Metacritique on Bentham and Foucault's Panoptic Theories as analytic tools for three modes of digital surveillance

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Abstract

The panopticon was originally a prison design made by Bentham in the late 18th century to efficiently reform offenders. Foucault appropriated Bentham's panopticon in the late 20th century to conceptualize and critique the society and state's coercive practices in making individuals conform to social and state norms. Although Foucault's appropriation of Bentham's panopticon was done prior to the full emergence of the digital age, a number of present day scholars use the panopticon in conceptualizing and critiquing digital surveillance. This paper problematizes the applicability of both Bentham and Foucault's panoptic theories to such contemporary phenomenon. This paper dissected both panoptic theories into five components—subjects; observers; data gathering, storage, and analysis; goals and effects of the systems; and management of the systems—and compared and contrasted these to their corresponding components from three cases of digital surveillance representing state digital surveillance, social media digital surveillance, and e-commerce digital surveillance. This paper established that Bentham and Foucault's panoptic theories have moderate resemblance to each other; that both Bentham and Foucault's panoptic theories are applicable to the conceptualization and critique of state digital surveillance; and that both Bentham and Foucault's panoptic theories are not applicable to the conceptualization and critique of social media and e-commerce digital surveillances. As a metacritique this paper is significant in the sense that its findings will hopefully enlighten other scholars about the actual levels of usefulness of both panoptic theories in conceptualizing and critiquing different modes of digital surveillance.

Keywords: *Panopticon, Jeremy Bentham, Michel Foucault, Digital Surveillance, State Digital Surveillance, Social Media Surveillance, E-Commerce Surveillance*

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Introduction

The panopticon was originally an architectural concept developed by the English engineer and naval architect Samuel Bentham (1757–1831) in Russia, and philosophically elaborated as a prison design that will efficiently reform offenders by his older brother, the English philosopher, lawyer, and social reformer Jeremy Bentham (1748–1832) in the late 18th century (Bentham, 1962). They coined the term from the Greek words πᾶν (*pan*, meaning "all") and ὀπτικός (*optikos*, meaning "visible"), as the efficiency of that prison design was based on the principle of continuous surveillance. The name also alluded to Ἄργος Πανόπτης (*Argos Panoptes*), the hundred-eyed giant of Greek mythology. From this point and onward, the phrase "Bentham's panopticon" refers to the philosophical elaboration of the older Bentham, and the name Bentham refers to the said person. Figure 1 shows the physical architecture of the panopticon, as drafted by the English architect Willey Reveley (1760–1799) whom Bentham commissioned in 1791, and as electronically re-rendered and relabeled by the coauthor of this paper (Bentham, 1962).
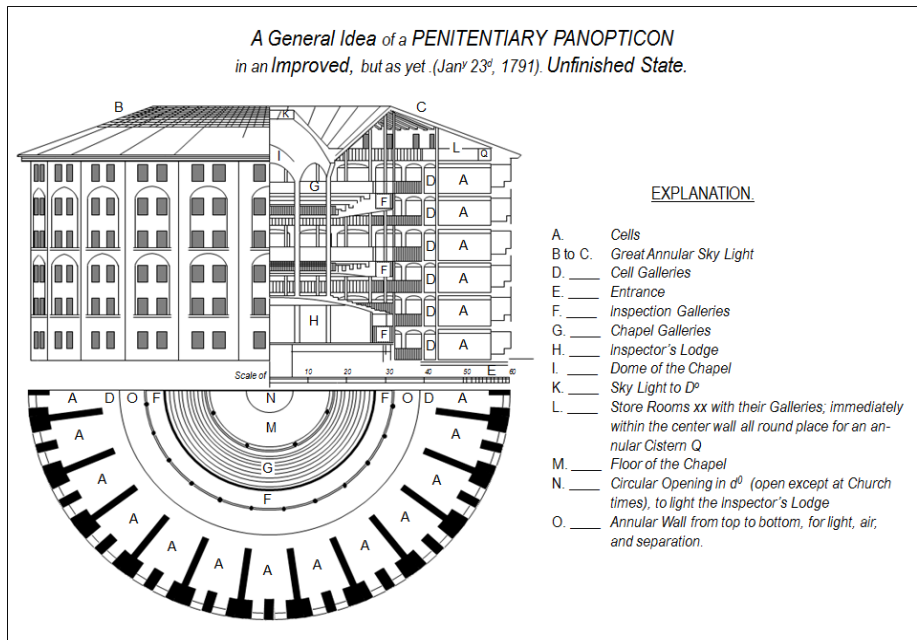

Figure 1. Willey Reveley's 1791 Architectural Drawing of the Elevation and Floorplan of Bentham's Panopticon

About two centuries later, the French philosopher and social and cultural critic Michel Foucault (1926–1984) went beyond the physicality of the panopticon and used instead its mechanisms for surveillance, rewards, and

punishments to conceptualize and critique the modern society and state's coercive practices that make individuals conform to social and state norms (Foucault, 1995). Bentham's panopticon was created about two centuries prior to dawn of the digital age, while Foucault's use of it happened at that very dawn, yet there are a great number of present day scholars who use the said construct in conceptualizing and critiquing digital surveillance (Haggerty, 2006, p. 23). In fact, Foucault did not consider the impact of digital technology as he theorized on the panopticon (Wood, 2016, p. 256), an impact that spreads and intensifies as digital technology develops (Green, 1999, p. 27; Galič et al., 2017, p. 10). Following the ideas of the Austrian and English media and surveillance scholars Christian Fuchs (2008), and Stephen Graham and David Wood (2003), this paper understands digital surveillance as the systematic gathering of digital and digitized personal data undertaken by an institution or organization, and processing such data with the use of artificial intelligence and machine learning in order to attain some of the central goals of such institution or organization.

Table 1 shows the number of publications returned from a series of five-year interval advanced searches using the Google Scholar with the key words "panopticon" and "digital surveillance."

Table 1. Number of Publications Returned from a Series of Five-Year Interval Advanced Searches Using Google Scholar with the Keywords "Panopticon" and "Digital Surveillance"

Five-Year Intervals	Number of Publications Returned	Percentage
1976-1980	0	0%
1981-1985	0	0%
1986-1990	0	0%
1991-1995	0	0%
1996-2000	7	1%
2001-2005	37	3%
2006-2010	111	10%
2011-2015	323	30%
2016-2020	591	55%
Total	1,069	100%

Table 1 points out that scholars started to talk about the panopticon and digital surveillance about two decades after Foucault's appropriation of the construct, and that such trend is increasing up to the present moment.

Despite the appeal of the panopticon to contemporary critics of digital surveillance, this paper offers a metacritique of its real applicability as a

critical tool in the said field of scholarship. There are definitely aspects and dimensions of digital surveillance that both Bentham and Foucault did not anticipate. Hence, it is both anachronistic and intellectually rash to just pull out these panoptic theories from their historical contexts and deploy them to understand the recent phenomenon of digital surveillance.

At a theoretical and meta-theoretical level, the literature reveals three clusters of works. The first one is about the appropriation and reworking of the panopticon in order to make it more suitable to the nuances of digital surveillance. Kevin Haggerty (2006), in his article "Tear Down the Walls: On Demolishing the Panopticon," catalogued these modified panopticons as the superpanopticon of Mark Poster, electronic panopticon of David Lyon, omnicon of Nic Groombridge, ban-opticon of Didier Bigo, global panopticon of Stephen Gill, panspectron of Manuel de Landa, myopticpanopticon of Stepahane Leman-Langois, fractal panopticon of Massimo de Angelis, industrial panopticon of Arthur Butchart, urban panopticon of Hille Koskela, pedagopticon of Robert Sweeny, polypticon of M. Allen, synopticon of Thomas Mathiesen, panoptic discourse of Vicente Berdayes, social panopticism of Loïc Wacquant, cybernetic panopticon of G. Bosquet, and neo-panopticon of Steve Mann, Jason Nolan, and Barry Wellman (Haggerty, 2006, p. 26). The second cluster of theoretical and meta-theoretical works is about the abandonment of the panopticon in favor of other conceptual and theoretical frameworks. Belonging to this cluster are the works of Giles Deleuze and Felix Guattari on control society, Haggerty and Richard Ericson on surveillant assemblage, Shoshana Zuboff on surveillant capitalism, and Bruno Latour on Actor-Network Theory (Galič et al., 2017, p. 11; Wood, 2017, p. 253). The third cluster, which may also be considered a subset of the second cluster, also abandons the panopticon, but instead of just looking for alternative conceptual and theoretical frameworks opts to return to Foucault for other useful and more appropriate concepts and frameworks. Belonging to this cluster are the works of Stephen Green (1999) on plague management and Gilbert Caluya (2010)on security.

This paper does not follow any of these three theoretical and meta-theoretical clusters on the panopticon of Bentham and Foucault. Instead, this paper opts to analyze again in more detail the panopticon as a conceptual and critical tool in the study of more specific forms of digital surveillance. Haggerty's (2006) article "Tear Down the Walls: On Demolishing the Panopticon" is so far the most detailed analysis of the usefulness of the panopticon in digital surveillance. But as Wood (as cited in Caluya, 2010), in his article "Beyond the Panopticon? Foucault and Surveillance Studies," has noted, there is a tendency for critics of the panopticon to merely dissect

a strawman version of the panopticon as they are more interested in setting up their post-panopticon theories for digital surveillance (Caluya, 2010, p. 631). Hence, this paper does only surpass the meticulousness of Haggerty in analyzing the panopticon, but also brings to the table the reality that there is a number of modes digital surveillance.

