A Synthesized Approach to Explaining the Expansion of Surveillance:

Risk Perceptions and Surveillance as a Positive Feedback Loop

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ABSTRACT: This paper is a review of partially available surveillance literature in an attempt to synthesize information about the field of surveillance within sociology to provide a clearer understanding of the process as a whole. This paper argues that modern surveillance paradigms evolve much like a positive feedback loop in the biological sense, where increasing surveillance feeds back into the need for more surveillance, causing an exponential (if left unchecked) rise in the level of surveillance within and of society. This position is supported through evidence from a thought-provoking question, surveillance assemblages, risk as a psychological and sociological process and its effect on surveillance, and surveillance capitalism. Finally, this paper concludes with a possible way forward for the study of surveillance, how to end this feedback loop, and where future research within sociology and surveillance as a focus could be taken.

KEYWORDS: Surveillance, risk perceptions, feedback loop

Introduction

Trends among surveillance studies have undergone an abundance of shifts throughout its relatively short existence. Myriad facets of surveillance have been inspected from different angles in attempts to find the most evidence-supported sociological theory of surveillance. Although numerous scholars have attempted to develop extensive theories within surveillance studies, there has been a lack of a complete synthesis of and explanations for all aspects of surveillance, and although fusion still requires more research, a common theme among much surveillance research can be scrutinized: risk management. Risk management has emerged as a potential focus for contemporary surveillance, as vast and diverse methods have been proposed to reduce the number of risk individuals and groups are exposed to daily. Paradoxically, the presence of surveillance has the ability to manage and mitigate risk, and at the same time, surveillance increases the likelihood of developing concern for the potential dangers within society. Surveillance is so much more than just cameras monitoring a store, and the paradigm of the expansion of surveillance itself should be focused on. Although the concept of a positive feedback loop has been studied extensively within the field of biology, it is yet to be applied to surveillance studies within the field of sociology, where increasing the level of surveillance present feeds back into the perception of the need for increasing the level of surveillance. The public perception of risk being present when surveillance is used is the primary focus, rather than its intended purpose of reducing the risk of danger. This paper will analyze and provide evidence for the presence of a positive feedback loop within several modern surveillance paradigms, as well as a possible way forward to stop this cycle before the expansion of surveillance becomes uncontrollable.

A Philosophical Anecdote and the Positive Feedback Loop Overview

To begin, an operational definition of surveillance must be stated in order to establish working parameters for analysis. Lyon (2001) in "Surveillance Society", defines surveillance as "[...] it is any collection and processing of personal data, whether identifiable or not, for the purposes of influencing or managing those whose data have been garnered" (2). Furthermore, the concept of a positive feedback loop must be operationally defined as well. When examined within the field of biology, the feedback loop is described as "a system where one variable increases the quantity of another variable, which in turn increases the quantity/occurrence of the first variable" (Nelson 2018); this same principle can be used when analyzing surveillance. A great deal of scholarly research has analyzed surveillance from a variety of perspectives, but a philosophical anecdote may illustrate this phenomenon of the positive feedback loop more successfully. Imagine you walk into a store with no visually present surveillance measures, you might believe that there is less risk present within the store as the need for surveillance is lessened. Then, you go into the store next to it, and there are more cameras, security guards, and other surveillance technologies than you can count. You may wonder why there is such a need for high levels of surveillance, and what risks those technologies are being used to protect you from. In the first example, you are at a higher level of risk as protective devices are not as present, but feel safer, and in the second example, you are more protected but feel less safe as you dwell heavily on the risks that the surveillance is used to protect you from. Risk management and surveillance have a positive correlational relationship, wherein surveillance is proposed as a risk management strategy, but the presence and perception of surveillance can cause a vicious cycle of increasing levels of surveillance. For example, Beck (1992) states that surveillance is a necessary part of a risk society that can be used to reduce exposures to danger, although, in the process, we allow more and more of ourselves to be surveilled. Further, Bennett et al (2014) in "Transparent Lives," state that "ironically, so much focus on security can breed insecurity" (42), perfectly encapsulating this example. These authors further highlight the paradoxical nature of surveillance when they state that "[...] even though we are probably, on average, safer than ever, people tend to spend more energy dwelling on the risks that remain" (43). This leads to increasing levels of surveillance in response to the perception of the presence of risk, regardless of the sociological understanding that more surveillance only increases the number of risk people believe themselves to be in, continuing to feed into the positive feedback loop of surveillance.

