Online Behavior Under State Digital Surveillance: A Comparative Study of Active and Passive Social Networking Sites Users in Pakistan

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ABSTRACT

The purpose of this study was to examine the influence of state digital surveillance on the online behavior of active users and passive users of social networking sites and to study the relevance between physical and digital surveillance. Thus, the study focused on the comparison between social networking sites active and passive users regarding how their behavior is influenced by the invisible and constant state digital surveillance along with the comparison between tangible and intangible (physical and digital) forms of surveillance. Jeremy Bentham's early disciplinary work and later contributions of Michel Foucault to the model of panopticism lead modern scholars of mass surveillance to study new surveillance trends by keeping their disciplinary model in view. Therefore, the theory of panopticism was used in this study to achieve its objectives. The quantitative research approach was incorporated and the sample was drawn through a purposive sampling technique where data was collected through a survey instrument based on a 5point Likert scale from a total of 150 active and passive social networking sites users, 25 active users, and 25 passive users on each of the three platforms i.e. Facebook, Instagram, and Twitter in Pakistan. The findings directed that the means of active and passive users on social networking sites have a slight difference and almost both categories agreed with the proposed hypotheses which also indicates a strong relevance between early physical surveillance and digital surveillance.

Keywords: Panopticism, state digital surveillance, influence, online behavior, active user, passive user, social networking sites

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CHAPTER 1: INTRODUCTION

1.1 Background

Generally, mass surveillance is a broader term that can be defined as accessing, monitoring, gathering, and scrutinizing personal or confidential data in immense amounts by using different technologies and tactics for defined purposes such as data management, a strategy for counterterrorism, persuasion, security, or to discern consumer behavior. Shoemaker (1996, p.32) defines surveillance as a way to monitor the world around us. In other words, mass surveillance is a systematic interference to observe people and influence behavior. Wang et al. (2017) describe surveillance as a social phenomenon and commonplace employed by companies, governments, and communities that play a fundamental role in providing tools for prevention and detection, especially in cybersecurity.

Traditionally, surveillance was only used in wartime such as in world wars for security purposes in the USA. Locke (2010) said that surveillance is now a part of institutional routines and human sociality; over the past 4 decades, it has become the practice of late modernity. However, technological advancement enables the surveillance of anything anywhere. Lyon (2001) said we live in true surveillance societies, especially after 9/11 where every citizen has a potential threat that needs to be monitored.

In recent times, mass surveillance is not only used for detection purposes but it's the greatest aid to health services and digital contact tracing. Many countries took advantage of mass surveillance in identifying the infected individuals during covid'19. For instance, Ram and Gray (2020) have enlightened how the apps using colors and different

ideas have detected minute-to-minute updates of infected individuals in countries like China, South Korea, and Israel.

As opposed to targeted surveillance, mass surveillance targets a fraction of the population or the entire population either through a covert method where the detective remains undetected or an overt (in the view of the public) method.

Moreover, further technological innovation allows mass surveillance to incorporate multiple ways for instance, closed-circuit television (CCTV) monitoring, wiretapping, the use of electronic means, and other digital technologies. One of the integral counterparts of mass surveillance is digital surveillance where data can easily be accessed, attacked, monitored, stored, and duplicated, with low data anonymity and high confidentiality of the detector. The improvements in technology like sensing and recording allow the monitoring of groups and individuals without the need for constant direct observation (Deleuze, 1992; Gandy, 1993; Lianos, 2001; Lyon, 1994, 2001; Poster,1990). According to Lyon (1994), digitalization is substantial because it enables monitoring, prioritization, judgment, active social sorting, identification, tracking of bodies, and behavior on a real-time basis. Although digital surveillance includes physical compromises or the use of physical devices such as biometrics, and GPS chips but majorly digital surveillance is common over the internet and incorporates the techniques like mass hacking, geotagging, mobile tracking, use of direct mass interception, remote exploitation, social engineering, use of Trojan, third-party compromise, social network mapping, and analysis (in which first social networks are mapped out and then data mining is performed to extract useful personal information) are just a few examples of digital mass surveillance.

Digital surveillance includes both types of surveillance for instance by the corporate sector and by the state government but the major hold in extensive digital surveillance will remain of the state government and legal authorities. At the same time, social networking sites also facilitate peer-to-peer surveillance but this surveillance cannot go beyond the intentionally shared data. Nowadays, social networking sites are used as a new intelligence and information-gathering tool which is considered a low-cost yet massive police surveillance that helps people in authority to detect and resolve cases. Especially, after online terrorism, and online crimes every state government is directly involved in digital surveillance to monitor online patterns and exercise its power to regulate online behavior. Similar results were found in one of the vendors' online surveys that shows 80% of law enforcement professionals use social networking sites as intelligence tool.

Digital surveillance not only influences the behavior of online users but professionals are also subject to it. For example, Waters (2017) assumed that journalists typically believe in people's right to know but are under great pressure due to surveillance. Moreover, journalists avoid online electronic communication tools and they don't store data there. Even sources refuse to give any information if they know that there is a surveillance program or someone else has access to the data. Most journalists prefer the use of digital security tools or a complete change of their work mode due to surveillance.

The extent of modification in online behavior due to digital surveillance may vary to the type of user but it influences online activities on the whole.

1.2 Problem Statement

State digital surveillance is a new way to exercise power, particularly state authorities use digital intelligence and surveillance programs to monitor, observe and record the online activities of social networking sites users. On the other hand, the number of social networking sites active users are increasing regularly. According to ComScore (2008) survey there are 580 million, a 25% increase in unique visitors on social networking sites as compared to previous years. As a result of state surveillance, now social networking sites users particularly those who are active users and use social networking sites to share their opinions have chilling effects, they censor and discipline their online behavior more than passive users to escape the threats and negative consequences that are coming from state digital surveillance. Therefore, the present study aims to examine the influence of state digital surveillance in altering the online behavior of social networking sites users particularly whether active users alter their behavior more than passive users or not. The study also examines the relevance of new trends in state digital surveillance with early physical surveillance (panopticon model). Thus, the researcher is testing two interlinked things simultaneously, one is the influence of digital state surveillance on active and passive users and the comparison between tangible and intangible (physical and digital) forms of surveillance.

1.3 Research Significance

The ever-revolutionary and dynamic nature of technology has reformed the entire social fabric and how society perceives and experiences new forms of security, privacy, and power. Digital surveillance by state authorities is the altered form of power and security in the era of mass media which is fueled by online terrorism. Digital surveillance

becomes a crucial part of national security after online incidents. For instance, in Europe only targeted surveillance was justified until 2006 after the London bombing Data Retention Directive started detecting calls from European citizens. Simultaneously, social networking sites users all over the world are now well aware of surveillance programs and they become conscious about their online behavior, especially after the leak of the United States National Security Agency (NSA) highly classified information under the USA intelligence program "PRISM" by Edward Snowden in 2013. The program tapped data from nine famous cloud servers including Google, Microsoft, Apple, and Facebook of US citizens. Similar cases of leaking and secretly recording online material are happening in Pakistan daily. Whether it's a Western liberal democracy or a third-world authoritative democratic country, military or state surveillance, state electronic policing, or corporate illegitimate digital surveillance create a kind of power structure where the authorities in power become dominant and subjects under surveillance have become submissive in the online world.

Digital surveillance and its evolving issues give a huge scope to mass surveillance scholars to study these issues through uncountable lenses. The concepts like self-monitoring, self-censoring, self-discipline, how power works on digital surfaces, and how power changes online behavior are widely studied in the West with the utilization of the old theory of panopticism as a foundational or conceptual framework. Unfortunately, in Pakistan, there is a literature gap on these problems or at least the panopticon model is not yet utilized to study power, online behavior, and self-discipline.

The exclusive dimension of this study along with examining whether active users are more influenced by state digital surveillance than passive users, this study also tested empirically the relevance between the nineteenth-century physical model of surveillance

known as the panopticon and the modern trends in state digital surveillance. It bridges the gap in the literature, especially the literature of third-world countries, and adds scope to the massive field of surveillance.

Moreover, the study is crucial to draw empirical findings and meaningful conclusions such as whether people under digital surveillance have a fear of being watched, alter their online behavior or not, who changes behavior more, and the extent to which they change their behavior.

1.4 Organization of the Study

This study is comprised of five chapters. The first chapter describes a general introduction to mass surveillance, a brief history of surveillance, and types of mass surveillance. Then the general introduction is narrowed down to the more specific form of surveillance which is digital surveillance, and how it affects online users, especially professionals. The second chapter comprises of extensive literature review, theoretical framework, and the application of the model used in this study. The third chapter is about the methodology and consists of an entire research design that includes the research approach, source of data, type of investigation, population, sampling technique, sample size, data collection methods, data analysis methods, operationalization, and conceptual framework. Chapter four contains data and analysis. Chapter five consists of a discussion and interpretation, conclusion, limitations, and recommendations for future study.

1.5 Research Objectives

The study explores the mentioned objectives

1. To explore the influence of state digital surveillance on online behavior by keeping active and passive users of social networking sites in view.