The authors of this paper were not able to find in the literature a classification of the modes of digital surveillance, hence figure 2 is their attempt to taxonomize the different references to particular modes of surveillance scattered in the literature.
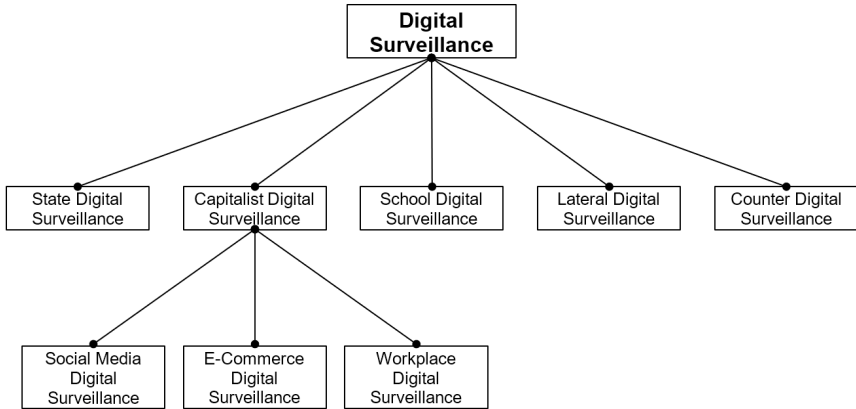
Figure 2. Modes of Digital Surveillance

In figure 2, digital surveillance has at least five basic modes: state digital surveillance (Leibold, 2020), capitalist digital surveillance (Zuboff, 2019), school digital surveillance (Haggerty, 2006, p. 26), lateral digital surveillance (Farinosi, 2011; Ivanna, 2012; Galič et al., 2017), and counter digital surveillance (Galič et al., 2017). State digital surveillance is a political and cultural mode of digital surveillance that is undertaken by the state on a portion or the totality of its citizens. Capitalist digital surveillance is an economic mode of digital surveillance undertaken by corporations on its clients and workers. School digital surveillance could be a hypothetical mode of digital surveillance that has as its roots the chrestomatic panopticon of Bentham (Galič et al., 2017, p. 11), and the pedagopticon of Sweeny (Haggerty, 2006, p. 26). Lateral digital surveillance is the mode of digital surveillance undertaken by internet and social media users on each other (Ivana, 2013). Lastly, counter digital surveillance is the mode of digital surveillance done by the supposedly usual subjects of surveillance on the supposedly usual agents of surveillance (Dupont, 2008). It must be noted that both lateral digital surveillance and counter digital surveillance,

strictly speaking, would not fit neatly into the initial definition of digital surveillance adapted by this paper based on Fuchs, Graham, and Wood.

Figure 2 also shows that capitalist digital surveillance has three modes: social media digital surveillance (Zuboff, 2019), e-commerce digital surveillance (Zuboff, 2019), and workplace digital surveillance (Green, 1999, p. 36). Social media digital surveillance is the mode of digital surveillance undertaken by the owners of social media on the activities of their users/ subscribers. E-commerce digital surveillance is the mode of digital surveillance undertaken by corporations on the buying behavior of their customers. Workplace digital surveillance is the mode of digital surveillance undertaken by companies on their workers, and has as its roots the pauper panopticon of Bentham (Galič et al., 2017, p. 11). All of these three modes of digital surveillance under capitalist digital surveillance neatly fit into this paper's initial definition of digital surveillance.

The meta-critical goal of this paper is accomplished by individually matching the aspects and dimensions of both Bentham and Foucault's panoptic theories against the analogous aspects and dimensions of three cases of digital surveillance that were selected by this paper, namely: the surveillance system in the Xinjiang Uygur Autonomous Region, People's Republic of China, as an instance of state digital surveillance; the surveillance system of Facebook, as an instance of social media digital surveillance; and the surveillance system of Amazon, as an instance of e-commerce digital surveillance. The four other modes of digital surveillance could not be explored in this paper for reasons of limitations of space; difficulties in looking for suitable cases, for the modes of workplace and school digital surveillance; and radical difference in their surveillance structures, for the modes of lateral and counter digital surveillance.

The Panoptic Theories of Bentham and Foucault

Bentham's Panoptic Theory: Bentham originally thought of two subjects that will be psychologically controlled by the panopticon: the internal subjects, or the prisoners who are expected to be reformed within the prison design; and the external subjects, or the general population who are expected to be deterred from committing crimes because of the scary reputation of the same prison design (Božovič, 1995). Hence, Bentham's panopticon as a prison design was founded on the principles of reform and deterrence, which he harmonized together with a lot of theatricality (Božovič, 1995). Since Foucault and all the other theorists and critics who were inspired by Bentham's panopticon focused only on the panopticon and its internal subjects, for the interest of minimizing the length of this paper, the authors opted to just set aside the panopticon's external subjects.

Hence, the subjects that are mentioned from this point and onwards refer to the internal subjects of the panopticon.

The subjects of Bentham's panopticon are the prisoners, who collectively are just a small segment of a given society. The basis of their inclusion in the system is the enforcement of state laws. These prisoners are fully aware that within the panopticon they will be placed on a sustained surveillance (Bentham, 1962). This panopticon will primarily manipulate their fears of being punished or being continually imprisoned. The observers in Bentham's panopticon are the inspector and his officers, who are all doing their tasks on behalf of the state (Bentham, 1962). Their mode of presence within the panopticon's inspector's lodge is fictional omnipresence, in the sense that such omnipresence is only assumed in the minds of the prisoners (Bentham, 1962). In reality, these observers can be present at some time and absent in other times. The physical architecture of the panopticon allows these observers to see the prisoners always, but not vice versa (Bentham, 1962). These observers can communicate to each and every prisoner, whether individually or collectively, about what they have observed, through a system of tin pipes emanating from the inspector's lodge to each of the prison cells (Bentham, 1962).

Following the logic of fictional omnipresence, the prisoners were made to believe that they are subjected to continuous surveillance by the inspector and his officers. But because in reality the inspector and his officers cannot be truly omnipresent to each and every prisoner, the observations that they can undertake are only partial and fragmented (Bentham, 1962). In Bentham's panopticon the source of data about the prisoners is the single observational point, which is the inspector's lodge (Bentham, 1962). From this lodge, the inspector and his officers manually collect the data about the prisoners, who are only passively involved during the process, and such information gathered are centrally stored as small data on the inspector's logbook. Eventually, such data will be manually processed and analyzed by the inspector and his officers.

The general purpose of the surveillance in Bentham's panopticon is to remold the prisoners in accordance with the ideals of the state and society (Bentham, 1962). This general purpose is attained with the active involvement of the prisoners, as they surveilled their own selves and push themselves toward the ideals of the state and society (Bentham, 1962). Bentham did not see any side effect of his panopticon on the individuals, nor on the society at large. The panopticon coaxes the prisoners to reform themselves through the promise and stipulation of rewards and punishments, where the best case scenario is freedom and the worst case scenario is continued imprisonment. Bentham's panopticon was meant to be a unified physical

building that is owned and funded by the state. Because of some historical circumstances, however, it was not actually built by the British government.

Foucault's Panoptic Theory: In Foucault's appropriation of Bentham's panopticon the physicality of the prison architecture was set aside, and what was highlighted was the bare mechanism for surveillance, punishments, and rewards that coerce the individuals to conform to stipulated norms. Foucault wrote: "whenever one is dealing with a multiplicity of individuals on whom a task or a particular form of behavior must be imposed, the panoptic schema may be used" (Foucault, 1995, 205). Instead of talking about one physical panopticon acting on a given subject, Foucault theorized about a multiplicity of non-physical panoptic schemas that are dispersed throughout the society and acting independently on any and all of the subjects.

The subjects, therefore, of Foucault's panopticons are no longer just the prisoners, but all of the citizens of any given society (Foucault, 1995). No physical architecture can confine this much number of subjects, but the non-physical schematic nature of Foucault's panopticons can easily put everyone under surveillance (Foucault, 1995). Social norms are the basis of everyone's inclusion in the Foucauldian panopticons. But these citizens are only partially aware that they are placed under dispersed and constant surveillance. These panopticons will also primarily manipulate their fears of punishment and social disapproval. The observers of Foucault's panopticons are the superiors, administrators, and officers of the various social institutions and state agencies (Foucault, 1995). Their mode of presence in these schematic panopticons are also fictional omnipresence, in the sense that such omnipresence is only assumed in the minds of the citizens (Foucault, 1995). In reality, these dispersed observers may or may not be observing at any given point in time. But it remained crucial for the Foucauldian panopticons that the citizens will eventually develop the psychological state of self-surveillance. Since the citizens are only partially aware of these surveillance systems, they might be able to see some of these observers only. In these schematic panopticons, it is possible for some observers to communicate with the citizens about what they have observed either face to face or through written documents.

