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# THE MODERN PANOPTICON:

## NEW PLAYERS FOR POWER

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## I. Introduction

In the current age of information technology, it is critical to reflect on our society and look inwardly on our actions, what impacts them, and who it matters to. Surveillance is the process of observing something simple like everyday actions, but with special interest. It is a focused and systematic directing of attention or resources towards others to gain information, or fulfil another specific purpose. Those who are surveilled are the subjects about whom the information is gained. This interaction between the system of surveillance and those being observed is critical [1]. Like many other disciplines, the study of surveillance can be split into three periods: pre-modern, modern, and post-modern. A true savant in this field, David Lyon distinguishes these periods through the methods used for such surveillance. The pre-modern era is identified as surveillance being physical or face-to-face [1], famously drawing upon Jeremy Bentham's 18$^{th}$ century panopticon prison model. Next, the modern period is defined by a bureaucratic, file-based form of surveillance. The rise of computers however, marks the post-modern age with interfacing or digital surveillance.

As these eras are not necessarily mutually exclusive [1], it proposes the question of how they function together and in what ways they may challenge each other. This paper thus investigates some of the key challenges to Foucault's panoptic concept, specifically brought about by the rise of digital information technologies. It is worth noting that due to limitations of space, this paper cannot present the full scope of challenges faced. Rather, it focuses on one overarching challenge with subsidiary contenders. This paper also does not bring forward the arguments defending the synergies between digital technology and panoptic surveillance. In fact, many scholars support Bentham's panopticon as illustrative through Foucault's concept, in that his lens for viewing the theory of surveillance is still very clear, and is perhaps even enhanced [2] in our modern digital society.

For this paper, I draw inspiration from the works of Galič, Timan & Koops, whom provide a comprehensive overview of panoptic surveillance and its role in a digitised world. Initially, I lay the critical groundwork for the paper, including discussing the central components of Foucault's panoptic surveillance: discipline and power. I then go beyond palpable challenges to discuss what I view as the ultimate challenge caused by technology: how power dynamics are shifting due to modern technology. Through the rest of the paper, I assert three essential revolutions to Foucault's panoptic discipline society and the challenges to its traditional power structures: the digital double, big data and algorithms and the rise of third-party power.

## II. Discipline & Control

*"The architect becomes a storyteller,*

*even in a more effective, powerful and contemporary way"* [3].

Foucault's most instrumental work is informed by a simple architectural design from Jeremy Bentham: the panopticon. This structure itself is exhausted within surveillance studies, so will not be described here in tremendous detail. The perimeter of the structure is defined by a ring-shaped building, divided entirely into cells. In the centre is a watchtower. The windows are set so the outer structure can view only to the outside of the building and to the inside, toward the tower. Utilising backlight, observations can be made from within the central tower into the cells, but cannot be made from the periphery back into the tower [4]. Panoptic surveillance thus operates through this power complex. This is not solely through a direct use of power, but due to the anonymity of the observer, it operates through subject self-discipline: a fear of punishment though one never knows if they are being watched.

This form of self-discipline is illustrated in Foucault's work, where the panopticon serves merely as the mechanism for what he calls a "disciplinary society" [4]. In this regard, the main purpose is effective soul training as a form of repression and internal transformation. Kevin Haggerty elaborates on this type of discipline whereby the inmate is meant to fixate on even the smallest details of their behaviour through self-analysis, and improve it according to the perceived desires of the observer [5]. Discipline is then the type of power [4], and panoptic surveillance is thus the power dynamic between the inmate and this omniscient authority figure, whether they are indeed present and watching or not. Foucault felt that the panopticon was in fact such a comprehensive surveillance model it could be used as a method of fully "defining power relations in terms of the everyday life of men" whereby the surveilled "inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection" [4].