2. To study the relevance between tangible and intangible (physical and digital) forms of surveillance.

1.6 Research Hypotheses

H1. It is more likely that active users on social networking sites are aware of state digital surveillance more than passive users.

H2. It is more likely that active users on social networking sites are aware that their online activities and identity are visible to surveillance agents more than passive users.

H3. It is more likely that active users on social networking sites have fear of negative consequences under state digital surveillance more than passive users.

H4. It is more likely that active users on social networking sites alter or change their online behavior under state digital surveillance more than passive users.

H5. It is more likely that active users on social networking sites discipline themselves online in a desired way to escape the threats more than passive users.

H6. It is more likely that active users on social networking sites are more influenced than passive users by state digital surveillance.

CHAPTER 2: LITERATURE REVIEW

2.1 Surveillance

Mass surveillance scholars explain surveillance differently. For instance, surveillance is a privilege for the powerful and inequality for marginal groups (Lyon et al., 2012). Another definition of surveillance is that it is an institutional mechanism to control individual citizens (Ball, 2010; Gandy, 1989; Lyon, 2003). According to Lyon (2006), surveillance is both caring and controlling. It means that surveillance controls the

individual as well as protects them. Clarke (2014) clearly stated that surveillance is a requirement for journalists to perform their jobs.

The two perspectives on surveillance are enlightened by (McQuail, 2010). One is a function of mass media and the other is a method for authority to study subjects like criminals or prisoners.

2.2 Overview of Surveillance Theories till Digital Age

The field of surveillance is evolving and there are infinite forms through which surveillance is studied and practiced. Galic et al. (2016) have studied surveillance frameworks and theories chronologically and in thematic phases to discuss different forms of surveillance. In the first phase, they studied Bentham's architectural framework of the model panopticon and later extension of Michel Foucault to the model. In the second phase, they studied infrastructural theories of surveillance that go beyond physical surveillance. This phase is also known as the post-panopticon theories era which includes the concepts of digital spaces, how distance becomes less important in surveillance, data doubles, and the work of notable contributors to networked surveillance such as Deleuze, Haggerty, Ericson, and Zuboff. In the third phase, they refined, combined, and extended the early conceptual frameworks rather than establishing new alternatives. In this phase, they also discussed new terms of the modern mass surveillance era for example dataveillance, access control, social sorting, self-surveillance, and resistance.

2.2.1 Phase One: Early Conceptual Frameworks

2.2.2 In View of Bentham

It is a limited spatial panopticon gaze, which is a controversial idea of Bentham (Schofield, 2009). Many scholars criticized that what is represented by Foucault on behalf

of Bentham is just a one-sided perspective. Such as Brunon-Ernst (2012, pp. 1-2) said that Foucault just represented the perception of authoritarianism and Bentham's work as state control. Foucault ignored Bentham's liberal school of thought about the rule of law, political rights, and civil rights. Brunon-Ernst said that the panopticon is more diverse and reversible than Foucault has acknowledged. Despite this fact, panopticism and Foucault's theory of liberalism draws on Bentham's utilitarian liberal thinking Brunon-Ernst (2012). Even though, Bentham's panopticon model was not the only model. Initially, he proposed four models that include the Prison panopticon, the Pauper panopticon, the Chrestomathic panopticon, and the Constitutional panopticon.

2.2.3 The Prison and Pauper Panopticon

The prison panopticon was the earliest model whose architectural framework was the basis of panopticism and early surveillance of the prisoners. The second model which was uncommon was the Pauper panopticon as discussed in *'Outline of a work entitled Pauper management improved'* (1797-1798). In this model, the 'Principle of the Earn First' was applied. Generally, paupers under this model can quit but they cannot leave without the completion of shared work (Schofield, 2009). This model includes paupers of all ages and privacy was also given on an occasional basis. In this model, surveillance was done through a complex method of control.

2.2.4 The Chrestomathic Panopticon

This type of Bentham's model is discussed in '*Chrestomathia'* (1816-1817). This panopticon model was for school children and children were set free; girls at the age of 17 and boys at 19. Moreover, this model was for surveillance of children inside the schools and there were no fixed classes. As children move among different categories so the

panopticon also changes. Therefore, this panopticon type was not a fixed structure. It changes along with circumstances.

2.2.5 The Constitutional Panopticon

It is discussed in '*Constitutional Code'* (1830). It is also known as the Inverted Panopticon by (Semple, 1987; Leroy, 2002) because of its down-to-bottom surveillance where many citizens watch the many governors. Yet under this model, the surveillance was only done when governors were on public duty. Thus, in this model, the panopticon also changes with circumstances.

2.2.6 Panopticism in View of Michel Foucault

Foucault used the panopticon as a metaphor that can be applied to a diverse variety of social institutions. Galic et al. (2016) also discussed the difference that Foucault draws between sovereign states and disciplinary societies. Moreover, Foucault studied the panopticon as a method of governing rather than the goal of governing. Foucault also studied individualization as descending rather than ascending in feudal or sovereign societies (Foucault, 1980).

2.3 Phase Two: Post-Panopticon Theories

2.3.1 Deleuze Concept of Control Society

Galic et al. (2016) have discussed the control society of Deleuze. The driving forces in capitalism are always changing, for example, schools are now becoming corporations (Deleuze and Guattari, 1987; Deleuze, 1992). The methods and processes of surveillance are changing too. Discipline is now considered as stable society, achieved through long-term goals and optimal use of resources to reach government-issued goals. Thus, there is a need for constant control where individual representations are more important and where

there is the use of technologies of power, data bodies, and open places. In control society, now distance is no longer required.

2.3.2 Haggerty and Ericson Surveillant Assemblage

According to Haggerty and Ericson (2000), we need an analytical tool that is a surveillant assemblage. According to them, we now rely on machines that record discrete observations. There is now the concept of data double in modern surveillance, and the data doubles through the data we leave online. This data double consists of additional self-features. Users leave data which re-assembled for the proposed purposes of surveillance. Now social control is decentralized. Therefore, Haggerty (2006) said surveillance is social inequality.

2.3.3 Zuboff Social Capitalism

Another prominent concept of modern surveillance or post-panopticon theories is social capitalism, first used by Bellamy and McChesney (2014) and then thoroughly disseminated by (Zuboff, 2015; 2016). Social capitalism is profit driven surveillance approach through the modification of human behavior (Zubnoff, 2015). It is a new form of revenue where the data or behavior is modified for profit.

2.3.4 Banopticon

Comparatively, a very new concept in which profiling technologies exclude the entries that do not fit the criteria of the panopticon model or surveillance. This concept was given by Didier Bigo (Paris school).

2.4 Third Phase: New Concepts in Surveillance

Galic et al. (2016) discussed relatively new concepts but according to them, it is an extension of old concepts rather than new alternatives.

2.4.1 Participatory Surveillance

The term participatory surveillance is coined by Albrechtslund. In that, the watched is actively engaged and also plays a conscious role in watching. This means the one tracking is tracked, the one watching is watched and the one sharing is shared.

Social networking sites have introduced a participatory approach to surveillance which empowers the user rather than violates him (Albrechtslund, 2008).

The more digital devices are accelerating the more it is turning classical panopticism into social or participatory panopticism. Dennis (2008) said that now a person is trapped in a veil of data and code rather than a target of dehumanization through an industrial machine. He also said that mobiles are everywhere, and anyone can record and publicize anything. We live in a social panopticon or participatory panopticon and this should promote responsibility, cooperation, participation, and empower connections not devalue or humiliate humans.

Jamais Cascio termed participatory panopticism and explained the positive side of surveillance and said that surveillance is more about choice rather than imposed by force (Cascio, 2005).

Stross (2002) in an essay 'The Panopticon Singularity' said that the effectiveness of societal surveillance depends on the number of people involved in surveillance because it induces a sense of securitization rather than leaving their selves vulnerable.

In today's revolutionized digital era users willingly share their personal information despite the fact that they know their information is under surveillance. This is also known as participatory surveillance. Boyne (2000) said that it is an innate desire of a human to be seen and heard.

2.4.2 Sousveillance

Mann (2004) explained sousveillance as a form of resistance against the governing bodies. This is from-the-below surveillance by citizens or the more appropriate phrase is watch back surveillance. This trend is initiated according to Mann after the innovation of recording equipment such as cameras. According to him, citizen journalism and leaked publication are a virtual form of sousveillance.

Dennis (2008) also said that surveillance is now decentralized through portable mobile phones. This is known as citizen journalism and Gillmor (2004) calls it participatory journalism. This type of coverage is also known as sousveillance described by (Mann, 1998) as a form of reflectionism and as a 'watchful vigilance underneath'. Sousveillance connects with the self-reflective responsibility aspect that includes selfcontrol and self-maintenance, a person should be vigilant toward himself and others (Denis, 2008).

Brands and Schwanen (2014) said that wearing anti-drone hoodies is the best example of sousveillance against CCTV cameras.

Latour (1999) has said that people still have room to negotiate and resist antiprogram.

