**, because new forms of *"knowledge will also make possible new forms of*

control" (Foucault, 1994, p. 84). As early as in the 19th Century, **Foucault** traces the implications of *"medico-administrative"* knowledge that concerns our health and overall our condition of life. Further, he examines *"political medical"* gaze, which is related to eating habits, sexuality and generally, our way of life (Foucault, 1994, p. 176). In his view, the idea of scientific knowledge is the result of a long history (Belliger, Krieger, 2016, p. 26 - 27). For him, it was important to *"not to accept the knowledge at the face value but to analyze these so-called sciences (economics, biology, psychiatry, medicine, penology), as a very specific "truth games" related to specific techniques that human beings use to understand themselves"* (Foucault, 1988, p. 18).

The term self-surveillance has become popular mainly thanks to the wearable devices, self-trackers or various health applications. **Albrechtslund** in his article *"Online social networking as participatory surveillance"* developed the theoretical framework of participatory surveillance (Firstmonday.org, 2008). His approach stems from the surveillance studies, computer ethics and philosophy of technology. **Albrechtslund** was interested in how social networking can be conceptualized, the kind of discourses that surround the practice of online social networking and what we can learn from this activity. He concludes: *"I contend that this practice of self–surveillance cannot be adequately described within the framework of a hierarchical understanding of surveillance. Rather, online social networking seems to introduce a participatory approach to surveillance, which can empower – and not necessarily violate – the user* (Firstmonday.org, 2008).

The concept of "self-surveillance" became popular also thanks to Quantified Self movement. In 2007 the term Quantified Self (QS) appeared in Wired Magazine, coined by **Wolf** and **Kelly**. They stressed that the recent technological innovations and various digital devices for individual use make it possible to track oneself in more accessible and cleverer ways (Wolf, 2009). **Wolf** points out: "*With new tracking systems popping up almost daily, we decided to create a Web site to track them. We called our project the Quantified Self. We don't have a slogan, but if we did it would probably be "Self-knowledge through numbers*" (Wired magazine, 2009). They published many articles regarding these new technologies (mainly The New York Times) and presentations (TED Talks) (Lee, 2014).

The main objective of the QS movement from California is extended tracking and analysis of personally relevant data. We can perceive QS as a growing phenomenon which organizes over 200 regular meet-ups groups across 34 countries (Ajana, 2018, p. 2). These local meet ups became crucial for the members of this movement,

since they can share their experiences with other enthusiasts of self-monitoring technology (Lee, 2014). Self-trackers are encouraged to talk about "What I did, how I did it and what I learned". This movement employs using digital wearable devices and sensing technologies connected to the internet that enables individuals to track and record their data about their everyday activities in the forms of graphs or illustrations (Ajana, 2018, p. 2). The concept of "n=1" is often stressed, since it means tracking oneself on the individual level (Lupton, 2017, p. 106).

The popularity of self-quantification is based on the "*user-centered perspective on surveillance*" (Galič, Timan, Koops, 2017, p. 18) and is mostly viewed as "empowering" or even "exhibitionist". Users are often unaware of the *"medical gaze"* (Foucault, 1994, p. 146) that pushes the responsibility of individual's well-being back on them. This resembles the classical panopticon, where the rational models are internalized through self-tracking devices in the self-induced process of self-discipline (Galič, Timan, Koops, 2017, p. 18). Notably, the human self through smartphones or various digital applications is becoming digitized and broken into numbers and charts and every aspect of our lives is reflected in numbers or data. In the digital panopticon individuals, by choice, expose themselves and participate in self-surveillance, so we are inclined to the idea that digital self-tracking applications might possess an aspect of empowerment. On the contrary to this, we assume the self-tracking devices resemble **Foucauldian** panopticon, where individuals intentionally take part in the self-surveillance and share their data freely on the internet, although they cannot escape the *"all seeing eye".* As **Foucault** states: "*there is no need for arms, physical violence, material constraints. Just a gaze. An inspecting gaze, a gaze which each individual under its weight will end by interiorizing to the point that he is his own overseer*" (Foucault, 1994, p. 155). His account of panopticon metaphor gives account how external rationales of surveillance may be internalized, so that people take part in self-tracking only because they can never be sure whether they are being watched, but also gave the consent to the surveillance as part of practices of self (Ajana, 2018).

4 Alarming Thoughts about Emergence of New Frontiers of Power – Self-tracking Goes to Healthcare vis-à-vis the Corporate Sector

"FitBit's health technology has the hearts, minds and data on millions of users in our global   community – we are with them 24/7" (Healthsolutions.fitbit.com, 2019).