Because the citizens are subjected to a multiplicity of schematic panopticons, it would be very easy for them to assume that they are subjected to continuous surveillance. But because in reality the observers of these schematic panopticons cannot be truly omnipresent to each and every citizen, the observations that they can undertake are also partial and fragmented (Foucault, 1995). In Foucault's multiplicity of schematic panopticons the data about the citizens also flow from multiple observational points

(Foucault, 1995). Due to the non-physicality of his schematic panopticons, it is even possible that in a given schematic panopticon the data can flow from a number of observational points. Foucault was theorizing at the early dawn of the digital age, and not surprisingly the mode of data collection in his schematic panopticons is still manual. In such process, the citizens are also only passively involved, and the information about them are stored as dispersed small data. Maybe a logbook here, a record file there, a dossier somewhere, and so on. Eventually, such data will be independently processed and manually analyzed by the respective superiors, administrators, and officers of the various schematic panopticons.
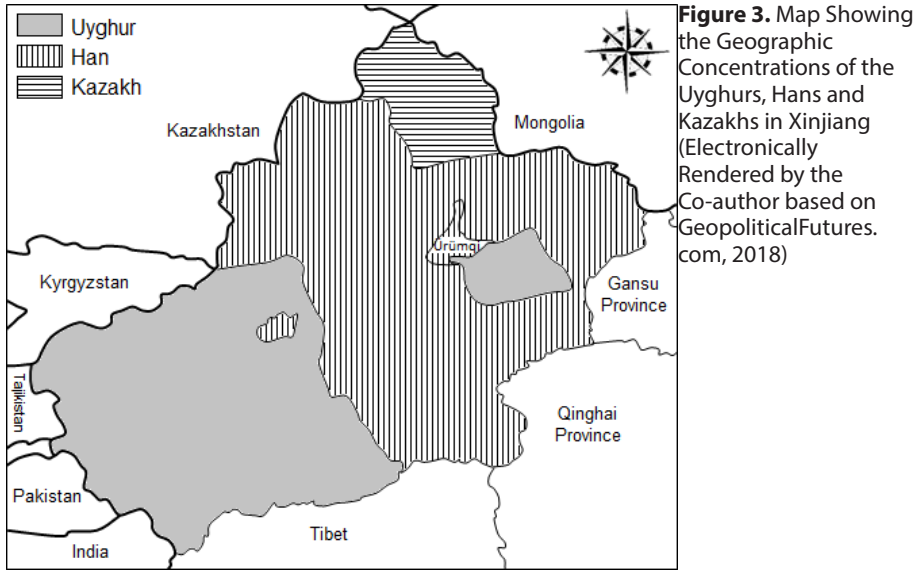
Although Foucault's multiple schematic panopticons have their own specific purpose of the surveillance, these panopticons converge on the bigger goal of molding the citizens in accordance with the ideals of the state and society (Foucault, 1995). Such bigger goal is attained with the active involvement of the citizens, as they also surveilled themselves and push themselves toward these ideals. Foucault warns that the schematic panopticons will have side effects on the individual, in the form of their docility and conformity; and on society, in the form of the erosion of social and cultural diversity. The Foucauldian panopticons coax the citizens to conform themselves to the individual and collective goals of these panopticons, through the implicit promise and stipulation of rewards, specifically social approval that will facilitate success in life, and punishments, specifically social disapproval that may entail failure in life. The infrastructure of Foucault's panopticons are the various social and state units, and these units fund the operation of their own surveillance systems.

Three Cases of Digital Surveillance

Digital State Surveillance in the Xinjiang Uygur Autonomous Region: The Xinjiang Uygur Autonomous Region is located in the northwestern corner of the People's Republic of China. It is surrounded by Kazakhstan, Russia, and Mongolia from the north; by Gansu and Qinghai provinces from the east; by Tibet and India from the south; and by Pakistan, Afghanistan, Tajikistan, and Kyrgyzstan from the west. Xinjiang is the largest province of China, consisting of 17% of the country's territory. It has a population of 22 million, as of 2010, and ethnically composed of 46% Uyghur, 40% Han, 7% Kazakh, 5% Hui, and 3% other groups (Toops, 2016). The Uyghurs are Turkic people with Islam as their religion, and they are the majority within Xinjiang. The Hans are the majority in the whole of China, constituting about 92% of the country's population. Their rapid increase in number in Xinjiang is a result of recent state-orchestrated migrations (Dooley, 2019). The Kazakhs are another Turkic people with Islam as their religion, and

they are a small minority within Xinjiang. The Huis are ethnically Chinese people with Islam as their religion, and they are also a small minority within Xinjiang. Figure 3 is a map of Xinjiang that shows the geographic concentrations of Uyghurs, Hans and Kazakhs. The same map also shows how Ürümqi, Xinjiang's capital city, is situated in a Han-dominated area.

Figure 3. Map Showing the Geographic Concentrations of the Uyghurs, Hans and Kazakhs in Xinjiang (Electronically Rendered by the Co-author based on GeopoliticalFutures.com, 2018)

The Uyghurs in Xinjian had a complex history. At one point their territory was part of the Chinese Empire, then of the Yarkant state, then a portion of that territory was occupied by Russia, then the area was reconquered by the Chinese Empire, then the same area became part of the Republic of China as a semi-independent warlord territory, then a portion of the area became the independent First EasternTurkistan Republic, then such state came under the influence of the Soviet Union, then a Second Eastern Turkistan Republic was formed, until finally the territory was incorporated into the People's Republic of China to be eventually declared as an autonomous region (Thum, 2018). The Uyghurs' desire to maintain their culture, language, religion, and tradition, mixed with some aspirations for a separate Uyghur state, resulted in a tension between them and the central government of China (Dooley, 2019). Soon this tension escalated into riots that prompted the central government to put the Uyghurs in Xinjiang under an intense and systematic surveillance system, not only to weed out extremists and potential extremists, but more so to pressure the rest of the Uyghurs to give up their culture, language, religion, and tradition,

and embrace the modern and modernizing Han Chinese culture (Dooley, 2019).

Thus, the subjects of Xinjiang's surveillance system are primarily the Uyghurs, who constitute almost half of the Xinjiang society (Dooley, 2019). Raw state enforcement is the sole basis of the their inclusion in this surveillance system, and they are made clearly aware that they are placed under intense and continuous surveillance through the constant presence and use of security agents, closed-circuit television cameras, digital identification scanners, security applications that are mandatorily loaded into their cellular phones, global positioning system gadgets that are mandatorily installed on their cars, and the central government's digital social credit scoring system (Leibold, 2020). This surveillance system also primarily manipulates the Uyghurs' fear for punishment. The observers in this system are the administrators and officers of state agencies, as well as their advanced and advancing artificial intelligence systems (Leibold, 2020). Their mode of presence is something that is already approaching real omnipresence because of their expanding use of digital surveillance and artificial intelligence systems (Dooley, 2019). The central government is also pressuring the Uyghurs to develop the psychological state of self-surveillance. Due to the multiplicity of the components of Xinjiang's surveillance system, some of the observers may be visible to the Uyghurs while others may not be (Leibold, 2020). In Xinjiang's surveillance system it is possible for the key observers to communicate with the Uyghurs concerning what they have observed through face-to-face communication, through written texts, and through digital communication.

The actual observations undertaken by the administrators and officers of state agencies, together with their digital surveillance and artificial intelligence systems, would easily add up into something that is total and continuous. In this set-up, the gaps left by the human observers are covered by the non-human observers (Leibold, 2020). The multiplicity of the components of Xinjiang's surveillance system makes the data about the Uyghurs flows from a number of observational points, and it is even possible that in a given component such data can also flow from a number of observational points. The mode of data collection is both manual and automated (Dooley, 2019). In such processes, the Uyghurs are both passively and actively involved. Passive in the sense that it is the observers who are capturing their data, and active in the sense that Uyghurs themselves are practically handing over some data to their observers in the form of digital traces. These information are stored as interconnected small data and as centralized big data. Eventually, such data will be independently and centrally processed in both manual and automated manner by the respective

administrators and officers of the various state agencies, as well as by artificial intelligence systems that are constantly being sharpened by the process of machine learning. It would appear that in Xinjiang's surveillance system, the several Foucauldian schematic panopticons are linked together using the ruthlessly powerful state bureaucracy and artificial intelligence. The American film and media studies scholar Poster's (1941–2012) concept of superpanopticon should be an appropriate label for Xinjiang's surveillance system (Poster, 1990).

As already stated, the overarching purpose of Xinjiang's surveillance system is not only to weed out extremists and potential extremists, but more so to pressure the rest of the Uyghurs to give up their culture, language, religion, and tradition and embrace the modern and modernizing Han Chinese culture. In other words, such a surveillance system is also about molding the individuals in accordance with the ideals of the central Chinese government (Leibold, 2020). Such an overarching goal is attained with the active involvement of the Uyghurs, as they also surveilled themselves and push themselves toward these ideals. But the side effects of Xinjiang's surveillance system on the individuals will be their docility and conformity, and outright violations of their human rights in general and rights to privacy in particular; and on the society will be the region's loss of social, cultural, and political diversities, as well as erosion of social trust (Leibold, 2020). The Xinjiang surveillance system both coaxes and coerces the Uyghurs to conform themselves with the overarching goals of the system through the explicit promise and stipulation of rewards in their social credit scoring system and other perks that will facilitate better or successful lives; and punishments, specifically demerits in their social credit scoring system, detention in their dreaded political re-education centers, and even outright disappearance (Dooley, 2019). The infrastructure of Xinjiang's surveillance system is composed of the integrated state agencies, and the multibillion-dollar digital communication systems with giant servers (Leibold, 2020). Such an elaborate infrastructure is owned and funded by the central government (Leibold, 2020).

Digital Social Media Surveillance: The Case of Facebook: *Fortune 500* lists Facebook as a technology sector company, involved in the internet services and retailing industry, with its corporate headquarters in Palo Alto, California ("Facebook," 2019). As of 2019, it has a total worth of over 97 billion dollars and employs over 35,000 workers ("Facebook," 2019). Facebook first made it to the *Fortune 500* list in 2013 at rank 482, and went up each year reaching rank 57 in 2019 ("Facebook," 2019). Facebook was founded in 2004 to interconnect students of Harvard University, Massachusetts, and two years after it expanded its user base to anyone who is at least 13 years old

and has a valid email address (Greiner et al., 2019). It developed a business model of providing its social networking platform to its users for free, but collects its main revenues from advertisers (Karppi, 2018). It also develop a system of finely profiling its users so that they can be offered as precise targets for micro-advertising (Zuboff, 2019). Facebook had to be designed to be addictive, because the more time the users spend on its platform, the more data the company gets from them for even sharper profiling, and the more leverage the company can claim that their paid advertisements will indeed be seen and/or heard by these users (Sacasas, 2018). The news feed, the like button, the reaction facility, the notification alert, and the messaging and video calling facilities are just some of these implements that hook users to Facebook. In 2012 the number of Facebook users ballooned to one billion, and in 2017 to two billion (Greiner et al., 2019).