Resistance or sousveillance is not an easy thing to do. As Brunton and Nissenbaum (2013) said that resistance is difficult because of two reasons. There is an asymmetry in power, for example, what will happen if the information of who is recording the information is got by someone? The other is an asymmetry in knowledge for instance how to monitor and what to monitor.

2.5 Equiveillance

The concept of equiveillance is discussed by Brown (2014); in which the powerless used surveillance tactics against the powerful to equalize power relations in surveillance.

2.6 State Surveillance

Surveillance in the social hierarchy is carried out by officers or watchers (Fuchs, 2011, p. 124).

Brown (2014) highlighted that all the member states of the European Union are restricted to record all telephone and internet service communication for police access. The UK Government Communications Headquarters (GCHQ) can record 25% of global internet traffic for three days. Now face recognition is used for a criminal suspect and more particularly social networking sites state surveillance uses a photo that is uploaded on social networking sites for identification (Brown, 2014).

According to Guzik (2009, p. 1), data mining in state surveillance of countries like the USA and the UK is considered future-oriented power that discriminates in design and other aspects.

2.7 Surveillance on Social Networking Sites

Social assemblages have a resemblance with social networking sites assemblages that draw data through cookies, location, or customer surveys (Brown, 2014).

Social networking sites allow internet users to build new contacts and online networks. Concurrently, it also allows government, organizations, and even internet users to perform surveillance on other users known as the concept of social surveillance (Marx, 2014).

Joinson (2008) assumed that surveillance on social networking sites is the second purpose for using social networking sites, the first is to build contacts.

2.8 Big Brother and Little Brother Surveillance

There are two relatively new forms of surveillance i.e. big brother and little brother surveillance. Palen and Dourish (2003) refer to big brother surveillance as the surveillance of government agencies.

Another type of social surveillance is interpersonal electronic surveillance discussed by (Tokunaga, 2011).

2.9 Three Perspectives of Ever-Changing Surveillance Practices

Marx (2002) has explained modern surveillance and changes in surveillance from three perspectives. Firstly, he said that it is a continuity of history yet the changes in surveillance are only a matter of degree. Secondly, the changes are the predominant feature of current society and these changes are revolutionized. The third perspective is more relativistic that is technology is revolutionary in nature and the changes largely reflect social and cultural changes.

2.10 Relevant and Contradictory Concepts and New Surveillance Practices

Panopticism is studied through the lenses of similarities and contradictions drawn by the various theoretical frameworks. Almost every field has either some work on the relevance or contradiction with panopticism. Be it politics, psychology, economics, management, and much more. The new digital technology supports and criticizes the assumptions of classical panopticism both at the same time. Some scholars of mass surveillance utilize the model and examine the relevance of the classical model with new

trends of surveillance however some scholars criticize the usefulness and relevance of classical panopticism in the modern era.

One of the scholars who argued against the relevance of the model in the modern age Bauman and Lyon (2003: 49) said that this model is only used by newcomers to the field of mass surveillance, it is a good idea for them but it is not for those who are studying surveillance for a long time. Similarly, Lianos (2003) said that the model is made for the past and does not apply to the objects for which it is not made for.

In contrast, many scholars also support that the model is still applicable and relevant in today's era.

2.10.1 Panopticism Reversed in a Digital Age: Numerocratic Panopticism

Hamann (2020) in his commentary has introduced a new form of panopticism known as numerocratic panopticism and draws the differences between classical panopticism and digital one. We indeed live in a world of numbers where everything can be explained and quantified in numbers (Hamann, 2020). He has explained how the panopticon model reversed in an age of digital numbers. He has elaborated on three key differences between classical panopticism and his numerocratic panopticism. In the classical one, inmates are separated, locked, and highly individualized but in his numerocratic panopticism observed or subjects are not locked but centered and surrounded by many observers. Secondly, the initial architectural structure was designed to reduce the number of those who exercise power (Foucault, 1991, p. 206) but in numerocratic panopticism, the observers are increased and even observers can mutually compare, see and discipline each other. Another major difference is that classical panopticism is based on the spatial arrangement with fixed structures like tower and

cells but numerocratic panopticism is a non-spatial arrangement where the locality is not fixed. Therefore, it is also known as a fluid network. The new model works from anywhere and remotely. The last difference that Hamann has raised is that this new panopticism is more open in nature than classical panopticism which was developed for purposes like inspection and discipline but the numerocratic model is much more diverse in nature and there is no predetermined single purpose of inspection and sometimes subjects do not even know the purpose of inspection. Moreover, he also said that the subjects under this new panopticism know all the time that they are under observation, unlike classical panopticism where inmates have no idea about when someone is seeing them. Thus, Hamann calls the new numerocratic form of panopticism a panopticon reversed. In short, this panopticism model is multi-centered, where observers are increased and networks are
fluid.

2.10.2 Panopticism Reversed: Statistical and Information Panopticism

Alike Hamann, many scholars by keeping classical panopticism in view have innovated different forms of panopticism such as Diaz-Bone (2019) said that the quantification of numerical data contributed to the term statistical panopticism. The best example of statistical panopticism is the official record of unemployment or health records.

Similar to this, in an information technology era there is an information panopticism that records and displays human behavior, especially in the business sector

(Zuboff, 1988). According to Mennicken and Espeland (2019), the concept of quantification is new to the previous Foucauldian concepts of power and discipline.

2.10.3 Panopticism in Early Western Democracies and Modern Digital Age

In another example, Manokha (2018) examined the relevance of the panopticon model of the nineteenth and twentieth centuries (of early liberal Western democracies) with the new democracies, especially in the digital age and mass surveillance era. The author has declared that the model is even more applicable in the mass surveillance age than in early Western societies. After the latest incidents like Edward Snowden users have chilling effects, they know that their data is stored and recorded. As a result, they avoid certain topics being shared on social networking sites.

Manokha said that in today's world, the concept of face recognition is what makes the model still relevant. Especially, if the model is applied to today's workforce and the notion of capitalism for example the surveillance of remote workers increases the intensity of the work and contributes to the capitalist interest even today. Also, the concept of categorization in Bentham's viewpoint is now more applicable in the form of social sorting of users by surveillance agents. Not only the agents but users discipline themselves for a reason to be placed in a preferred category or to avoid certain categories online.

2.10.4 Niklas Luhmann's Theory of Power: Organizational Power and Panopticism

Tarkke (2011) in his article elaborated that the organizational power in view of Luhmann's theory of power and Foucault's panopticism is somewhat relatable. According to Luhmann, power is very different from coercion. Power can be based on trust and can be transferred to the power subject while coercion is based on control and there is no alternative to coercion. Tarkke has interlinked two theories i.e. Luhmann

Power theory and Medium theory to study the new digital media, how it rejects the old norms in a new information world established by digital media, and how the power works in an organization by keeping the surveillance and digital panopticism in the background. As said by Tarkke, the role of technology in exercising organizational power is so crucial. The technology is not neutral in the selection of subjects and interpretation of the consequences of surveillance.

Even the decision of what to monitor depends on the software they choose (Lyon, 1994:132). Surveillance is a byproduct of technology, especially in a dataveillance era we do not make databases, databases make us because all the digital data traces are stored and monitored. Tarkke has used the term "Dataveillance" which was invented by Roger Clarke (1987), the term generally refers to the surveillance of data itself. Tarkke has argued that now the new digital media started surveillance of the data yet the data in dataveillance is very specific or selective and it increases the possibility of missing out on the overall working of employees in other sectors.

"Risk" is one of the main sub-parts of Luhmann's Power theory. One of the examples given by Tarkke of risks in organizational power is that the management takes the risks of not controlling, or trusting employees, or even risks in the selection of what areas to monitor and not to monitor and vice versa employees take risks of surveillance for their career and money. He further elaborates that the power in an organization is always dependent on the trust of employees and it makes the power holder free from exercising control and giving instructions. As a result, both the management and employees try to maintain trust and this trust also increases the creativity of the

employees. Whereas coercion leads to mistrust and stimulates the poor working of employees.

Early scientific management was more about coercion and less about power but now organizations are more about power than coercion. The power holder or management can monitor or compare the surveillance data of employees with the decisions the management has made about appropriate behavior. The power without coercion is somewhat related to panopticism.

The author also believed that Luhmann's concept of power where power places the power-holder in a position where he can put the subject under sanctions and Foucault concept as he believed that surveillance occurs in the organization itself, it's in the activities and timetable of the organization, in the norms of behavior which forces the employees to behave according to that power. Both these Luhmann's and Foucault's concepts are relatable.

2.10.5 Adam Smith's Impartial Spectator and Panopticism

Smith's impartial spectator as discussed in '*An Inquiry into The Nature and Causes of the Wealth of Nations'* (1776) and '*The Theory of Moral Sentiment'* (1759) is a man or third party in a man who brings real experiences, and scenarios into account to assess, judge, approve his certain response or behavior and can deny any unwanted desire or subjection. Both panopticism and impartial spectator are types of internalized surveillance but the cognitive processes involved are different in the process of subjection and self-reduction.

Fonna Forman-Barzilai (2010) in *'Adam Smith and the Circles of Sympathy:*

Cosmopolitanism and Moral Theory' said that there are many similarities between Foucault's panopticism and impartial spectator because both behavioral change is based on social norms and values.