Power is a substantial political concept and we always come across various definitions of it. As **Susskind** states *"force, coercion, influence, authority and manipulation"* (Susskind, 2018, p. 93) are different facets of power. In this sense we may argue that traditionally, power was connected to notions such as sovereignty, manipulation, or force by state. **Foucault's** concept of the "*microphysics*" of power deals with the manifestation of power in people's private lives. But as digital technologies become more prevalent, we need to move beyond these traditional perceptions of power. As societies became more intertwined and dependent on technology, we have seen how power has proliferated diverse new overlapping "modus operandi."

Nowadays, power circulates untraditionally and invisibly, through smartphones, computers and notably through various self-tracking devices. The digital gaze has diffused throughout this power network to such an extent that it has become difficult to escape its influence even temporarily. To **Buraj,** the distinctive feature of today's power is "*systematic self-control of people connected to their self-manipulation*" (Buraj, 2018, p. 750). In our view one of the main facets of today's power is that it permeates our lives digitally through the technologies which produce an assemblage of human data. People use data to gain control over their lives as illustrated by the self-tracking practices popularized in the Quantified Self movement. This form of power is intertwined with wellbeing discourse and the use of the fitness gadgets, and it is difficult to spot its disciplining measures as it sets the user's mindset to become responsible for their own health.

To **Foucault**, these wearable gadgets would potentially resemble the all-seeing gaze cast upon the individual – especially in cases where health insurance companies make decisions about premiums or risk groups and then "*nudge*" their patients with health-promoting messages (Lupton, 2012, p. 236) thus turning the gaze inwards. The narrative of responsibility for one's wellbeing and surrounding the healthy lifestyle of the average citizen becomes ubiquitous throughout healthcare policies both in the United States and Europe (Sharon, 2017).

It is therefore possible to reasonably speculate that in our near future, decisions about our health derived from this will be reflected in the data produced by digital self-tracking devices. Digital enterprises develop wearable devices to scour data from individuals primarily to find ways of advancing their business. According to **Susskind,** tech enterprises possess a great deal of political power, and subsequently, power will lie in the hands of those who will control the technology, not those that use it (Susskind, 2018, p. 154). Similarly, the rise of big data will bring about changes in power relations among individuals, business and government

(Kool, 2016, p. 10). Tech firms are already able to carry out detailed analysis of very personal user information, such as eating habits, levels and quantities of exercise, sleep patterns and more (Crawford, Lingel, Karppi, 2015, p. 493). Although the integration of wearable devices into the healthcare and workplace industries is still in early stages, there are already many examples of how these gadgets are implemented.

Arguably, once health care institutions are able to read and classify a subject based upon the data the subject provides through these devices, political implications come to the surface. As **Beer** notes: *"the data themselves come to life and begin to have consequences when they are analysed and when those analyses are integrated into social, governmental and organizational structures"* (Beer, 2019, p. 15). Once the data are able to give insights that govern people's lives, it could certainly mean providing others with the means to govern their lives as well (Davies, 2015, p. 221). To **Foucault**, not only economic but political power was present in these institutions – the people who manage and, most importantly, have the right to punish – and reward (Foucault, 1994, p. 85). As these health institutions discover that its subjects are not meeting the health ideals, punishment may follow. "*To punish is the most difficult thing there is. A society such as ours needs to question every aspect of punishment as it is practiced everywhere"* (Foucault, 1994 p. 464). Another instance is when individuals refuse to wear the self-tracking device or provide their health data to these parties which can lead to higher insurance premiums (The conversation.com, 2019). An interesting fact to point out is that, according to a survey conducted by Insurance Journal, it was found that individuals agreed to use the self-tracking device in order to lower their healthcare costs (Sps.northwestern.edu., 2016).

Health insurance providers such as Vitality or Aetna have amended health premiums if an individual agrees to use the self-tracking device and achieves the established standard of health (Langzing, 2017, p. 12). Aetna began its program only recently and grants the users various gifts cards if they meet their health goals (Time.com., 2019). Another instance was when the US health insurer Cigna began to distribute wearable devices to employers. The moment they became aware of the fact stemming from the data that some of the employees were prone to diabetes, they reduced the risk behaviours. We observe also that punitive measures are already being implemented by some healthcare providers, for instance to smokers by increasing their insurance costs (Crawford, Lingel, Karppi, 2015, p. 493). As **Johnson** rightly points out:"

Individuals provide their data to the state that allows it to control their biological capacities and ultimately damns them" (Johnson, 2017, p. 152).