The subjects of Facebook's digital surveillance are its users, who collectively can be a considerable portion of a given society. In the Philippines, for example, their number can be equivalent to about two-thirds of the country's population (Tantuco, 2018). Their basis of inclusion in the system is their own desires to go on using the social media platform, and these users are ordinarily not aware that they are placed under intense and continuous surveillance (Turner, 2018). Facebook's surveillance system will primarily manipulate their feelings of happiness and satisfaction so that they will remain hooked on the platform (Sacasas, 2018). The observer of this surveillance system is an artificial intelligence that is advanced and advancing through the company's substantial investment on research and development (Zuboff, 2019). The mode of this observer's presence is fictional absence but real omnipresence, in the sense that Facebook does not want its users to be suspicious that they are being intensely and continuously observed, nor trigger within these users the psychological state of self-surveillance. This observer is invisible from the perspective of the subjects. Although Facebook's artificial intelligence sends the news feeds, recommended friends, and advertisements to the users, this artificial intelligence does not directly communicate concerning what it has observed with such users (Karppi, 2018).

The actual observations undertaken by Facebook's artificial intelligence, together with the artificial intelligences of their partner websites, are total and continuous, in the sense that these systems thoroughly and ceaselessly scrape the identity and the digital traces of the users (Zuboff, 2019). Because Facebook and its partner websites are jointly collecting the digital traces of their users, the information about the users flow from a multiple observational points (Zuboff, 2019). The mode of data collection is purely automated, where the users are actively involved as they practically hand over

their information, in the form of digital traces, to the artificial intelligence systems. These information are stored in the form of centralized big data, which eventually will be automatically processed by the company's artificial intelligence that is also constantly being sharpened with the process of machine learning (Zuboff, 2019).

As already mentioned, the primary purpose of Facebook's digital surveillance system is to so finely profile its users so that they can be hoisted as precise targets for micro-advertising, and secondarily so that they can be given the individually tailored dosage of news feeds and suggested friends so that they will be hooked more and more on the social media platform (Karppi, 2018, pp. 14-16; Lyon, 2019, p. 66). These goals are attained with passive involvement of the users, in the sense that after the users hand over their digital traces, it will the company's artificial intelligence that will do the rest of the tasks (Karppi, 2018). The side effects of Facebook's digital surveillance on the individuals will be their addiction to the social media platform, the consumerist mentality, political bigotry, and violations of the right to privacy; and on the society will be the erosion of democracy and damage on the competitiveness of the smaller companies (Sacasas, 2018). Facebook attains its purposes and goals even without stipulating rewards or punishments to its users. The infrastructure of this digital surveillance system is composed of unified electronic communication system and giant servers that are owned by Facebook, but funded by revenues coming from its advertisers.

Digital E-Commerce Surveillance: The Case of Amazon: Fortune 500 lists Amazon also as a technology sector company, involved in the internet services and retailing industry, with its corporate headquarters in Seattle, Washington State ("Amazon," 2019). As of 2019, it has a total worth of over 162 billion dollars and employs over half a million workers ("Amazon," 2019). Amazon first made it to the Fortune 500 list in 2002 at rank 492, and went up each year reaching rank 5 in 2019 ("Amazon," 2019). Amazon was founded in 1995 as an online bookstore. In 1999 it started to expand selling items beyond books (DePillis & Sherman, 2018). It developed a business philosophy of selling a wide variety of selections at a lower price. In 2000 Amazon started to accept other vendors in its expanding online market (DePillis & Sherman, 2018). Very early on its bold venture into e-commerce, Amazon started to collect the information from its customers including their digital traces to predict the other products a given customer may want (West, 2019). In 2005 it launched it annually paid membership program in exchange for free delivery service that is guaranteed to happen within the next two days (DePillis & Sherman, 2018). In 2006 Amazon ventured into web servicing to utilize its excess computing power. At present, Amazon

has already controlled about 8% of the total retail business in the United States of America.

The subjects of Amazon's digital surveillance are its online shoppers. This is estimated to be two-thirds of the people of the United States of America, but definitely much smaller in other countries. Philippine online shoppers, for example, are more into Lazada and Shopee than into Amazon, and this non-dominant position of Amazon is true in the other Southeast Asian Countries as well (Kemp & Moey, 2019). The online shopper's basis of inclusion in Amazon's surveillance system is their own desires to continue availing of the convenient service of the online shopping platform, plus their calculative thinking about maximizing the value of their paid annual membership. These shoppers are ordinarily not aware that they are placed under intense and continuous surveillance. Amazon's surveillance system will primarily manipulate their feelings of satisfaction so that they will come back again and again to its platform (Herzog & Rösseler, 2019). The observer of this surveillance system is an artificial intelligence that is also advanced and advancing through the company's substantial investment on research and development (Herzog & Rösseler, 2019). The mode of this observer's presence is also fictional absence but real omnipresence, in the sense that Amazon does not want its users to be conscious that they are being intensely and continuously observed, nor trigger within these users the psychological state of self-surveillance. This observer is invisible from the perspective of the subjects. Although Amazon's artificial intelligence sends advertisements to the shoppers, this artificial intelligence does not directly communicate concerning what it has observed with the shoppers (Herzog & Rösseler, 2019).

The actual observations undertaken by Amazon's artificial intelligence, together with the data directly scraped by Alexa and Echo personal devices, are total and continuous in the sense that these thoroughly and ceaselessly glean the identity and the digital traces of the shoppers. Alexa and Echo devices are interactive gadgets that converse with the shoppers/users in their homes, offices, and even on their bodies (Herzog & Rösseler, 2019). Because Amazon and the Alexa and Echo devices are jointly collecting the digital traces of their shoppers/users, the information about such shoppers flow from a multiple observational points (Zuboff, 2019). It must be admitted however, that the current number of users of Alexa and Echo devices is still very small in comparison to the current shoppers of Amazon. The mode of data collection is purely automated, where the users are actively involved as they practically hand over their information, in the form of digital traces, to the artificial intelligence systems. These information are also stored in the form of centralized big data, which eventually will be automatically

processed by the company's artificial intelligence that is constantly being sharpened with the process of machine learning (Zuboff, 2019).

As already suggested, the primary purpose of Amazon's digital surveillance system is to so finely profile its shoppers so that they can be micro-targeted with advertisements of its own products, or of its vendors, or of other parties that wish to plug into Amazon's vast online market (Zuboff, 2019). This goal is attained with passive involvement of the shoppers, in the sense that after the shoppers hand over their digital traces it will be the company's artificial intelligence again that will do the rest of the tasks. The side effects of Amazon's digital surveillance on the individuals will be the formation of a consumerist mentality, and violations of the right to privacy; and on society will be the erosion of the competitiveness of smaller companies and startups (Herzog & Rösseler, 2019). Amazon attain its purpose and goal even without stipulating rewards or punishments to its shoppers. The infrastructure of this digital surveillance is system is composed of unified electronic communication system and giant servers that are owned by Amazon, but funded by revenues coming from its shoppers, vendors, and advertisers.

Statement of the Problem

This paper addressed the main problem: How applicable are Bentham and Foucault's panoptic theories as conceptual tools in critiquing different modes of digital surveillance? This main problem was broken into the following sub-problems: (1) What is the level of resemblance between Bentham and Foucault's panoptic theories?; (2) What is the level of applicability of Bentham's panoptic theory to the critique of state digital surveillance?; (3) What is the level of applicability of Bentham's panoptic theory to the critique of social media digital surveillance?; (4) What is the level of applicability of Bentham's panoptic theory to the critique of e-commerce digital surveillance?; (5) What is the level of applicability of Foucault's panoptic theory to the critique of state digital surveillance?; (6) What is the level of applicability of Foucault's panoptic theory to the critique of social media digital surveillance?; and (7) What is the level of applicability of Foucault's panoptic theory to the critique of e-commerce digital surveillance?

Significance

As a meta-critique this paper is significant in the sense that this will enlighten other scholars about the actual levels of usefulness of both Bentham and Foucault's panoptic theories in conceptualizing and critiquing different modes of digital surveillance. This paper does not intend to reject the usefulness of panoptic theory in dealing with digital surveillance. Instead, it

points out for which modes of digital surveillance the panoptic theory can still be very useful. For the literature on the theoretical and meta-theoretical studies on the panopticon, this paper attempts to present the most detailed analysis of the panopticon in relation to its conceptual and critical use on different modes of digital surveillance.

Methodology

In order to be able to answer the main problem and subproblems stated in the preceding subsection, the main strategy of this paper is to compare pair by pair the two panoptic theories and the three modes of digital surveillance. In order to make such pair-by-pair comparisons systematic and consistent, a construct had to be made that organized some 24 comparison points that are grouped under five clusters. As already mentioned, this paper aims to present the most detailed critique of the panoptic theories of Bentham and Foucault, but this paper certainly stands on some of the comparison and critical points that were already used before but are still dispersed in the literature. What this paper did was to categorize these existing comparison and critical points under five clusters and add some more comparison points. The five clusters of the construct that was created by this paper are: (1) the subject of surveillance (Haggerty, 2006, p. 27); 2) the observer (Campbell & Carlson, 2002, p. 594); (3) the data gathering, storage, and analysis (Campbell & Carlson, 2002, p. 596; Haggerty, 2006, p. 35); (4) the goals and effects and surveillance (Green, 1999, p. 35; Haggerty, 2006, p. 27); and (5) the management of the surveillance system (Campbell & Carlson, 2002, p. 594).