To Foucault's credit, the concept of the panopticon still resonates with scholars today. However, the world we live in now is vastly different than just fifty or even twenty years ago. The most evident challenge then to Foucault's panoptic surveillance is one of architecture. In brief, this is illustrated as a major discrepancy in that the traditional panopticon, as a physical structure, has a visible tower in the centre. This is an essential component, where the surveilled subjects live in a domain of pure uncertainty. In other words, in order for behavioural modification to occur, it is critical that the inmate is aware that they may be being watched [5]. With today's technology however, this may not be the case. Surveilled subjects may not in fact be cognizant that observation is taking place. For Foucault, the disciplinary

society was powerful due to its visibility, and thus the pressure to modify behaviour. It is then challenged if surveillance is unperceivable or invisible to its subjects [6].

While the panopticon concept is utilised as a power dynamic through a strategic use of space [6,7] this idea is critically challenged once it liquefies and flows from the physical domain and into cyber-space [6]. A virtually invisible method of surveilling poses a critical challenge to the very foundations of the model itself, as well as Foucault's utilisation of it. According to the analysis on surveillance theories by Galič, Timan & Koops, "The idea of internalisation of control via one-directional top-down architectures of surveillance no longer seemed to fit contemporary societies" [6]. This could have been due to the fact that Foucault never attempted to extend his analysis to the electronic modes of surveillance [8].

It is believed that "power dynamics between institutions and individuals are no longer so delineated" [6] as they were with Foucault. Yet during his lifetime, Foucault may have prepared the foundation for expanding beyond a disciplinary society. In his famous text, *Discipline and Punish*, he discusses that with advancement, disciplinary mechanisms could become "de-institutionalised," whereby they would be dismantled into more fluid forms of control that could be adapted and transferred [4]. This informed the work of Gilles Deleuze, who observes that surveilled beings no longer rely on physical containment as the "socio-technical landscape has changed" [6]. He then offers explanation for more modern power dynamics, and applies "societies of control" [9]. Whereby utilising new technologies for modes of surveillance and control, surveillance programs can reach their goals even without subject awareness [5]. In fact, some may indeed require an element of secrecy [6].

## III. The Digital Double

With the implementation of modern software and hardware, there are some critical technological deviations from Foucault's original reasoning of panoptic surveillance. With modern surveillance methods, a by-product of the traditional power relationship is created. The presumably genuine actions of the unknowingly surveilled are recorded, and utilised in the form of information. This is a critical factor that modern surveillance theory need consider. Failing to account for data creation would be akin to being a scientist who studies clouds but does not account for rain, how it subsequently impacts the environment and then the clouds again in turn.

Surveillance thus "moves away from being a present and often physical force on individuals, to become more abstract and numerical." [6]. Described skilfully as a "surveillant assemblage," by Haggerty & Ericson, this is done by employing a hybrid rationality. The

body is first abstracted, whereby it is broken down from its physical, territorial setting. Next it is reassembled through data flows. "The result is a decorporealized body, a 'data double' of pure virtuality" [10]. This alternate digital is established as a second self, additional to the physical body [6]. The data double is not bound to a specific location, and is broken down in a more measurable way that can be analysed through innovative techniques.

Deleuze notes that individuals in a control society, are no longer relevant in the traditional terms of their personal signature and their position within the public. Instead individuals become relevant only as a code. "Individuals have become 'dividuals' and masses, samples, data, markets or banks" [9]. Their body and mind are no longer subjected to surveillance for discipline, but modern surveillance seeks the data double, the divdual, or the representation of the real person. These "characteristics of contemporary surveillance demonstrates a quantitative turn towards people and other surveilled phenomena. It is no longer (physical) individuals who needs to become visible and controlled, rather, the focus is on their data doubles (who need not be a double at all), the data that individuals leave behind and are then re-assembled according to the purpose it is supposed to serve." [6]. The physical individual is no longer of the same interest, especially when individuals play, work, communicate and carry out much of their lives virtually [11]. This is not being physically forced on people however. There is an element of volunteering information for surveillance, though it is difficult to argue if individuals are not necessarily aware they are being surveilled, or what is being done with the information collected [6].