In addition to healthcare, we need to point out how corporations that develop self-tracking devices such as FitBit penetrate into the workplace and corporate environment. For instance, the wellbeing program by FitBit Care provides employees with so-called "personalized digital interventions" and "health coaching & virtual care." In a nutshell, employees can track your location, breaks, hours worked, or activity levels although they have to provide an employer with consent (Personneltoday.com, 2017). FitBit claims they can lower your medical costs and also take proactive steps to avoid your health deteriorating. It is mostly targeted to subjects suffering from diabetes and hypertension. The narrative of FitBit Care revolves around normative rhetoric such as wellbeing and positive affirmations which help you feel healthy, inspired and empowered (Healthsolutions.fitbit.com, 2019). The FitBit slogan "*FitBit's health technology has the hearts, minds and data on millions of users in our global community – we are with them 24/7*" (Healthsolutions.fitbit.com, 2018) clearly bring us closer to the famous **Orwellian** statement from Nineteen Eighty-Four, "*Big brother is watching you*" (Orwell, 1949, p. 3). This creates a serious ethical privacy concern. Users are being surveilled 24/7 voluntarily once they put the device on their wrist often without even knowing precisely by whom or to what (or whose) ends. Ultimately, users receive only a small fragment of the data they generate. The disciplining effect cannot be overlooked. It is unclear why self-surveillance would be preferable to obligatory surveillance.

The other important thing to realize is that these data are compared to the other's data, which are processed by new companies such as Vivametrica for self-tracking devices. They have considerable power to define a "normal" subject while the users aren't even aware they are contributing to the new definitions of normalcy which might have profound consequences at both the individual and collective level (Crawford, Lingel, Karppi, 2015, p. 493). For example, fitness norms such as a recommended 10,000 steps per day would burn 20% of a standard daily calorie intake, which indicates that an individual who desires to be healthy is one willing to meet these norms (Ajana, 2017). This normative nature of the data gathered by self-tracking would likely raise a concern for **Foucault**, because of the tendency to accept or to conform to norms of the body or the self (Lupton, 2017) and, furthermore as **Lupton** states, the data gathered through self-tracking are represented as "*objective forms of information compared to the information that is gathered from people's own*

subjective experiences of their bodily sensations and rhythms. The production of quantitative data via digital technologies is portrayed as contributing to their objective neutrality, supposedly removed from the subjective actions of humans (Lupton, 2014, p. 14).

We are also concerned how data are processed by wearable and healthcare companies since there does not exist much clear legal protection for the user. Generally, the user has to sign a consent form regarding the sharing of data, part of which is consciously sharing with other users, but also to various third parties[3] the identities and aims of which remain unknown to the user (Crawford, Lingel, Karppi, 2015, p. 494).

To sum up, self-tracking devices and data they produce begin to influence people to behave in a certain way. They use them in an effort to control their own lives, but at the same time contribute to a growing inescapable normalizing power. The health and corporate sector thus outsources its surveillance practices to the citizen under the auspices of health and wellbeing, which become key modes of biopower by the neoliberal state.

Conclusion

In this paper we presented the relatively new phenomenon of "self-tracking" through a **Foucauldian** prism. We believe **Foucault**'s notions of power and panopticon serve as illuminating frameworks when examining self-tracking practices as human-technology interaction brings many political philosophical concerns.

Foucault's analyses of power are very specific and do not stop at simple and overt manifestations like force, coercion or domination. Throughout his academic endeavours he showed us how power operates at a microlevel, how knowledge is shaped, and how in the end power is exerted at the global level – through discourses, institutions and social practices. **Foucault** elaborated on **Bentham**'s notion of the panopticon and presented his view on surveillance which he labelled as "panopticism", where the "all seeing gaze" ensures the control of individuals. Through this technology, surveillance is transforming into a participatory self-surveillance. This implies the internalization of rational models through self-discipline and the subject occupying a panopticon of themselves (Han, 2017).

Furthermore, regarding self-tracking activity, the data it produces needs to be taken into consideration. Human bodies, activities and feelings are broken down by

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[3] The third parties are mainly advertisers, health institutions, tech firms or various pharmaceutical companies that are interested in users' data (Ruckenstein, Schüll, 2018, p. 263).

this process into statistical data and individuals are expected to behave according to the "knowledge" reflected in these numbers. On the one hand, we find the motto of QS "*Self Knowledge Through Numbers*" alluring, as it gives us a certain feeling of an empowerment over our lives. On the other, **Foucault** reminded us that the production of knowledge is the result of a long history (Belliger, Krieger, 2016) and we should be aware of normalizing nature of power which circulates through self-tracking tools thus quietly persuading individuals to conform to norms.

In our view, power today is not centralized but diffused among different players in the associated industries. In addition, we raised a concern regarding self-tracking devices and the data they produce. We have outlined how today's "all-seeing eye" penetrates into the healthcare and corporate sector through the implementation of self-tracking devices. Although self-tracking seems like a voluntary action, health organizations and employers are trying to modify behaviour with the structuring of health costs which can be said to reward or punish the subject. Clearly, those who owns the data enjoy a great deal of power. It seems only rational to worry how the data are processed by these wearable companies where few clear legal protections exist for the citizen. Moreover, what consequences might we experience due to the pervasive nature of self-tracking technologies, which make us massively vulnerable without us even realizing it? As this state of affairs progresses and becomes more efficient, it appears as if citizens will be casually and regularly manipulated by healthcare institutions or even employers based merely on the kind of lives they prefer to live.

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