Weinstein (2016) said that the impartial spectator is more of an educative tool in society while panopticism attacks the progressiveness of society. According to Leroy (2012), panopticism is a method to control corruption.

Smith argues that an impartial spectator allows the subject to resist totalitarianism or coercion. There is always freedom to choose behavior while panopticism is internalized surveillance through social determinism that diminishes the difference between interior and exterior, psychic and social, subject and society. It is not in the case of the impartial spectator in which moral development and changes of behavior are based on the harmonization of two human instincts i.e. self-interest (love and preservation for oneself) and the other is sympathy (engagement with others). It allows for the balance between self-happiness and social relations because an impartial spectator puts the

subject in a crucial role and allows the subject to deny unwanted desires and force. One of the examples of the impartial spectator is that sympathy requires a response or certain behavior from others and this response or behavior is obtained through the imagination or realization of other's experiences and individual judgment by imagining scenarios and possible outcomes.

2.10.6 Impartial Spectator and Foucault Panopticism in Digital Age

Mark (2022) said that with technological advances, the initial panopticism now goes beyond the mere analysis of Foucault. Mark argued that panopticism is now a matter of data analysis where the human is judged through data. Moreover, innovations like

artificial intelligence and different algorithms play the role of judgment and selfassessment (impartial spectator) where the decision is based on AI. The subject becomes a commodity and technology is the decision-maker. Digital surveillance infiltrated all aspects of life either personal or professional.

2.11 Effects of Digital Surveillance

Taekke (2011) said that the surveillance of an individual or group alters the preexisted power structure and it increases the power of those doing surveillance. He calls the altered power structure a bad economy.

Richards (2013) talked about the negative impact of surveillance on social progress and culture. He supposed that social progress starts with radical thought which is not possible under surveillance.

According to Fromm (1960), the modern surveillance society created two sides of a man simultaneously. A man is independent, critical, and self-reliant yet isolated, alone, and afraid.

Some scholars argue that not only the authorities but those who are in a position of control use power to alter the behavior of others. Therefore, digital surveillance has limitless harmful online and offline effects.

2.11.1 Mental Health

Murray and Fussey (2019) explained that surveillance affects mental health, especially those who are in the minority. They have shared a result of a survey in which 8,000 cases at the micro level of health data where minorities under high police surveillance are most affected by the surveillance. One of the reasons noted by them is

mostly individualized suspicion of the subject under surveillance. Authors have also declared labeling as one of the harms of mass surveillance.

2.11.2 Effects on Self-Presentation

Duffy and Chan (2018) analyzed the self-presentation activities on different social networking sites platforms namely Facebook, Instagram, LinkedIn, Snapchat, and Twitter against imagined surveillance from different social institutions most prominently the employment, family, and education sectors by analyzing 28 college-age adults through in-depth interviews. The findings of their study are divided into three distinct categories that include privacy setting, self-surveillance, and Pseudonyms with the conclusion that now adult anticipates socialization and digital surveillance, especially with the guidance of social institutions. Mostly, adults are intended to differently manage their selfpresentation on different social networking sites platforms. Their disciplinary and resistance tactics are based on imagined audiences (Litt, 2012; Litt and Hargittai, 2016).

Duffy and Chan in the same study have discussed another strategy against imagined surveillance in that adults use fake profiles and names for instance in their study 13/28 adults have Rinsta (Real+ Instagram) and Finsta (Fake+ Instagram) profiles both. Adults and youth control their self-presentation because of the surveillance by social actors.

In a 2016 survey, 25% of employees were terminated based on online content they posted (CareerBuilder, 2016; see also, Gandini and Pais, 2018; McEwan and Flood, 2018).

2.12 Effects of State Digital Surveillance

2.12.1 The Chilling Effect

The chilling effect is extensively studied by scholars as an impact of surveillance on individual behavior despite the fact that the chilling effect can't be generalizable. Murray and Fussey (2019) argued that the chilling effect is subject to different beliefs, levels of fear, belief in the legitimacy of surveillance, and demographic location. It can't be generalized among different social groups. Yet they also said that the chilling effect impacts the effective working of participatory democracy because it affects the free marketplace of ideas.

The empirical evidence of the chilling effect is always surveys and quantification of data. According to one of the Pew Research Center surveys of 475 adults, 34% of those who know about National Security Agency surveillance programs try to conceal their online behavior, and 25% have modified their use of such platforms.

2.12.2 Edward Snowden Leak, Chilling Effect and Online Behavior

Marthews and Tucker (2018) in their article said that it is presumed by people that people are more subject to physical surveillance than digital surveillance. Physical surveillance requires physical efforts such as labor or physical touch on mobiles yet online surveillance due to its high trackability can be more empirically measured. They took the Snowden revelation incident as a shock and studied the change in search intent (online behavior) and the chilling effect on user's behavior. To empirically study the chilling effect as a result of surveillance Marthews et al. (2018) have categorized the search terms into three lists. First, a list of search terms in which the government of the USA was interested. They accessed the list through Google Trends. The second list was gathered

from the local technology communities, and the search terms in that list were categorized as embarrassing search terms (search terms that users want to keep private and found embarrassing if found by a family member or a friend). The third list covered neutral search terms related to businesses such as restaurants, or salons. They then measured the sensitivity of these search terms and their relationship with government interest after the Snowden leak by using a Likert scale having options like less sensitive and highly sensitive. In this way, Marthews et al. (2018) empirically showed the effects of mass surveillance especially after the Snowden Leak on online behavior mainly search intent.

In the first six months after the revelation of documents different institutions attempted to study its effects differently but mostly through survey methods as Pew Internet and American Life Project used opinion polling in June but didn't study the changes in online behavior.

PEN America studied the effects of Snowden revelation on writers and found that 24% of people intentionally avoid certain topics in email conversations or phones. 28% have curtailed social networking sites activities while 16% avoid writing and speaking on certain topics. In another report by Castro (June-July 2013), Cloud Security Alliance reported that 10% of cloud computing companies and stakeholders outside the US have canceled their contracts of projects with US computing providers after the revelation of the Snowden leaks while 56% of non-residents of US are less likely to use US computing service and 36% of US residents say that they see the difficulty to do business outside the USA.

In another survey, Penny (2016) found that after the Edward Snowden leaks there is a 30% decrease in searches of security-sensitive words.

2.12.3 Effects on Human Rights: Discrimination, and Inequality

The most common harmful effect especially of state mass surveillance will remain individual privacy. At the same time, mass digital surveillance can impact beyond just individual privacy. Murray and Fussey (2019) have discussed different human rights concerns in the context of bulk communication data surveillance but the same harm can be applied to the overall mass surveillance of any type. In addition to privacy and freedom of expression, according to them, surveillance also affects the democratic society. They believe that freedom of speech is important to fully develop identity and that identity plays a role in democracy. Apart from the freedom of expression, people who are in the minority or have fewer resources can't able to oppose government policies. Surveillance affects dignity and can create discrimination and inequality.

2.12.4 Effects on Online Political Participation

The internet indiscriminately provides a free and open space for users to share their ideas and opinions. On the other hand, state digital surveillance aims at suppressing political opinions that go against the government. In addition to other major effects, digital state surveillance also affects the political participation of users online especially.

Stoycheff et al. (2018) discussed how the technology of suppression such as internet censorship and internet surveillance affects democratization across countries. They analyzed the secondary data through country-level analysis and multi-level analysis. Their present research shows that internet surveillance makes internet censorship more effective but both are different yet unique constructs that threaten democracy. A notable finding was that internet surveillance even blocks the effects of

internet censorship and internet surveillance affects extensively on democratization and online political participation.

Digital surveillance affects political liberties even in liberal democracies (Penny, 2016, 2017; Stoycheff, 2016; Stoucheff and Wibowo et al., 2018). Stoycheff et al. (2018)

Boulianne (2009) said that there is a positive relationship between civic and political participation.

Government use suppression technology to overcome the potential of collective action (Bernal, 2016; Meserve and Pemstein, 2018; King et al., 2013) while Huang and Sun (2014) said that online spaces are used to robust a country's civil societies.

Google Transparent Report in 2017 shows that the requests from countries for the removal of content are mostly based on reasons of national security concerns rather than obscenity.

Shen (2017) said that people in countries that are under high censorship demand less for reforms as compared to people under low censorship.

2.12.5 Authoritative Control

Another effect of state surveillance as discussed by Xu (2020) is that surveillance gives information about the anti-regime sentiments of radical opponents that leads the government to more targeted repression, social control, regime stability, and nonexclusive co-optation.

The Internet gives political freedom and promotes democratic values that create new opportunities for citizens to protest and mobilize (Diamond, 2010) yet concurrently information, and communication technologies are used for political control (e.g. Lynch, 2011).

Gohdes (2014) has given the example of spying malware or automated mass detection in authoritarian countries for such purposes.

2.12.6 Control of User Identity

Brown (2014) said that social media allow marginal or sexual minorities to develop their identity but social media surveillance also reduces the individual control of information. Now the surveillance agent has more access to individual information than the individual himself.