Surveillance Assemblages and their Role in the Positive Feedback Loop

Modern surveillance usage has largely come to culminate into perceived assemblages, meaning that levels of surveillance are spreading to every corner of society and cross-sectioned with technology, integrating together. This, therefore, increases the levels of invasiveness of surveillance, and the data gained as a result is vaster than ever before (Haggerty and Ericson, 2000). In their work "Surveillant Assemblages," Haggerty and Ericson (2000) argue that these increasing levels of surveillance are causing a loss of the ability to be anonymous, with surveillance users employing strategies in order to identify individuals for the user's protection. This integration of surveillance is meant to further reduce risk on all sides, and it may do so, however, the perception of the presence of risk remains, and as a result, the level of surveillance further increases. The number of surveillance technologies and methods is increasing and becoming further interconnected and, as such, the populations of the world witness and experience greater surveillance, feeding fears of danger and risk even more. When every aspect of one's life is exposed

to extensive surveillance, fear sets in as to why. These assemblages are thus not reducing perceived feelings of risk, but rather, increasing them. As more surveillance measures are brought together into the assemblages, the more the population is going to believe they are at risk. The growth of these assemblages is likened to "rhizomatic expansion" where surveillance assemblages "grow like weeds" (Haggerty and Ericson 2000, 614), and this growth further feeds into the positive feedback loop of surveillance.

Capitalism and How the Assurance of Profit Feeds into the Positive Feedback Loop

Profits from surveillance also benefit, feed into, and protect the positive feedback loop. As a result, surveillance can be proposed as a risk management strategy not only for individuals but for corporations as well. In his work "Surveillance, Crime and the Police," Haggerty (2012) states that the private operation of surveillance cameras began within the private sector in order to protect themselves from theft, fraud, and numerous other dangers that may cost the corporations money. The risk of monetary loss has not only led corporations to place their own surveillance devices within their physical property but has also caused them to seek out other data about the public in order to gain profits. An example of this can be seen with corporate marketing utilizing advertiser profiling an individual's online browsing and spending in order to advertise to them more effectively, and in turn, gain more profit. Zuboff (2015) discusses this in great detail in "Surveillance Capitalism," which exemplifies this new paradigm when they state: "new monetization opportunities are thus associated with a new global architecture of data capture and analysis that produces rewards and punishments aimed at modifying and commoditizing behaviour for profit" (85). The relationship between corporations and surveillance is not only reactive and defensive, but proactive and offensive as well, in order to protect themselves from the risk of losing potential profit. Corporations would thus perceive themselves to be at risk of profit loss if not for surveillance technologies, and in turn, surveillance levels increase not only physically, but digitally as well. This illustrates the pervasive nature of the positive feedback loop, as the risk of profit loss leads to investing in increased levels of surveillance for new avenues towards profit, which as a result, increases the capabilities of profit, as well as the risk for money loss if this expenditure was not successful.

The Rapid Expansion of Surveillance and National Security

The post 9/11western world saw the rise of the already expanding vast regime of surveillance skyrocket due to moral panics and western isolationist policies. National security became a forefront of policy decision-making

and led to years and years of wars "On Terror" being waged by the western world on many middle eastern countries, such as Iraq or Syria. While the long-term purpose of said wars has been up for debate for a long time, whether it be for materialistic gain (Bayo 2012), or imperialism (Fouskas and Gökay 2005), it was initially a retaliatory measure for the September 11th attacks. These wars caused thousands of unnecessary, unrelated deaths after the attacks on both sides, such as citizens who had nothing to do with it. Further, the fallout of what happened after resulted in many numerous side effects, such as xenophobia and islamophobia (Kumar 2021) that has had lasting ramifications on international relations and on the lives of many citizens inside western nations. Domestically, national security measures started to expand incredibly fast, resulting in higher levels of surveillance than ever before. Rhizomatic expansion, as stated earlier by Haggerty and Ericson (2000), of surveillance assemblages also manifested post-9/11. Lyon (2003) exemplifies this with "The surveillance aftermath of 9/11 also highlights two key trends: the convergence and integration of different surveillance systems, and their globalization." (8). These surveillance measures were meant to protect the country from threats from other nations and their people, but modern western governments have gone the other way, furthering their own surveillance capabilities and frequency of its own citizens within the borders of