To the lay person, the concept of a digital self may be difficult to understand. In order to illustrate this digital double, I will suggest an example. Imagine you have a friend with a camera who follows you around for a week, recording your actions throughout. This camera pics up information as it follows you, like what time you use the bus, what you buy at the grocery store, when you use your credit card, which road you take to meet your significant other for drinks. Your friend sells the recording to a company who transfer your physical actions into pure information [10]. The company will not know who you are per-se, but they will have an informational record of you defined by your actions in that video. While not necessarily the most eloquent example, this should illustrate the idea of what a digital body of representation is.

To understand big data, simply apply this idea of collecting data about a digital representation, to millions of people, with the many activities they do, over a long period of time, which is then stored in a databased and retired to a retrievable archive. Big data is thus just an extremely large set of data which if utilised properly, can give a requested output from

the input of information. “The database allows for the accumulation and analysis of enormous amounts of information, and the results of these analyses often pertain to events yet to occur” [11]. Given the clearly massive amount of data, these analyses can naturally be complex, and take the form of an analytics or algorithms.

## IV. Big Data & Algorithms

Simply put, analytics is the detection of significant patterns within a given data set. Data mining is used to collect the information and an analysis is done to discern patterns, primarily through programming or statistics. This is regularly done in a bureaucratic setting and generally works best with simple, structured data, like numbers. If the given data remains the same, and the parameters remain the same, the output will always be the same. Each time new calculations must be run, it begins anew. The data input may stay the same and then the variables are altered. Analytics works by discovering when certain parameters are met, which specific patterns then develop from the data set. More complex data, such as online reviews, requires a deeper analysis. Machine learning takes this further. Machine learning deals constantly with new data, so while the parameters may stay the same, the output will be changing. In this case, machine learning differs in that it receives new data, builds from the previous results by recalling old patterns that it discovered with the same parameters, and provides new patterns within the data set. Machine learning also works after new data is input, where it may need to alter the parameters, in order to develop the best output for a given goal.

For the lay purposes, algorithms are the overarching category for these two. In basic, an algorithm is simple or complex computer code which allows a data set to be evaluated. The algorithm takes the input of data, performs a function based on given parameters, and develops an output of different data based on the inputted data. What algorithms do is simply execute a code, written by a programmer. What gives them power then, is the relationship where big data inputted, collected through surveillance, and then utilised. When data sets have billions of individual data points, often there must be millions of parameters available in order to reach a discernible output. The algorithm must then decide which parameters to utilise and prioritise to provide the best output for the given task. The algorithm cannot tell us however, which parameters it set, and to what strength they may have been used. Thus, the algorithm itself, enters into power.

Once an output is reached, that output may have additional consequences, and algorithms are not necessarily objective in their outputs either. There are still factors such as

the programmers of code and the enforcers of outputs who make decisions and can influence both inputs and outputs [6]. A consequence of an output could be seemingly small such as which news articles appear first in an online search. However, when that is the primary source of information you receive on your short coffee break, it could alter your decisions like who you decide to vote for in an upcoming election. By rules of association, and anticipation, algorithms can also be predictive, wanting to know who from a given data set is most likely to do something. As illustration of the predictive power of algorithms, Target, a US-based retail store, used an algorithm to successfully detect pregnancy before family members. Collecting vast amounts of information such as demographics and purchase history, the company's algorithm marked women who were statistically likely to be pregnant, determined by the algorithm's parameters, and targeted them for advertisements [12].

This relationship between data surveillance and collection, algorithmic analysis, and tractability of a data double to a physical self or "how information is used to identify the subjects of surveillance" [7] creates a new power structure that may have been difficult for Foucault to have predicted. Power comes when such a system as an algorithm is able to effectively govern the actions of others [6]. In addition to prevention of bad behaviours, these methods are applied to ensure desired behaviours like purchasing a specific product. This circles back to the elements of social control highlighted by Deleuze, but may take it even further. "Social control today is, thus, decentralised and shape-shifting—it is not focused just on collecting information but on decoding and recoding, sorting, altering, circulating and re-playing information" [13]. Human agency is then called into question as big data and algorithms enter the arena of power dynamics.