2.12.7 Online Policing and Misinterpretation

Mateescu et al. (2015) discussed that the proliferation of social networking sites platforms and new monitoring tools have changed the dynamics of policing yet it also leads to the challenges of misinterpretation, context collapse, and criminalization of innocents. They have suggested that there are critical legal questions on the surveillance of social networking sites users that need to be answered and must have their own new constitutive limits. As law enforcement agents use surveillance to monitor peaceful protests online. Mateescu et al. (2015) have highlighted the most recent and specified example of surveillance on social networking sites by law enforcement agents which was the surveillance by the Department of Homeland Security (U.S.) who monitored the hashtag #Blacklivesmatter and Black Lives Matter social networking sites activists too, one of them was Deray Mckesson.

2.12.8 Effects on Journalists Relations with Confidential Sources

Waters (2017) has analyzed the discussion of seven USA journalists through indepth interviews. He used a constant comparative method and examined whether the journalists especially those who cover national security issues and are investigative

journalists feel the negative effects of mass surveillance on their work, personal lives, and their relationship with the sources. He also examined the conditions under which journalists use security tools and what makes security tools inconvenient. The findings show that journalists feel difficulty in their workflow and they alter their online communication under perceived or real surveillance by government agents. They mostly prefer not to share personal information nor use social networking sites for interviewing sources more than initial communication. Either they use security tools or prefer face-toface discussion. In one place the author also mentioned that journalists mostly take steps to resist surveillance more than altering their behavior by using security tools. Most of the reporters use email encryption and the tool PGP for email encryption. The use of security tools become common, especially after the Snowden leaks in 2013. Journalists also told that they use security tools for the safety and security of sources more than their own security.

Lashmar (2016) said that journalists show huge concern about the government's ability to monitor, they fear the chilling effect and feel a challenge to the fourth estate paradigm.

2.13 Digital Surveillance and its Effects in Different Countries

In Iran and Syria, regimes use surveillance to spy on their citizens, and because of this citizens hide their anti-regime sentiments, which is one of the most impactful effects of state mass surveillance (Gohdes, 2014; Gunitsky, 2015).

In Egypt, the parliament has passed a bill that makes ridesharing companies restricted to the obligation of sharing all their data with authorities (Malsin, 2018).

Russia started its surveillance activities back in 1995 and advances its communication technology to counter threats against Russian political stability (Soldatov and Borogan, 2011). Not even this, the Russian government also monitors requests for the licensing of weapons, travel plans, job applications, banking activities, and transportation (Gainutdinov,2017).

In China, there is social credit system to generate public scores and these scores are taken as the credibility or as the trust of citizens which is also used as criteria in jobs or school admissions (Botsman, 2017).

2.14 State Surveillance as a Useful Tool

Surveillance is always considered a useful tool for a state to protect national security, human rights obligations, and state responsibility for security and protection.

2.14.1 Regime Stability in Dictatorship

Xu (2020) established the information theory for repression and co-optation in dictatorships in his article where he proposed that state digital surveillance resolves the problem of information seeking about the citizens, especially radical opponents that ultimately reduces the cost of repression and leading to the targeted repression and nonexclusive co-optation in dictatorships or authoritarianism. He used the difference-indifferences design by using secondary data where he took measures like public security expenditure and several political arrests for measuring the targeted repression during the Chinese project Golden Shield which has different phases. He compared the effects of this surveillance project during different phases and also compare the effects in the areas where it was implemented and where the project was not yet implemented to study the effects of surveillance. For the study of the non-exclusivity of co-optation, he took a

measure of local welfare expenditure and local public goods expenditure during different phases of the Golden Shield project. He concluded that digital state surveillance decreases the non-exclusive co-optation and increases the cost-effective targeted repression.

2.14.2 Surveillance Leads to Self-Surveillance and Transparent Society

As Dennis (2008) spoke about the necessity of self-surveillance and transparency in the age of digital exposure. According to the author, distance no longer matters. Now due to digital exposure capitalist territories are turning into proximities.

Urry (2003,2005) said that interrelations and interconnections in global and social networks are compressed relations.

Gladwell (2002) said now global news becomes localized, and local news becomes a global consumerist phenomenon that establishes media narratives and images in such a way that encourages self-surveillance and collective vigilantism.

Brin also in *'The Transparent Society' (1998)* gave the concept of a transparent society that is formed through surveillance.

2.14.3 Digital Personas Era

Roger Clarke (1994) invented the term "Digital Personae" having the same meaning as Simon's (2005, p.16) term digital selves.

Moore et al. (2018) said Now an individual is introduced to the complex information sets and expanding networks that create human existence. This existence demolishes the non-digital persona and makes the digital one a real one.

Poster (1996) calls this complex system a "Superpanoticism" while Fukuyama (2002) calls it post-human existence.

2.14.4 Surveillance as Profit Making Strategy

Rathbone (2022) said that industrial capitalism is an exploitation of labor and natural resources as opposed to surveillance capitalism which is based on behavioral analysis (of data) through the method of instrumentation. This instrumentation predicts, surveys, and controls behavior for profit. Thus, the new surveillance is surveillance capitalism. The profit-driven strategies are influenced by computation.

Brin (1998) also said that now images are the new form of power and force.

2.14.5 Usefulness of Communications Data Surveillance

Murray and Fussey (2019) while discussing the utility of bulk communications data surveillance said that it is useful for mapping out activities, composing the networks, and pattern identification, and this type of surveillance has the ability to look at the past while it is more resource efficient than physical or targeted surveillance.

2.15 Theoretical Framework

This study applied the model of panopticism. According to Manokha (2018), the first few traces of the model indicate the use of this model in early hospitals and military schools of the 18th century yet the panopticon model started using in the social sphere no earlier than the 19th century.

The term panopticism refers to "All Visible" or "All Seeing". The early disciplinary or institutional framework was proposed by English philosopher Jeremy Bentham, a social theorist and reformer celebrated for his ethical philosophy of utilitarianism. The classical model of the panopticism is based on an architectural

structure used for early prison design with the idea of centralized inspection. The structure comprised a central tower for a watchman encircled by cells made for inmates. The proposed idea behind the model is Bentham's belief in the visibility of power to alter society without the use of actual force where a central tower is visible to the inmates but inmates cannot see the watcher who can see inmates anytime. As a result, inmates monitor, censor and discipline themselves all the time in a desired way to escape the fear of punishment. The first building structure based on this model was built in the 1920s, the Presidio Modelo Complex in Cuba.

Bentham has proposed three main assumptions of this model which include the omnipresence of a watcher by ensuring total invisibility, universal visibility of (subjects) inmates to the watcher, and constant observation. Bentham interlinked panopticism with utilitarianism and capitalism. He believes in the maximization of gain from the punishment which is only possible through the reformation of inmates or criminals instead of giving them suffering and pain. Thus, his cost-effective strategy for punishment to gain maximum profit is a good investment in the form of increased threats instead of increasing the actual suffering. In other words, internalized control over the mind is more gain than public punishment. Moreover, Bentham also thinks that the panopticon model is useful to ensure work in capitalized societies to maximize gain.

Later, the French philosopher Michel Foucault used this model as a metaphor and mechanism that can be applied to different social institutions to create a new form of power and disciplinary institutions. For instance, teacher-judge, doctor-judge, educatorjudge, or social worker-judge. Foucault also elaborated the usefulness of the model in the modern age.

Together with Bentham, Foucault is also known for his prominent contributions to the model. Wood (2003:235) thinks that Foucault is the foundational thinker of a model panopticon. Foucault in his famous book *'Discipline and Punish: The Birth of Prison'* (1975) explained the panopticon model as asymmetrical surveillance for the inmates who are at receiving end where inmates are the object of information but never the subject in communication.

Panopticism is strongly connected with the concept of power. Bentham and Foucault both studied power through critical lenses, one aspect is power over which means the power of the watchman to observe, discipline, and punish inmates, and the other aspect is a power exercise over oneself which refers to the self-discipline and selfcensoring by inmates who are under constant observation. Foucault called power exercise a technology of the self (an ability to improve/ alter self). Foucault studied power as repression and a factor of domination along with power as a transformational tool that ensures self-monitoring. Furthermore, both see this model not as an architecture but as a mechanism and manner in which power alters society. According to Bentham, the model works best when inmates are identifiable with labels printed on their skins or elsewhere.

He emphasized on categorization and recognition.

Scholars of mass surveillance utilize this model in different studies of modern mass surveillance, especially digital ones. The model still validates the study of modernday electronic monitoring and surveillance. Preconceived awareness of mass surveillance programs among online users where their identity is exposed through the features like face recognition and in return their self-censorship of online behavior ensures the relevance and usefulness of the model in today's digital world. Even scholars of mass surveillance have

moved from digital Panopticism to the post-Panopticon and Synopticon models which refer to a new model of digital surveillance with slight contradictions from the classical one.

On the other hand, many critics argue about the working of the model and perceive its power as an oppressive tool, for example, Gertrude Himmelfarb an American historian in her book '*The Haunted House of Jeremy Bentham'* (1965) said that panopticism is the tool for oppression and social control. Poster (1990) sees the panopticon model as an imposition of a structure of domination. Similarly, Fiske (1999) has explained panopticism as the most efficient form of power, totalitarian in nature, and hard to resist.