their nations, as well as outside threats. The countries used national security as a justification for it, but this has only fed into the loop more. For example, the Patriot Act in the USA, Bill C-36 and C-51 in Canada, and other similar legislation has had the opposite effect of furthering citizen fears of an omnipresent, surveilling government that could be violating our rights and freedoms (Alford 2016), rather than the intended purpose of quelling their fears of national security risks from other foreign nationals. CSIS in Canada and the NSA in the US were created, adding to the governments' abilities to surveil, as legislation to protect domestic interests lagged behind (Alford 2016). Policymakers felt as if the risk was incredibly high and used that fear to expand surveillance not only of their own people but of foreign nationals who they felt might be a threat (Foley 2018). This fear allowed and justified the governments of each country the ability to spy on their, and other countries' citizens, as the legality of such spying was not a focus at the time directly following the attacks. A "do and ask for forgiveness later" approach was essentially employed by the governments of western nations, but by the time forgiveness is sought, the damage could already be done. A quote from Lyon (2003) encapsulates this idea perfectly: "The current anxious and tense situation which has followed September 11, 2001, is helping to create a potentially parlous augmentation of surveillance of the latter [socially negative] kind in several countries." (17). Due to this rapid expansion, surveillance technology and capabilities soared, meaning surveillance was increasingly becoming a part of everyday life. When people see these rising levels of surveillance, their fear of the risks also increases, and as a result, surveillance increases as well. 9/11 caused an exponential rise in surveillance, not only in the technology, but also the quantity. It has served as a metaphorical trampoline for the continuing expansion of surveillance that has persisted ever since.

Where To Now?

The next question many have is where we go from here? How do we stop this rapid expansion of surveillance? Education on the topic is the first step towards ending the positive feedback loop of surveillance that not only serves to grow itself but takes away the privacy and identity of individuals in the process. Risk, however, cannot be completely avoided, which, as seen, leads to more surveillance. As demonstrated, being aware of surveillance without a proper understanding of its purpose can lead to inaccurate perceptions of the intentions of surveillance. This can be remedied through resistance, however, which is a side effect of the increasing levels of surveillance. This resulting resistance to surveillance is a reactionary measure to growing levels of surveillance and is necessary to stop the cycle of the positive feedback loop. Gilliom and Monahan's (2012) work, "Everyday Resistance," states that "although surveillance systems are becoming more encompassing and totalizing, amassing data and manipulating people as objects, resistance remains one of the levers by which power relationships can be adjusted, in trivial or significant ways, within the machine of modern life" (411). This then illustrates the effect resistance can have on surveillance as it can lead to problem-solving measures such as public education about surveillance and privacy legislation to ensure individuals are protected. Privacy must be at the forefront of surveillance policymaking, not lagging behind as it typically does, since surveillance is expanding faster than the already established laws can handle (Bennett et al. 2014). The phenomenon of the positive feedback loop can lead to further invasive surveillance levels of individuals who often do not need to be surveilled and deserve privacy and protection instead. Lyon (2003) states that "I wish to bypass the hype and to argue soberly that unless the current intensification of surveillance is slowed or stopped, in the USA and elsewhere, the emerging climate of suspicion will envelop us all in conditions that are not merely disagreeable but unjust and unfree" (6). Education, understanding, and legislation as a result of resistance can therefore all work together to stop the exponential expansion of surveillance. It must be exercised before surveillance expansion becomes unmanageable and loses the ability to be controlled by humans, and society is damaged as a result.

Conclusion

Perceptions of surveillance and risk have large levels of interplay with one another. The actions of increasing surveillance to mitigate feelings of risk tend to have the opposite intended effect. Increased surveillance creates feelings of increased risk, which in turn leads to more surveillance to "solve" the problem, leading to a never-ending positive feedback loop of surveillance expansion. Many surveillance users and individuals who are monitored rationalize this effect for a variety of reasons, such as risk management and even for profit. Evidence for this effect can be seen in other contemporary surveillance theories as well. These theories attempt to explain different aspects of surveillance, and the positive feedback loop is present in these theories, as they all share evidence for the existence of this effect. Being aware of and understanding this loop is paramount for necessitating change that will halt the inclining slope that is the amount of surveillance in contemporary society. It is not known the true limits of surveillance and its consequences, which could potentially be damaging to society without controls in place. The onus is largely on the population who is being monitored to speak out and resist the expansion of surveillance, and thus it is on us to have a say in how much we are willing to be surveilled without pushback and potential change. Ending this cycle of positive feedback is very important for society's well-being, but does require further sociological research to fully analyze the depth and effect of this phenomenon and keep surveillance levels from becoming disastrous.

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