## V. Third-Party Power

Here, "where society is becoming fragmented, so does the individual; the Panopticon blurs and the individual is split up into pieces […] In a Deleuzian society, the point is no longer making bodies docile, but to mould consumers, whose data-bodies become more important than their real bodies." [6]. This is furthered by the idea of surveillance capitalism. Used heavily by Shoshana Zuboff, surveillance is no longer just about relationships, but also this information by-product created and how it effects those relationships. As discussed, surveillance data is merely the input but there are also outputs which can lead to governance and effectively control over others. Because of that power, the information is then bought and sold through surveillance capitalism. Foucault fails to account for the very real market value

of this data. Data that is created takes new shapes, is mouldable, and its value is often decided through the context of others. Zuboff conceptualises surveillance then as a dominant feature within a capitalist society [6] as a "wholly new subspecies of capitalism in which profits derive from the unilateral surveillance and modification of human behavior." [14]. In a brilliantly illustrative example, Zuboff states,

> "Google knows far more about its populations than they know about themselves. Indeed, there are no means by which populations can cross this divide, given the material, intellectual, and proprietary hurdles required for data analysis and the absence of feedback loops. Another asymmetry is reflected in the fact that the typical user has little or no knowledge of Google's business operations, the full range of personal data that they contribute to Google's servers, the retention of those data, or how those data are instrumentalized and monetized […] Surveillance capitalism thrives on the public's ignorance. These asymmetries in knowledge are sustained by asymmetries of power" [15].

She believes that the invisible surveillance mentioned in the beginning of this paper is crucial to this evolved capitalism, and is thus is a threat to democracy itself, to human agency, and indeed to social governance and politics. Patterns of consumption replace soul training and surveillance capitalism suddenly aligns closely with Deleuze and a control society. The disciplinary and oppressive [6] methods are challenged by opportunity and profit, where a company will buy information to discover the question you're going to ask before you even do. This is done through a market so they can then sell you the answer for ten times more to profit. Citizens of a given population are merely broken down into their data doubles, seen solely as consumers within the market economy. The big data collected makes this possible, with algorithms at the heart. The output and subsequent control then creates new power dynamics to try to conceptualise.

Though this data created from the observer and surveilled relationship is indeed an element of shifting power dynamics, there is another relationship that enter in as well. Panoptic surveillance looks at the power dynamics on the inmates, but does not account for the additional dangers from new power complexes embedded with a digital society. In 2017, half of all money spent in the United States is on Amazon.com [16], and The Economist claimed that data has now become the world's most valuable resource. Such information and data then gives tremendous strength to large corporations. This creates an uneven distribution of power within private industry where smaller corporations may not have adequate resources to compete. Additionally, "corruption thereby gains a new power […] The operation of

markets is now the instrument of social control and forms the impudent breed of our masters." [9]. Collaboration is required then, or governments risk losing control of their citizens to corporations.

This can however, be done delicately. The General Data Protection Regulation (GDPR) is a regulation to strengthen rights for data protection of European Union citizens. While this seemingly puts the power back into the hands of the surveilled subjects, by granting them access to their own information and having the ability to remove it [17], the true power is returning to the government. The people must remember that the government will be the holders of power as the enforcers of this regulation. In basic, corporations must enact security measures to ensure strength against information breaches and cannot send data outside of the EU, without incurring massive fines. This privacy could help protect citizens from unwanted access or distortion of data from criminals through hacking, identity theft or blackmail. Until it goes into effect in 2018, and likely even thereafter, it will remain unclear how the GDPR will change the framework of surveillance capitalism, how is will change the use of data or control from algorithms. It may do nothing or it may completely topple the structures of power within our digital society.

## VI. Conclusion

In pursuit of the answer to how is Foucault's concept of panoptic surveillance is challenged by the rise of digital information technologies, this paper has illustrated several promising contenders. While not the only challenges, specific focus has been given to digital identity and the digital double; big data, analytics, machine learning and algorithms; and surveillance capitalism giving rise to third-party power. These have been highlighted with the aim of depicting the overarching concept challenging the discipline society: that the dynamics of power are being redefined. New actors, both physical and virtual, are developing within and for the digital age. They present new structures and power changes which once settled, may challenge the very theoretical frameworks of modern surveillance theory.

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