The cluster on the subject of surveillance holds five comparison points, namely: (1) the identity of the subjects (Haggerty, 2006, p. 27); (2) the scope of the subjects that are surveilled in relation with the totality of their society (Simon, 2005, 9); (3) the basis of the subjects' inclusion in the surveillance system (Haggerty, 2006, 27; Campbell & Carlson, 2002, 603); (4) the subjects' awareness that they are placed under observation (Simon, 2005, p. 9; Green, 1999, p. 35; Haggerty, 2006, p. 34); and (5) the subjects' emotion/s that is/are primarily manipulated by the surveillance system. The cluster on the observer of the surveillance system holds four comparison points, namely: (1) the identity of the observer/s (Campbell & Carlson, 2002, p. 594; Haggerty, 2006, p. 28); (2) the mode of the observer/s presence in the system, specifically whether such is omnipresent or not; (3) the visibility of the observer/s from the point of view of the subjects; and (4) the capacity of the observer/s to communicate with the subjects about the former's behavior in relation with the goals of the surveillance system (Simon, 2005, p. 11-14).

The cluster on the data gathering, storage, and analysis holds six comparison points, namely: (1) the form of observation, specifically whether such is partial and fragmented on the one hand, or total and continuous on the other hand; (2) the source point of the observation process and data collection, specifically if such came from a single source point or multiple source points; (3) the mode of data collection, specifically if such is manual or automated (Haggerty, 2006, p. 35); (4) the involvement of the subjects in the data collection, specifically whether they are active or passive; (5) the data storage system (Haggerty, 2006, p. 35); and (6) the mode of processing the data (Haggerty, 2006, p. 35).

The cluster on the goals and effects of the surveillance system holds four comparison points, namely: (1) the general purpose of the surveillance (Green, 1999, p. 35; Haggerty, 2006, p. 27); (2) the involvement of the subjects in attaining such general purpose, specifically whether they are active or passive (Simon, 2005, p. 9); (3) the side effect/s of the surveillance on the individual subjects; and (4) the side effect/s of the surveillance on society as a whole. Lastly, the cluster on the management of the surveillance system holds five comparison points, namely: (1) the rewards given/promised by the surveillance system if the subjects meet the general purpose of the system (Simon, 2005, p. 9; Green, 1999, p. 35); (2) the punishment given/ stipulated by the surveillance system if the subjects fail to meet the general purpose of the system; (3) the nature of the infrastructure of the surveillance system (Simon, 2005, p. 9); (4) the identity of the owner/s of the surveillance system (Campbell & Carlson, 2002, p. 594; Haggerty, 2006, p. 28); and (5) the source of operational funding for such surveillance system (Campbell & Carlson, 2002, p. 594).

The configuration of the strategy's pair by pair comparisons of the two panoptic theories and three modes of digital surveillance, along the construct's 24 comparison points, is presented in figure 4, which is the conceptual framework of this paper.
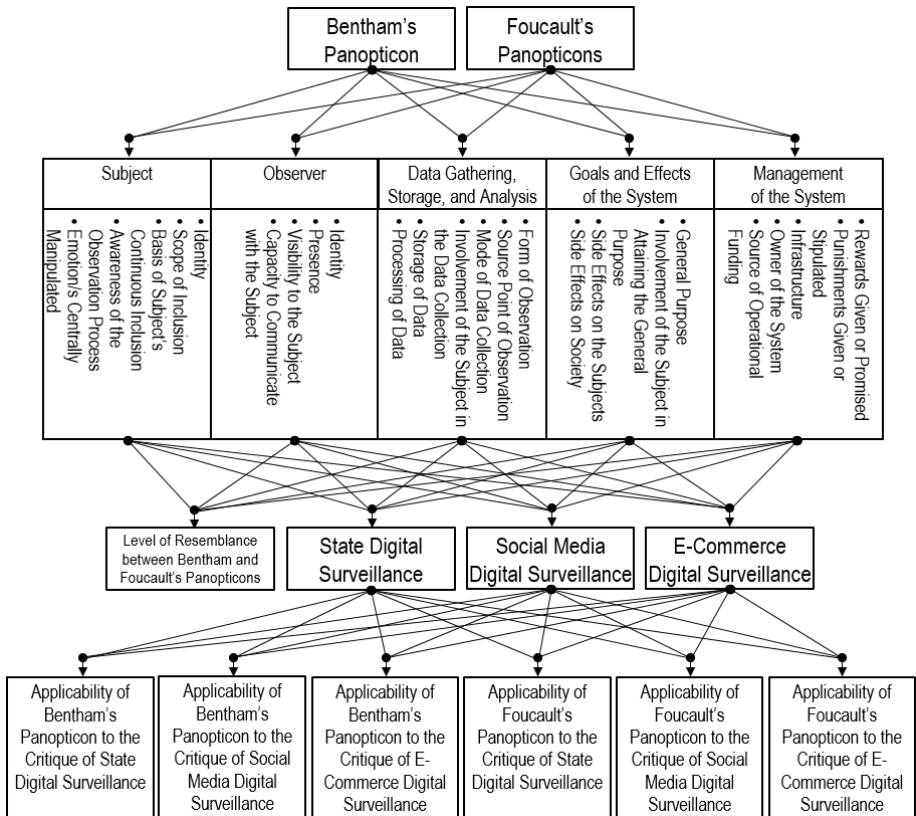
Figure 4. Conceptual Framework

In order to manage the pair-by-pair comparisons, this paper came up with a three-level evaluation system, namely: low resemblance, with a numerical value of 1; moderate resemblance, with a numerical value of 2; and high resemblance, with a numerical value of 3. This evaluation and scoring system is presented in table 2.

The overall level of resemblance of one panoptic theory or mode of digital surveillance to another is reckoned through the average of their comparative scores, using the following range: 1.00 to 1.67 = low resemblance; 1.68 to 2.34 = moderate resemblance; and 2.35 to 3.00 = high resemblance.

In order to be able to clearly answer the main problem and subproblems stated in the preceding subsection, this paper contains four substantive sections: (1) the first one compares and contrasts the panoptic theories of Bentham and Foucault; (2) the second one compares and contrasts Bentham's panoptic theory with the three modes of digital surveillance; and (3) the third one compares and contrasts Foucault's panoptic theory with the same three modes of digital surveillance.

Table 2. Verbal and Numerical Assessments on the Resemblances of the 24 Comparison Points, Held Under 5 Clusters, of this Paper's Construct

Clusters	Points of Comparison	Possible Evaluations/ Numerical Values		
		Low Resemblance	Moderate Resemblance	High Resemblance
Subject of Surveillance	Subjects' Identity	1	2	3
	Scope of the Subjects, in Relation with the Whole Society	1	2	3
	Basis of Subjects' Inclusion in the System	1	2	3
	Subject's Awareness of the Observation Process	1	2	3
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	1	2	3
Observer	Observer/s' Identity	1	2	3
	Observer/s' Presence	1	2	3
	Observer/s' Visibility from the Subject	1	2	3
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	1	2	3
Data Gathering, Storage and Analysis	Form of Observation	1	2	3
	Source Point of Observation/Data Collection	1	2	3
	Mode of Data Collection	1	2	3
	Involvement of the Subject in the Data Collection	1	2	3
	Storage of Data	1	2	3
	Processing of Data	1	2	3
Goals and Effects of the Surveillance	General Purpose of Surveillance	1	2	3
	Involvement of the Subjects in Attaining the Purpose of Surveillance	1	2	3
	Side Effects on the Subjects	1	2	3
	Side Effects on the Society	1	2	3

Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/are Met	1	2	3
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	1	2	3
	Infrastructure	1	2	3
	Owner of the Surveillance System	1	2	3
	Source of Operational Funding	1	2	3

The Level of Resemblance of Foucault's Panopticon with Bentham's Panopticon

This first substantive section of this paper compares and contrasts the panoptic theories of Bentham and Foucault, using the constructs' 24 comparison points, in order to determine the latter's level of resemblance with the former. Table 3 presents the results of such comparative analysis.

Table 3. Comparison and Contrast between Bentham and Foucault's Panoptic Theories Using the 24-Point Construct of this Paper

Clusters	Points of Comparison	Bentham's Panopticon	Foucault's Panopticons	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Prisoners	Citizens	Low	1	1.60	Low Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Part of the Society	Whole Society	Low	1		
	Basis of Subjects' Inclusion in the System	State Enforcement	Social Norms	Low	1		
	Subject's Awareness of the Observation Process	Fully Aware	Partially Aware	Moderate	2		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Fear	High	3		

Category	Attribute						
Observer	Observer/s' Identity	Inspector and Officers on Behalf of the State	Social Institutions and State Agencies	Moderate	2	2.50	High Resemblance
	Observer/s' Presence	Fictional Omnipresence	Fictional Omnipresence	High	3		
	Observer/s' Visibility from the Subject	Hidden	Visible and Hidden	Moderate	2		
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Capable	High	3		
Data Gathering, Storage and Analysis	Form of Observation	Partial/Fragmented	Partial/Fragmented	High	3	2.50	High Resemblance
	Source Point of Observation/Data Collection	Single	Multiple	Low	1		
	Mode of Data Collection	Manual Observation	Manual Observations	High	3		
	Involvement of the Subject in the Data Collection	Passive	Passive	High	3		
	Storage of Data	Centralized Small Data	Non-Centralized Small Data	Moderate	2		
	Processing of Data	Manual	Manual	High	3		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Molding the Individuals in Accordance with the Ideals of the State/Society	High	3	2.00	Moderate Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Active	High	3		
	Side Effects on the Subjects	None	Docility and Conformity	High	1		
	Side Effects on the Society	None	Threat to Social and Cultural Diversity	Low	1		

						Moderate Resemblance
Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/ are Met	Freedom from Prison	Social Approval that may Facilitate Success	Moderate	2	
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/ are not Met	Continued Imprisonment	Social Disapproval that may Lead to Failure	Moderate	2	2.00
	Infrastructure	Unified Physical Building	Dispersed Social Units and State Units	Low	1	
	Owner of the Surveillance System	State	Society and State	Moderate	2	
	Source of Operational Funding	Owner of the System	Owner of the System	High	3	
Overall Comparison					2.13	Moderate Resemblance

Table 3 shows that there is an overall moderate resemblance in between Bentham and Foucault's panoptic theories. Their level of resemblance is high in their observer cluster; as well as in their data gathering, storage, and analysis cluster. Their level of resemblance is moderate in their goals and effects of the surveillance cluster; as well as in their management of the surveillance cluster. Their level of resemblance is low in their subject of the surveillance cluster. The overall moderate resemblance between Bentham and Foucault's panoptic theories is this paper's baseline value in determining the applicability of any of these two panoptic theories to any of the three modes of digital surveillance. This means that a panoptic theory is applicable only to a given mode of digital surveillance if their overall resemblance level is at least moderate.