The advocates of this model perceive it as a reforming and rehabilitation tool. They believe that the power of the gaze is crucial for achieving productivity targets and they massively use this model to study modern trends of mass surveillance. Giddens (1985) calls this model a "Constitutive of Modernity".

2.15.1 Application of the Panopticism Model

Few of the studies are already discussed in this study that incorporated and tested the model of panopticism, especially digital panopticism. This model is extensively used in Western societies for the study of mass surveillance. In Pakistan, due to the sensitivity of the topic, there is no prominent work has been done even on the initial assumptions of the model that test the validity of panopticism in a new era of mass surveillance.

This model is applicable in a way as the study focuses on the influence of state digital surveillance in altering online behavior by testing the initial assumptions of the model that simultaneously proves its validity and relevance in the modern mass surveillance era.

CHAPTER 3: METHODOLOGY

This chapter consists of the details about the research methodology of the study and the entire research design. It includes the research approach, source of data, type of investigation, population, sampling technique, sample size, data collection methods, data analysis methods operationalization, and conceptual framework.

3.1 Research Design

According to Andrew B Kirumbi (2018), a research design is the methods and procedures used to collect and analyze measures of variables specified in research problems. This study incorporated the quantitative research approach and used the primary data source to answer the research problem and achieve its objectives. The quantitative research approach is mostly a deductive method that is frequently used for

hypothesis testing with the intent to generalize the numerical results of the sample over the entire population under study.

Majorly, this study focused on the cause-and-effect relation between independent and dependent variable i.e. the influence of state digital surveillance on the online behavior of social networking sites users, and the comparison between the two categories of a dependent variable i.e. active and passive users of social networking sites.

This study used purposive sampling which is a non-probability sampling technique within the sample size of 150 social networking sites active and passive users in which entities were selected according to particular criteria such as 25 active users and 25 passive users taken from the three most prominent social networking sites Facebook, Instagram, and Twitter.

For the data collection, the researcher of this study used a survey instrument to explore the influence of state digital surveillance on the online behavior of active and passive social networking sites users and to examine the relevance between state digital surveillance and early physical surveillance.

The independent variable was the influence of state digital surveillance. The dependent variable was the online behavior of social networking sites users.

For the data analysis, descriptive statistics such as frequency, percentages, and pie charts were used for nominal-level data and demographics. In the inferential part of the data analysis, the statistical tests particularly independent sample t-tests were used to draw comparison between active and passive users on social networking sites.

3.2 Type of Investigation

Generally, social sciences research is a scientific study of actions and relations between abstract concepts. In social sciences, everything that varies can be variable. Variables can relate to each other in one way or another. These different types of relations and associations between variables make the different types of investigation such as descriptive investigation, which describes the relationship between variables, relational investigation studies the type or direction of relationship among variables and causal investigation studies the cause-effect relationship between variables.

In this study, the researcher concurrently examined two things. One was the cause-and-effect relationship between the influence of state digital surveillance and online behavior. The other thing that the researcher examined was the relationship between active and passive social networking sites users. For that reason, this study was a causal and relational investigation both at a time.

3.3 Population

Pritha Bhandari (2020) explained the population as the whole area or a group about which the researcher wants to conclude. In other words, the entire area or group under consideration in the study is a population. The population of this study was social networking sites users of three social networking sites that were Facebook, Instagram, and Twitter who were based in Pakistan. It was empirically impossible to study all Pakistan-based active and passive social networking sites users on mentioned platforms, therefore the researcher considered only those who were easily accessible whether online or offline mostly who were based in Islamabad and Rawalpindi.

Facebook is the most famous social networking site in comparison to other platforms (Huberman and Wilkinson,2007; Stutzman, 2006; Educase, 2006). The other platform which is under consideration in the study was Instagram. Sprout Social Index (2023) explored Instagram as the fourth most commonly used platform, and it boosts two billion active users monthly. According to DataReportal, 69.7% of users use it for sharing and posting photos and videos. The third platform under consideration in this study was Twitter. Usually, Twitter is most commonly used for political debates and criticism. According to Hootsuite Survey, Twitter is the 7th most famous social networking platform in the world. A statistic report by Daniel Ruby (2023) published on the Demand

Sage website says that there are 450 million monthly Twitter active users in 2023.

3.4 Sampling Technique

The sampling technique is the way of selecting entities from the population of the study, who have characteristics of interest and representation of that population. There are two categories of sampling. One is probability sampling and the other is nonprobability sampling. In probability sampling, every entity has an equal chance to get selected for a sample. In non-probability sampling, not every entity has an equal chance to get selected for a sample. Non-probability sampling is based on specific purposes, methods, and intent while probability sampling is always random. Both categories are further divided into sub-types.

In this study, purposive (non-probability) sampling was incorporated. Purposive sampling is commonly used for selecting the sample or cases based on a proficient

decision, according to the intent of research or having a particular reason in mind (Black, K. 2010).

A sample of active and passive social networking sites users from three social networking sites was taken out for this study while the researcher intentionally didn't consider average users on social networking sites.

3.5 Sample Size

The sample size was 150 social networking sites users which included 75 active users and 75 passive users. For further categorization, 25 active users and 25 passive users were taken from each of the three platforms (Facebook, Instagram, and Twitter) from an age group of 18-40 years.

3.6 Data Collection Methods

Data collection generally defines as a systematic approach for collecting data from all the relevant sources to measure variables, test hypotheses and address the research problem. Data collection includes both types of data such as primary data and secondary data. The data collection tools refer to different methods of obtaining data such as surveys, interviews, focus groups, experiments, and many other methods. These tools are also known as research instruments. A research instrument in research is a tool for collecting data, analyzing, and measuring it. Mostly, the selection of the research instrument is closely tied to the research methodology. According to Sathiyaseelan (2015) be it a standardized instrument or developed by the researcher, the validity and reliability should be established because the credibility of an instrument depends on its validity and reliability.

The survey instrument is the most common type of data collection tool used in quantitative research. The survey is a way of collecting information from sample individuals who respond to the questions (Check and Schutt, 2012, p.160). Marthews et al. (2018) in their article said that the survey approach is quick and well-constructed empirical work. Surveys are mostly used in social sciences especially in psychology because it aims to study human behavior (Singleton and Straits, 2009).

The survey can be open-ended (unstructured) or close-ended (structured). It may consist of multiple-choice questions and a rating or ranking scale.

The nature of this study was quantitative and the researcher focused on primary data collection. Therefore, a researcher used a survey instrument to collect the primary data from a sample of 150 social networking sites active and passive users. The type of survey used was a questionnaire comprised of three demographic questions including gender, age, and highest level of education. In addition to this, it also consisted of two multiple-choice questions regarding the type of user and the type of platform used by a user. Also, the researcher has established the 5-point Likert scale based on the proposed hypotheses of current research. The Likert scale consisted of 15 items. To make the measurement scale valid and reliable the researcher applied the statistical test Cronbach's Alpha to test the internal consistency reliability analysis of the items in the questionnaire. The value of Cronbach's Alpha as shown in table 3.1 below was .759 which is considered a good and acceptable value that shows the internal consistency reliability between the items of the measurement scale used in this study. The survey was administrated individually so that the respondent responses cannot be influenced. The mode of conducting the survey was majorly by hand and only 5% of the survey was filled out by users online.

Table 3.1

Internal Consistency Reliability Analysis

Cronbach's Alpha	N of Items
.759	15

3.7 Data Analysis Methods

For the analysis of demographics and nominal-level data, descriptive statistics such as frequency tables, percentages, and pie charts were used. The inferential statistics (SPSS 27) particularly the independent sample t-test was used to compare the mean between the two categories of active and passive users and for in-depth analysis of the variables.

3.8 Operationalization

The concepts and topics under discussion in this study are given below

State Digital Surveillance

Refers to online surveillance by the government or legal authorities in Pakistan.

Influence

Refers to the influence of digital surveillance by the government or legal authorities in Pakistan on the online behavior of active and passive users on mentioned social networking sites in Pakistan.

Social Networking Sites

Refers to the three leading social networking sites Facebook, Instagram, and

Twitter.

Active User

The one who uses mentioned platforms actively and shares his/her opinions, viewpoints, and perspectives there and is based in Pakistan.

Passive User

The one who only consumes content but does not actively use or participate in discussions and debates on mentioned platforms and is based in Pakistan.

Online Behavior

Refers to the altered or non-altered online behavior of an active or a passive user of the mentioned platforms under state digital surveillance. In other words, the online activities of social networking sites users on mentioned platforms which are influenced or not influenced by the state digital surveillance.

3.9 Conceptual Framework

The conceptual framework of this study consists of variables.

The independent variable in this study was the influence of state digital surveillance.

The dependent variable of this study was the online behavior of social networking sites users

The two categories of dependent variable were active users and passive users.

CHAPTER 4: DATA AND ANALYSIS

This chapter consists of the results and analysis of the data collected for this study. It includes both types of data analysis i.e. descriptive and inferential statistics. The data was collected from a sample of 150 total respondents, including 75 active and 75 passive users on three social networking sites i.e. Facebook, Instagram, and Twitter. The data was collected over a period of one month through a survey instrument based on a questionnaire that includes demographics, multiple-choice questions, and a 5-point Likert scale consisting of 15 items. The data was gathered physically and only 5% of the survey was

filled by respondents online. There were no missing values in the data, if there were any then that data was not considered in the study and replaced by other respondent's data.

Table 4.1 indicates the demographic characteristics of 150 respondents involved in the current study. Firstly, the table indicates the number of males and females involved in this study. The number of males was 94 which is 62.7% and the number of females was 56 which is 37.3 %. As compared to females, the number of males was relatively high. The second thing which the given table indicates is the age ranges of respondents. The age of 131 respondents was in the first range i.e. 18-25 which indicates that 87.3% of respondents ages were between 18-25 whereas 15 respondents (10%) were in the range of 25-30, 3 respondents (2.0%) were in the range of 30-35, and only 1 respondent (.7%) was in the range of 35-40.

As reflected by their ages, the majority of the respondents for instance 138 (92%) respondent's highest level of education was undergraduate or graduate, 11 (7.3%) respondents were M.Phil. or master and only 1 (.7%) respondent was Ph.D. as shown in the table below.

Table 4.1

Frequency Table of Demographics

Variable	Frequency	Valid Percentage
Gender		
Male	94	62.7
Female	56	37.3

Age		
18-25	131	87.3
25-30	15	10.0
30-35	3	2.0
35-40	1	.7
Education		
Undergraduate/Graduate	138	92
Masters/M.Phil.	11	7.3
PhD	1	.7

Figure 4.1 shows the number of active and passive social networking site users who were part of the current study. The respondents were directly asked whether they are active users or passive users. As it was predetermined in the research design to draw the sample equally from active and passive users thus the figure below indicates 50% active users and 50% passive users.

Figure 4.1

Number of Active and Passive Users

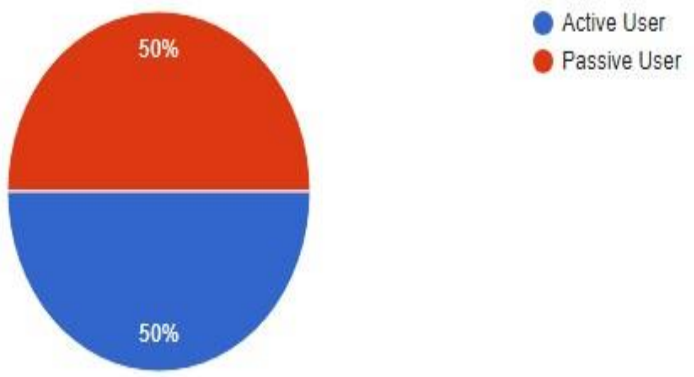
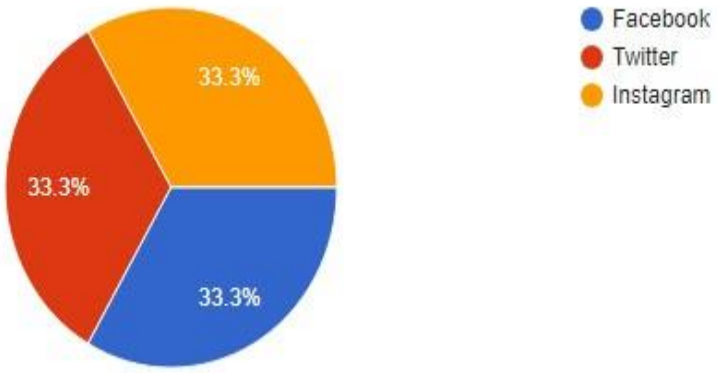


Figure 4.2 shows the percentages of the platforms used by the respondents of this study. They were asked to select one platform which they use most of the time as an active or a passive user out of three platforms i.e. Facebook, Instagram, and Twitter. As it was also predetermined in the research design to draw the sample equally from the three mentioned platforms thus the figure below indicates 33.3% of users use Facebook, 33.3% of users use Twitter and 33.3% of users use Instagram.

Figure 4.2

Platforms Used by Users



H1. It is more likely that active users on social networking sites are aware of state digital surveillance more than passive users.

Table 4.2 shows the descriptive statistics specifically the mean of all the responses from 150 respondents. The hypothesis was that active users more than passive users on social networking sites are aware of the state digital surveillance. The researcher operationalized the variable in four items to collect responses from respondents. The items include statements such as that active users are more aware of the constant existence of state surveillance, they believe in behind-the-screen surveillance, they think that the surveillance by the government is a real thing and they believe someone is constantly watching them. As shown in the table 4.2 the mean of respondents who agreed with the hypothesis is 68.75% while 19% of respondents strongly agreed with the given

hypothesis. Collectively, the sum of agree and strongly agree is 87.75% which directs that the proposed hypothesis is approved. On the other hand, 28.5% of respondents were neutral, 23% disagreed and only 9% strongly disagreed with the proposed hypothesis. See table on the next page.

Table 4.2

Descriptive Statistics of Hypothesis One

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	16	15	23	75	21
2	10	23	41	68	8
3	9	24	27	76	14
4	9	30	22	56	33
Mean	11	23	28.5	68.75	19

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.3 shows the results of the independent sample t-test which is used to compare the means of two different categories or groups. For instance, in this, the independent sample t-test was run to compare the level of awareness between social networking sites active and passive users. As per the results, the p-value is .016 which is less than 0.05. It indicates that there is a statistically significant association between the means of active users and passive users. This p-value also indicates that our alternative hypothesis is approved. The mean of group one i.e. active users is (M= 14.27 & SD= 3.116) and the mean of group two i.e. passive users is (M=13.03 & SD 3.119). We can see the difference in the mean of both groups and a difference in the standard deviation. The t-value is 2.436. The lower limit is .234 and the upper limit is 2.246 (same with equal variance not assumed). Cohen's d which is the measure of effect size is 0.397755 as shown below.

Table 4.3

Results of Independent Sample T-test to Compare the Level of Awareness between Active and Passive Users

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Awareness	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL,*	*UL*	Cohen's d

(Equal Variance Assumed)	14.27	3.116	13.03	3.119	2.436	.016	.234	2.246	0.397755
(Equal Variance Not Assumed)					2.436	.016	.234	2.246	

H2. It is more likely that active users on social networking sites are aware that their online activities and identity are visible to surveillance agents more than passive users.

Table 4.4 shows the mean of all the responses from 150 respondents. The hypothesis was that active users more than passive users on social networking sites are aware that their online behavior including their real identity is visible to surveillance agents. The researcher operationalized the variable through four items to collect responses. Items include statements for example social media active users are more aware that their online activities are visible along with their real identity, they try more to conceal their identity but despite their efforts, they know that there is no way to hide their

identity from state surveillance agents. The results in the table 4.4 show the mean of respondents who agreed is 64.25% and those who strongly agreed is 22.5%. Collectively, 86.75% of respondents agreed and strongly agreed with the proposed hypothesis. While the neutral responses were 25.5%, disagree responses were 28.5%, and strongly disagree responses were 9.25%.

Table 4.4

Descriptive Statistics of Hypothesis Two

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5	11	20	27	62	30
6	8	38	25	58	21
7	10	24	30	66	20
8	8	32	20	71	19
Mean	9.25	28.5	25.5	64.25	22.5

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.5 shows the results of independent sample t-tests to compare the level of awareness between active and passive social networking sites users regarding their online visibility and identity. As per the results, the p-value is .076 which is greater than 0.05 and it shows that there is no statistically significant association between the means of active

and passive users yet a very slight difference is observed. The statistics of group one i.e. active users is (M=14.09 & SD=2.867) and group two i.e. passive users is (M= 13.23 & SD=3.078). There is a minute difference in the means and standard deviations of both groups. The t-value is 1.784. The lower limit is -.093 and the upper limit is 1.827 (same with the equal variance not assumed). Cohen's d value is 0.289137. See table on the next page.

Table 4.5

Results of Independent Sample T-test to Compare the Level of Awareness between Active and Passive Users Regarding Their Online Visibility

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Online Visibility	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL,*	*UL*	Cohen's d
(Equal Variance Assumed)	14.09	2.867	13.23	3.078	1.784	.076	-.093	1.827	0.289137

(Equal Variance Not Assumed)		1.784	.076	-.093	1.827

H3. It is more likely that active users on social networking sites have fear of negative consequences under state digital surveillance more than passive users.

Table 4.6 below shows the descriptive statistics (mean) of the responses from 150 respondents. The proposed hypothesis was that social networking sites active users have more fear than passive users of negative consequences under state digital surveillance. The operationalization of the variable to collect responses consists of two items that include statements for example social media active users feel more threatened if they share something inappropriate and they know that the one who is watching them will punish them. The results show that the mean of the respondents who agreed is 45% and the respondents who strongly agreed is 18.5%. The sum of both means is 63.5%. Hence, the proposed hypothesis is approved by more than 50%. While 35% of respondents were neutral, 39% of respondents disagreed and 12.5% of respondents strongly disagreed.