The Applicability of Bentham's Panopticon as Conceptual Tool in Critiquing the Three Modes of Digital Surveillance

This second substantive section of this paper compares and contrasts the panoptic theory of Bentham with the three modes of digital surveillance, using the construct's 24 comparison points, in order to determine the former's applicability in conceptualizing and critiquing the said three modes of digital surveillance. Table 4 presents the results of the comparative

analysis between Bentham's panoptic theory and Xinjiang's state digital surveillance.

Table 4 shows that there is an overall moderate resemblance in between Bentham's panoptic theory and Xinjiang's state digital surveillance. Their level of resemblance is high in their subject of the surveillance cluster; as well as in their management of the surveillance system cluster. Their level of resemblance is moderate in their observer cluster; as well as in their goals and effects of the surveillance cluster. Their level of resemblance is low in their data gathering, storage, and analysis cluster. This overall moderate resemblance level suggests that Bentham's panoptic theory can be applied in conceptualizing and critiquing Xinjiang's state digital surveillance.

Table 4 Comparison and Contrast between Bentham's Panoptic Theory And Xinjiang's State Digital Surveillance

Clusters	Points of Comparison	Bentham's Panopticon	Xinjiang's State Digital Surveillance	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Prisoners	Uyghurs	Moderate	2	2.80	High Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Part of the Society	Part of the Society	High	3		
	Basis of Subjects' Inclusion in the System	State Enforcement	State Enforcement	High	3		
	Subject's Awareness of the Observation Process	Fully Aware	Fully Aware	High	3		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Fear	High	3		
Observer	Observer/s' Identity	Inspector and Officers on Behalf of the State	Stage Agencies and Artificial Intelligence	Moderate	2	2.0	Moderate Resemblance
	Observer/s' Presence	Fictional Omnipresence	Moving towards Real Omnipresence	Low	1		

Observer	Observer/s' Visibility from the Subject	Hidden	Visible and Hidden	Moderate	2		Moderate Resemblance
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Capable	High	3	
Data Gathering, Storage and Analysis	Form of Observation	Partial/ Fragmented	Total/ Continuous	Low	1	1.67	Low Resemblance
	Source Point of Observation/Data Collection	Single	Multiple	Low	1	
	Mode of Data Collection	Manual Observation	Manual Observations and Automated Data Collections	Moderate	2	
	Involvement of the Subject in the Data Collection	Passive	Passive and Active	Moderate	2	
	Storage of Data	Centralized Small Data	Interconnected Small Data and Centralized Big Data	Moderate	2	
	Processing of Data	Manual	Manual and Automated	Moderate	2	
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Molding the Individuals in Accordance with the Ideals of the State/Society	High	3		Moderate Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Active	High	3	

Goals and Effects of the Surveillance	Side Effects on the Subjects	None	Docility, Conformity, and Violations on Human Rights and Rights to Privacy	Moderate	1	2.0	**Moderate Resemblance**
	Side Effects on the Society	None	Threat to Social, Cultural, and Political Diversity, and Erosion of Social Trust	Low	1		
Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/are Met	Freedom from Prison	Social Credit that may Facilitate Success	Moderate	2	2.60	**High Resemblance**
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	Continued Imprisonment	Social Demerit/Imprisonment	High	3		
	Infrastructure	Unified Physical Building	Unified State Units, Digital Communication System, Giant Servers	Moderate	2		
	Owner of the Surveillance System	State	State	High	3		
	Source of Operational Funding	Owner of the System	Owner of the System	High	3		
Overall Comparison						2.21	**Moderate Resemblance**

Table 5 presents the results of the comparative analysis between Bentham's panoptic theory and Facebook's social media digital surveillance It 5 shows that there is an overall low resemblance in between Bentham's panoptic theory and Facebook's social media digital surveillance. Their level of resemblance is low in all of their five clusters. This overall low level of resemblance suggests that Bentham's panoptic theory cannot be applied in conceptualizing and critiquing Facebook's social media digital surveillance.

Table 5. Comparison and Contrast between Bentham's Panoptic Theory and Facebook's Social Media Digital Surveillance

Clusters	Points of Comparison	Bentham's Panopticon	Facebook's Social Media Digital Surveillance	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Prisoners	Users of the Social Media Platform	Low	1	1.40	Low Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Part of the Society	Part of the Society	High	3		
	Basis of Subjects' Inclusion in the System	State Enforcement	Subject's Desire to Continue Availing of the Services of the System	Low	1		
	Subject's Awareness of the Observation Process	Fully Aware	Not Aware (Ordinarily)	Low	1		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Happiness and Sense of Satisfaction	Low	1		
Observer	Observer/s' Identity	Inspector and Officers on Behalf of the State	Artificial Intelligence on Behalf of the Platform Owners	Low	1		Low Resemblance
	Observer/s' Presence	Fictional Om-nipresence	Fictional Absence, and Real Omni-presence	Low	1		
Observer	Observer/s' Visibility from the Subject	Hidden	Hidden	High	3	1.5	Low Resem-blance
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Not Capable	Low	1		

Category	Attribute			Resemblance	Score	Average	Overall
Data Gathering, Storage and Analysis	Form of Observation	Partial/ Fragmented	Total/ Continuous	Low	1	1.17	Low Resemblance
	Source Point of Observation/Data Collection	Single	Multiple	Low	1		
	Mode of Data Collection	Manual Observation	Automated Data Collections based on the Users' Digital Footprints	Low	1		
	Involvement of the Subject in the Data Collection	Passive	Active	Low	1		
	Storage of Data	Centralized Small Data	Centralized Big Data	Moderate	2		
	Processing of Data	Manual	Automated	Low	1		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Profiling the Subjects so that they can be Micro-targeted with Advertise-ments, News-feeds, and Suggested Friends	Low	1	1.00	Low Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Passive	Low	1		
	Side Effects on the Subjects	None	Addiction to Social Media, Consumerist Mentality, Po-litical Bigotry, and Violation on the Right to Privacy	Low	1		
	Side Effects on the Society	None	Threat to Democracy, and Competi-tiveness of Smaller Com-panies	Low	1		

Clusters	Points of Comparison	Bentham's Panopticon	Amazon's E-Commerce Digital Surveillance	Resemblance Verbal	Resemblance Numerical	Cluster Averages Numerical	Cluster Averages Verbal
Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/are Met	Freedom from Prison	None	Low	1	1.20	Low Resemblance
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	Continued Imprison-ment	None	Low	1		
	Infrastructure	Unified Physi-cal Building	Unified Digital Com-munication System, Giant Servers	Moderate	2		
	Owner of the Surveillance System	State	Owner of the Platform	Low	1		
	Source of Operational Funding	Owner of the System	Third Party (Advertisers)	Low	1		
Overall Comparison					1.25		Low Resemblance

Table 6 presents the results of the comparative analysis between Bentham's panoptic theory and Amazon's e-commerce digital surveillance. It shows that there is also an overall low resemblance in between Bentham's panoptic theory and Amazon's e-commerce digital surveillance. Their level of resemblance is also low in all of their five clusters. This overall low level of resemblance suggests that Bentham's panoptic theory cannot be applied in conceptualizing and critiquing Amazon's e-commerce digital surveillance.

Table 6. Comparison and Contrast between Bentham's Panoptic Theory and Amazon's E-Commerce Digital Surveillance

Clusters	Points of Comparison	Bentham's Panopticon	Amazon's E-Commerce Digital Surveillance	Resemblance Verbal	Resemblance Numerical	Cluster Averages Numerical	Cluster Averages Verbal
Subject of Surveillance	Subjects' Identity	Prisoners	Shoppers of the Online Platform	Low	1	1.40	Low Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Part of the Society	Part of the Society	High	3		

Subject of Surveillance	Basis of Subjects' Inclusion in the System	State Enforcement	Subject's Desire to Continue Availing of the Services of the System, and Maximizing their Paid Annual Membership	Low	1		Low Resemblance
	Subject's Awareness of the Observation Process	Fully Aware	Not Aware (Ordinarily)	Low	1		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Sense of Satisfaction	Low	1		
Observer	Observer/s' Identity	Inspector and Officers on Behalf of the State	Artificial Intelligence on Behalf of the Platform Owners	Low	1	1.50	Low Resemblance
	Observer/s' Presence	Fictional Omnipresence	Fictional Absence, and Real Omnipresence	Low	1		
	Observer/s' Visibility from the Subject	Hidden	Hidden	High	3		
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Not Capable	Low	1		
Data Gathering, Storage and Analysis	Form of Observation	Partial/ Fragmented	Total	Low	1	1.17	Low Resemblance
	Source Point of Observation/Data Collection	Single	Multiple	Low	1		

Data Gathering, Storage and Analysis	Mode of Data Collection	Manual Observation	Automated Data Collections based on the Users' Digital Footprints, and Data from Alexa and Echo Devices	Low	1		Low Resemblance
	Involvement of the Subject in the Data Collection	Passive	Active	Low	1		
	Storage of Data	Centralized Small Data	Centralized Big Data	Moderate	2		
	Processing of Data	Manual	Automated	Low	1		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Profiling the Subjects so that they can be Micro-targeted with Advertise-ments	Low	1		Low Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Passive	Low	1	1.00	
	Side Effects on the Subjects	None	Consumerist Mentality	Low	1		
	Side Effects on the Society	None	Threat to Competitive-ness of Small-er Companies and Startups	Low	1		
Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/are Met	Freedom from Prison	None	Low	1		Low Resemblance
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	Continued Imprison-ment	None	Low	1	1.20	

Management of the Surveillance System	Infrastructure	Unified Physical Building	Unified Digital Communication System, Giant Servers	Moderate	2	Low Resemblance
	Owner of the Surveillance System	State	Owner of the Platform	Low	1	
	Source of Operational Funding	Owner of the System	Subjects, Vendors, and other Advertisers	Low	1	
Overall Comparison					1.25	Low Resemblance

The Applicability of Foucault's Panopticons as Conceptual Tool in Critiquing the Three Modes of Digital Surveillance

This third substantive section of this paper compares and contrasts the panoptic theory of Foucault with the three modes of digital surveillance, using the construct's 24 comparison points, in order to determine the former's applicability in conceptualizing and critiquing the said three modes of digital surveillance. Table 7 presents the results of the comparative analysis between Foucault's panoptic theory and Xinjiang's state digital surveillance.

Table 7 shows that there is an overall moderate resemblance in between Foucault's panoptic theory and Xinjiang's state digital surveillance. Their level of resemblance is high in their subject of the observer cluster; in their goals and effects of the surveillance cluster; as well as in their management of the surveillance system cluster. Their level of resemblance is moderate in their data gathering, storage, and analysis cluster; and low in their subject of surveillance cluster. This overall moderate level of resemblance suggests that Foucault's panoptic theory can be applied in conceptualizing and critiquing Xinjiang's state digital surveillance.

Table 7. Comparison and Contrast between Foucault's Panoptic Theory and Xinjiang's State Digital Surveillance

Clusters	Points of Comparison	Foucault's Panopticons	Xinjiang's State Digital Surveillance	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Citizens	Uyghurs	Moderate	2	1.60	Low Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Whole Society	Part of the Society	Low	1		
	Basis of Subjects' Inclusion in the System	Social Norms	State Enforcement	Low	1		
	Subject's Awareness of the Observation Process	Partially Aware	Fully Aware	Low	1		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Fear	High	3		
Observer	Observer/s' Identity	Social Institutions and State Agencies	Stage Agencies and Artificial Intelligence	High	3	2.50	High Resemblance
	Observer/s' Presence	Fictional Omnipresence	Moving towards Real Omnipresence	Low	1		
	Observer/s' Visibility from the Subject	Visible and Hidden	Visible and Hidden	High	3		
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Capable	High	3		
Data Gathering, Storage and Analysis	Form of Observation	Partial/ Fragmented	Total/ Continuous	Low	1	1.83	Moderate Resemblance
	Source Point of Observation/Data Collection	Multiple	Multiple	High	3		
	Mode of Data Collection	Manual Observations	Manual Observations and Automated Data Collections	Moderate	2		

Category	Criterion			Level	Score	Average	Resemblance
Data Gathering, Storage and Analysis	Involvement of the Subject in the Data Collection	Passive	Passive and Active	Moderate	2		Moderate Resemblance
	Storage of Data	Non-Central-ized Small Data	Intercon-nected Small Data and Centralized Big Data	Low	1		
	Processing of Data	Manual	Manual and Automated	Moderate	2		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Molding the Individuals in Accordance with the Ideals of the State/Society	High	3		High Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Active	High	3		
	Side Effects on the Subjects	Docility and Conformity	Docility, Conformity, and Violations on Human Rights and Rights to Privacy	Moderate	2	2.50	
	Side Effects on the Society	Threat to Social and Cultural Diversity	Threat to Social, Cultural, and Political Diversity, and Erosion of Social Trust	Moderate	2		

Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/are Met	Social Approval that may Facilitate Success	Social Credit that may Facilitate Success	High	3	**High Resemblance**
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	Social Disapproval that may Lead to Failure	Social Demerit/Imprisonment	Moderate	2	
	Infrastructure	Dispersed Social Units and State Units	Unified State Units, Digital Communication System, Giant Servers	Moderate	2	2.40
	Owner of the Surveillance System	Society and State	State	Moderate	2	
	Source of Operational Funding	Owner of the System	Owner of the System	High	3	
Overall Comparison					2.13	Moderate Resemblance

Table 8 presents the results of the comparative analysis between Foucault's panoptic theory and Facebook's social media digital surveillance. It shows that there is an overall low resemblance in between Foucault's panoptic theory and Facebook's social media digital surveillance. Their level of resemblance is low in all of their five clusters. This overall low level of resemblance suggests that Foucault's panoptic theory cannot be applied in conceptualizing and critiquing Facebook's social media digital surveillance.

Table 8. Comparison and Contrast between Foucault's Panoptic Theory and Facebook's Social Media Digital Surveillance

Clusters	Points of Comparison	Foucault's Pan-opticons	Facebook's Social Media Digital Sur-veillance	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Citizens	Users of the Social Media Platform	Low	1	1.20	Low Resemblance
	Scope of the Sub-jects, in Relation with the Whole Society	Whole Society	Part of the Society	Low	1		
	Basis of Subjects' In-clusion in the System	Social Norms	Subject's Desire to Continue Availing of the Services of the System	Low	1		
	Subject's Awareness of the Observation Process	Partially Aware	Not Aware (Ordinarily)	Moderate	2		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Happiness and Sense of Satisfaction	Low	1		
Observer	Observer/s' Identity	Social Institu-tions and State Agencies	Artificial Intelligence on Behalf of the Platform Owners	Low	1	1.25	Low Resemblance
	Observer/s' Presence	Fictional Omni-presence	Fictional Absence, and Real Omni-presence	Low	1		
	Observer/s' Visibility from the Subject	Visible and Hidden	Hidden	Moderate	2		
	Observer's Capacity to Communicate with the Subject Con-cerning the Latter's Behavior	Capable	Not Capable	Low	1		

Category	Attribute			Resemblance	Score	Average	Overall
Data Gathering, Storage and Analysis	Form of Observation	Partial/Fragmented	Total/Continuous	Low	1	1.33	Low Resemblance
	Source Point of Observation/Data Collection	Multiple	Multiple	High	3		
	Mode of Data Collection	Manual Observations	Automated Data Collections based on the Users' Digital Footprints	Low	1		
	Involvement of the Subject in the Data Collection	Passive	Active	Low	1		
	Storage of Data	Non-Centralized Small Data	Centralized Big Data	Low	1		
	Processing of Data	Manual	Automated	Low	1		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Profiling the Subjects so that they can be Micro-targeted with Advertisements, Newsfeeds, and Suggested Friends	Low	1	1.00	Low Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Passive	Low	1		
	Side Effects on the Subjects	Docility and Conformity	Addiction to Social Media, Consumerist Mentality, Political Bigotry, and Violation on the Right to Privacy	Low	1		
	Side Effects on the Society	Threat to Social and Cultural Diversity	Threat to Democracy, and Competitiveness of Smaller Companies	Low	1		

Clusters	Points of Comparison	Foucault's Panopticons	Amazon's E-Commerce Digital Surveillance	Verbal	Numerical	Numerical	Verbal
Management of the Surveillance System	Reward/s Given/ Promised if the General Purpose/s of the Surveillance is/ are Met	Social Approval that may Facilitate Success	None	Low	1	1.00	Low Resemblance
	Punishment/s Given/ Stipulated if the General Purpose/s of the Surveillance is/are not Met	Social Disapproval that may Lead to Failure	None	Low	1		
	Infrastructure	Dispersed Social Units and State Units	Unified Digital Communication System, Giant Servers	Low	1		
	Owner of the Surveillance System	Society and State	Owner of the Platform	Low	1		
	Source of Operational Funding	Owner of the System	Third Party (Advertisers)	Low	1		
Overall Comparison					1.17		Low Resemblance

Table 9 presents the results of the comparative analysis between Foucault's panoptic theory and Amazon's e-commerce digital surveillance.

Table 9. Comparison and Contrast between Foucault's Panoptic Theory and Amazon's E-Commerce Digital Surveillance

Clusters	Points of Comparison	Foucault's Panopticons	Amazon's E-Commerce Digital Surveillance	Resemblance		Cluster Averages	
				Verbal	Numerical	Numerical	Verbal
Subject of Surveillance	Subjects' Identity	Citizens	Shoppers of the Online Platform	Low	1	1.20	Low Resemblance
	Scope of the Subjects, in Relation with the Whole Society	Whole Society	Part of the Society	Low	1		

Subject of Surveillance	Basis of Subjects' Inclusion in the System	Social Norms	Subject's Desire to Continue Availing of the Services of the System, and Maximizing their Paid Annual Membership	Low	1		Low Resemblance
	Subject's Awareness of the Observation Process	Partially Aware	Not Aware (Ordinarily)	Moderate	2		
	Subjects' Emotion/s that is/are Primarily Manipulated by the Surveillance System	Fear	Sense of Satisfaction	Low	1		
Observer	Observer/s' Identity	Social Institutions and State Agencies	Artificial Intelligence on Behalf of the Platform Owners	Low	1		Low Resemblance
	Observer/s' Presence	Fictional Omnipresence	Fictional Absence, and Real Omnipresence	Low	1	1.25	
	Observer/s' Visibility from the Subject	Visible and Hidden	Hidden	Moderate	2		
	Observer's Capacity to Communicate with the Subject Concerning the Latter's Behavior	Capable	Not Capable	Low	1		
Data Gathering, Storage and Analysis	Form of Observation	Partial/Fragmented	Total	Low	1		Low Resemblance
	Source Point of Observation/Data Collection	Multiple	Multiple	High	3		
	Mode of Data Collection	Manual Observations	Automated Data Collections based on the Users' Digital Footprints, and Data from Alexa and Echo Devices	Low	1	1.33	

Data Gathering, Storage and Analysis	Involvement of the Subject in the Data Collection	Passive	Active	Low	1		Low Resemblance
	Storage of Data	Non-Centralized Small Data	Centralized Big Data	Low	1		
	Processing of Data	Manual	Automated	Low	1		
Goals and Effects of the Surveillance	General Purpose of Surveillance	Molding the Individuals in Accordance with the Ideals of the State/Society	Profiling the Subjects so that they can be Micro-targeted with Advertisements	Low	1	1.00	Low Resemblance
	Involvement of the Subjects in Attaining the Purpose of Surveillance	Active	Passive	Low	1		
	Side Effects on the Subjects	Docility and Conformity	Consumerist Mentality	Low	1		
	Side Effects on the Society	Threat to Social and Cultural Diversity	Threat to Competitiveness of Smaller Companies and Startups	Low	1		
Management of the Surveillance System	Reward/s Given/Promised if the General Purpose/s of the Surveillance is/are Met	Social Approval that may Facilitate Success	None	Low	1	1.00	Low Resemblance
	Punishment/s Given/Stipulated if the General Purpose/s of the Surveillance is/are not Met	Social Disapproval that may Lead to Failure	None	Low	1		
	Infrastructure	Dispersed Social Units and State Units	Unified Digital Communication System, Giant Servers	Low	1		
	Owner of the Surveillance System	Society and State	Owner of the Platform	Low	1		
	Source of Operational Funding	Owner of the System	Subjects, Vendors, and other Advertisers	Low	1		
Overall Comparison					1.17		Low Resemblance

Table 9 shows that there is also an overall low resemblance in between Foucault's panoptic theory and Amazon's e-commerce digital surveillance. Their level of resemblance is also low in all of their five clusters. This overall low level of resemblance suggests that Foucault's panoptic theory cannot be applied in conceptualizing and critiquing Amazon's e-commerce digital surveillance.

Comparative Analysis

This fourth substantive section of this paper compares and contrasts the levels of applicability of Bentham and Foucault's panoptic theories on the conceptualization and critique of the three modes of surveillance along this paper's construct's five clusters. Table 10 presents the results of such comparative analysis.

Table 10. Per Cluster Summary of All the Comparisons Undertaken by this Paper

Clusters	Resemblance between Bentham and Foucault's Panopticons	Resemblance between Bentham's Panopticon and			Resemblance between Foucault's Panopticon and		
		Xinjiang's State Digital Surveillance	Facebook's Social Media Digital Surveillance	Amazon's E-Commerce Digital Surveillance	Xinjiang's State Digital Surveillance	Facebook's Social Media Digital Surveillance	Amazon's E-Commerce Digital Surveillance
Subject of Surveillance	Low	High	Low	Low	Low	Low	Low
Observer	High	Moderate	Low	Low	High	Low	Low
Data Gathering, Storage and Analysis	High	Low	Low	Low	Moderate	Low	Low
Goals and Effects of the Surveillance	Moderate	Moderate	Low	Low	High	Low	Low
Management of the Surveillance System	Moderate	High	Low	Low	High	Low	Low
Overall	Moderate	Moderate	Low	Low	Moderate	Low	Low

The comparative analysis on Bentham and Foucault's panoptic theories was undertaken in order to establish the baseline value of the level of resemblance between a panoptic theory and a mode of digital surveillance for such panoptic theory to be deemed applicable as a theoretical framework in conceptualizing and critiquing such mode of digital surveillance. Figure 5

illustrates the per cluster comparative analysis on Bentham and Foucault's panoptic theories, as based on the second column of table 10.
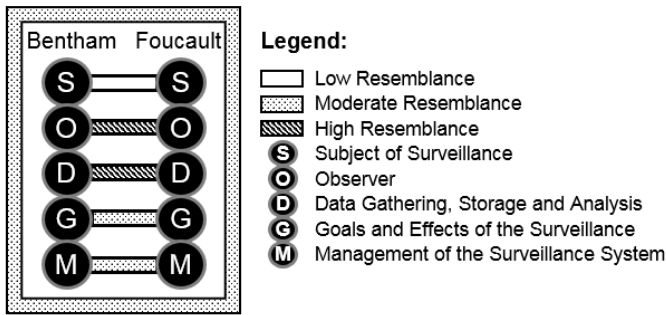
Figure 5 shows the overall moderate resemblance level between Bentham and Foucault's panoptic theories.

Figure 6 illustrates the central per cluster comparative analyses undertaken by these paper on the two panoptic theories on one hand, and the three modes of digital surveillance on the other hand, as based on the third, fourth, fifth, sixth, seventh, and eighth columns of columns of table 10.
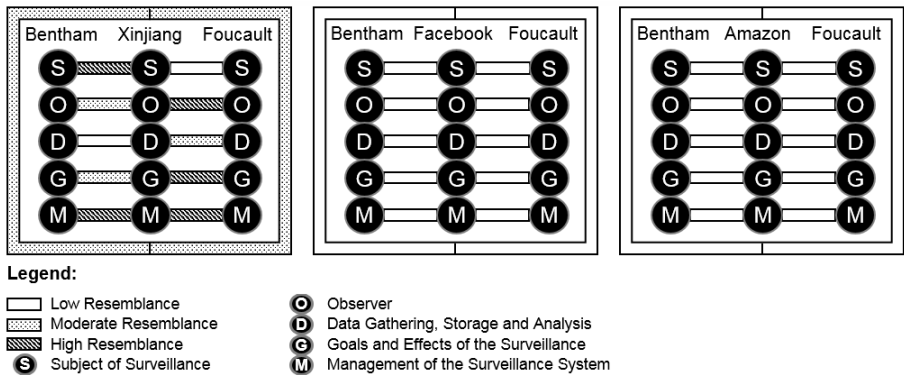
Figure 6: Per Cluster Summary of the Comparative Analyses on the Levels of Resemblance between the Two Panoptic Theories on One Hand, and the Three Modes of Digital Surveillance on the Other Hand

Figure 6 shows that both Bentham and Foucault's panoptic theories have overall moderate resemblance levels with Xinjiang's state digital surveillance; and both also have overall low resemblance levels with Facebook's social media digital surveillance, as well as with Amazon's e-commerce digital surveillance. Thus, both Bentham and Foucault's panoptic theories can be applied as a theoretical framework for the conceptualization and critique of Xinjiang's state digital surveillance, but not for the conceptualization and

critique of either Facebook's social media digital surveillance or Amazon's e-commerce digital surveillance.

Conclusion

This paper established that Bentham and Foucault's panoptic theories have moderate resemblance to each other; that both Bentham and Foucault's panoptic theories are applicable to the conceptualization and critique of state digital surveillance; and that both Bentham and Foucault's panoptic theories are not applicable to the conceptualization and critique of social media and e-commerce digital surveillance.

Bentham's panoptic theory is applicable to the conceptualization and critique of state digital surveillance because this paper's analysis has established that Bentham's panopticon and Xinjiang's state digital surveillance system as a case at hand have moderate to high resemblances in the clusters of the subject of the surveillance, observer, goals and effects of the surveillance, and management of the surveillance system. The analogous structure between Bentham's panopticon and Xinjiang's state digital surveillance system falters only in the cluster of data gathering, storage, and analysis. Foucault's panoptic theory is also applicable to the conceptualization and critique of state digital surveillance because this paper's analysis has established that Foucault's panopticon and Xinjiang's state digital surveillance system as a case at hand have moderate to high resemblances in the clusters of observer; data gathering, storage, and analysis; goals and effects of the surveillance; and management of the surveillance system. The analogous structure between Foucault's panopticon and Xinjiang's state digital surveillance system falters only in the cluster of the subject of surveillance.

On the other hand, Bentham's panoptic theory is not applicable to the conceptualization and critique of social media digital surveillance and e-commerce digital surveillance because this paper's analyses have established that Bentham's panopticon and Facebook's and Amazon's digital surveillance systems as two cases at hand have only low resemblances in all of the five clusters examined by this same paper. Furthermore, Foucault's panoptic theory is also not applicable to the conceptualization and critique of social media digital surveillance and e-commerce digital surveillance because this paper's analyses have also established that Foucault's panopticon and Facebook and Amazon's digital surveillance systems as two cases at hand have only low resemblances in also all of the five clusters examined by this same paper.

Thus, this paper was able to present the actual levels of usefulness of both Bentham and Foucault's panoptic theories in conceptualizing and

critiquing different modes of digital surveillance. There are simply modes of digital surveillance where Bentham and Foucault's panoptic theories can still be very useful, just as there are also modes of digital surveillance where such theories can no longer be useful. Furthermore, this paper was also able to lay out a framework on how to test the actual levels of usefulness of either Bentham or Foucault's panoptic theories to the conceptualization and critique of other modes of digital surveillance.

Most probably, Bentham and Foucault's panoptic theories will also be applicable to the conceptualization and critique of workplace digital surveillance, as well as to school digital surveillance. These two modes of digital surveillance did not have cases that were analyzed by this paper, but their structures and configurations are very similar to state digital surveillance. A future research study should be able to confirm this new hypothesis.

Most probably, Bentham and Foucault's panoptic theories will not be applicable to the conceptualization and critique of lateral digital surveillance, as the horizontal power structure and configuration of this mode of digital surveillance is very different from the structure and configuration of both Bentham and Foucault's panopticons. It would not be worthwhile to conduct future research to confirm this negative hypothesis.

Bentham and Foucault's panoptic theories will be applicable to the conceptualization and critique of some modes of counter digital surveillance. The different modes of counter digital surveillance would be an interesting future research project to pursue.

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