Table 4.6

Descriptive Statistics of Hypothesis Three

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9	12	26	25	54	33
10	13	52	45	36	4
Mean	12.5	39	35	45	18.5

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.7 below shows the results of the independent sample t-test run on the proposed hypothesis to compare the extent of fear between active and passive users on social networking sites. As per the results, the p-value is .230 which is greater than 0.05 and it indicates that there is no statistically significant association between the means of the two groups. The statistics of group one i.e. active users is (M=6.4133 & SD= 1.65295) which shows a very slight difference with the group two i.e. passive users (M=6.0667 & SD= 1.86238). The t-value is 1.206. The lower limit is -.22154 and the upper limit is .91487 (with equal variance assumed). The lower limit is -.22160 and the upper limit is .91494 (with equal variance not assumed). Cohen's d value is 0.196844.

Table 4.7

Results of Independent Sample T-test to Compare the Extent of Fear between Active and Passive Users

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Fear	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL*,	*UL*	Cohen's d
(Equal Variance Assumed)	6.4133	1.65295	6.0667	1.86238	1.206	.230	-.22154	.91487	0.196844
(Equal Variance Not Assumed)					1.206	.230	-.22160	.91494	

H4. It is more likely that active users on social networking sites alter or change their online behavior under state digital surveillance more than passive users.

Table 4.8 below shows the descriptive statistics particularly the mean of the responses from 150 respondents. The proposed hypothesis was that active users on social networking sites alter or change their online behavior more than passive users under state digital surveillance. The operationalization of the variable includes a single item regarding the proposed hypothesis to collect responses. The results show that the mean of respondents who agreed is 66% and who strongly agreed is 14%. The sum of both means is 80%. It indicates that the hypothesis is approved by 80%. However, 40% of respondents were neutral, 26% disagreed and only 4% of respondents strongly disagreed with the proposed hypothesis.

Table 4.8

Descriptive Statistics of Hypothesis Four

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13	4	26	40	66	14
Mean	4	26	40	66	14

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.9 below shows the results of the independent sample t-test run on the proposed hypothesis to compare the extent of change in online behavior between active and passive users. As per the results, the p-value is .092 which is greater than 0.05. It indicates that there is no statistically significant association between the mean of the two groups of active and passive users on social networking sites. The statistics of group one i.e. active users is (M=3.53 & SD .827) which has a very slight difference with the mean and standard deviation of group two which is passive users (M=3.27 & SD 1.082). The tvalue is 1.695. The lower limit is -.044 and the upper limit is .578 (same with equal variance not assumed). Cohen's d value is 0.269996.

Table 4.9

Results of Independent Sample T-test to Compare the Extent of Change between Active and Passive Users

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Change	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL*,	*UL*	Cohen's d
(Equal Variance Assumed)	3.53	.827	3.27	1.082	1.695	.092	-.044	.578	0.269996
(Equal Variance Not Assumed)				1.695		.092	-.044	.578	

H5. It is more likely that active users on social networking sites discipline themselves online in a desired way to escape the threats more than passive users.

Table 4.10 below shows the mean of all the responses from 150 respondents. The proposed hypothesis was that active users more than passive users on social networking sites discipline themselves in a desired way to escape threats. The hypothesis was operationalized through two items to collect responses. Items include statements such as social media active users discipline themselves more than passive users, and they censor their political debate, criticism, and opinions more. The results in the given table show that 64% of respondents agreed with the proposed hypothesis, and 8% of respondents strongly agreed which means a total 72% of respondents agreed and strongly agreed with the proposed hypothesis. Whereas 34% of respondents were neutral, 37% disagreed and only 7% of respondents strongly disagreed with the hypothesis.

Table 4.10

Descriptive Statistics of Hypothesis Five

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11	7	44	33	58	8
12	7	30	35	70	8
Mean	7	37	34	64	8

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.11 shows the results of the independent sample t-test to compare the level of discipline between active and passive users on social networking sites. As given in the table, the p-value is .262 which is greater than 0.05. It indicates that there is no statistically significant association between the mean of active and passive users. Hence, the statistics of group one i.e. active users is (M=6.5333 & SD=1.48263) which shows a slight difference with the statistics of group two i.e. passive users (M=6.2400 & SD=1.69928). The t-value is 1.126. The lower limit is -.22126 and the upper limit is .80792 (with equal variance assumed). The lower limit is -.22133 and the upper limit is .80800 (with equal variance not assumed). Cohen's d value is 0.183929.

Table 4.11

Results of Independent Sample T-test to Compare Discipline between Active and Passive Users

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Discipline	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL,*	*UL*	Cohen's d
(Equal Variance Assumed)	6.5333	1.48263	6.2400	1.69928	1.126	.262	-.22126	.80792	0.183929
(Equal Variance Not Assumed)					1.126	.262	-.22133	.80800	

H6. It is more likely that active users on social networking sites are more influenced than passive users by state digital surveillance.

Table 4.12 below shows the mean of all the responses of 150 respondents. The proposed hypothesis was that active users on social networking sites are more influenced than passive users by state digital surveillance. The hypothesis was operationalized through two items to collect responses from the respondents. The items include statements like I feel that the level of awareness/education has an impact on the understanding of state digital surveillance and the more you are aware of state digital surveillance the more you are influence by it. The results as given below show that 74% of respondents agreed and 39.5% of respondents strongly agreed with the proposed hypothesis. While only 19% of respondents were neutral, 11.5% disagreed and only 6% of respondents strongly disagreed with the hypothesis.

Table 4.12

Descriptive Statistics of Hypothesis Six

Item Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14	6	10	16	76	42
15	6	13	22	72	37
Mean	6	11.5	19	74	39.5

Note. The table contains the collective means of both active and passive users on social networking sites.

Table 4.13 below shows the results of the independent sample t-test to compare the level of influence between active and passive users on social networking sites. As shown below the p-value is .367 which is greater than 0.05. It indicates that there is no statistically significant association between the mean of active and passive users. Hence, the group statistics of active users (M=7.8533 & SD=1.56562) show a slight difference from the group statistics of passive users (M= 7.6000 & SD= 1.85268). The t-value is .904. The lower limit is -.30015 and the upper limit is .80682 (with equal variance assumed). The lower limit is -.30028 and the upper limit is .80694 (with equal variance not assumed). Cohen's d value is 0.147682.

Table 4.13

Results of Independent Sample T-test to Compare Influence between Active and Passive Users

Variables	Active Users (n=75)		Passive Users (n=75)				95% CI		
Influence	*M*	*S.D*	*M*	*S.D*	*t* (98)	P	*LL,*	*UL*	Cohen's d
(Equal Variance Assumed)	7.8533	1.56562	7.6000	1.85268	.904	.367	-.30015	.80682	0.147682
(Equal Variance Not Assumed)					.904	.367	-.30028	.80694	

CHAPTER 5: DISCUSSION AND CONCLUSION

This chapter consists of a discussion, interpretation, and conclusion of the findings of this study. The focus of this study was on two things i.e. to examine the relevance between tangible and intangible (physical and digital) forms of surveillance by keeping the assumptions of panopticism in view. Secondly, variables are a crucial part of any research. Thus, the researcher added two categories of dependent variable such as active users and passive users of social networking sites in the initial assumptions of the model to compare the influence of state digital surveillance on the online behavior of active and passive users. There were six hypotheses. The results are discussed in the data and analysis chapter in detail. The overview of the findings is that the first hypothesis that compared the level of awareness between active and passive users is 87.75% approved with a p-value of .016.

The second hypothesis that compared the level of awareness regarding the visibility of online behavior and identity between active and passive users on social networking sites is approved by 86.75% with a p-value of 0.76. The third hypothesis compared the level of fear among active and passive users on social networking sites. The hypothesis is approved by 63.5% with a p-value of .230. The fourth hypothesis compared the extent of change in online behavior between active and passive users. The hypothesis is approved by 80% with a p-value of .092. The fifth hypothesis compared the extent of discipline between active and passive users. The hypothesis is approved by 72% with a p-value of .262. The last hypothesis was to compare the level of overall influence of state digital surveillance on active and passive users on social networking sites. Hypothesis is 74% agreed, and 39.5% strongly agreed with the p-value of .367. All the hypotheses were based on the difference between active users and passive users of social networking sites.

For the discussion and interpretation of the findings, it is crucial to address that the hypotheses were asked directly from the respondents rather than their own awareness, fear, behavior, etc. One of the examples of a question asked from the respondents was 'I feel that social media active users are more aware than passive users about state digital surveillance'. Both categories directly answered the hypothesis. We then combined the means of agree and strongly agree to see whether our hypothesis is approved or not.

Another thing that we can interpret from the findings of this study is that if the respondent strongly agreed or disagreed with any statement it ultimately indicates his level of awareness, fear, and whatever the asked variable was because no one can agree with the statements until they are well aware of it and vice versa no one can disagree with

statements until the respondent himself is not aware of it. Our findings also interpret the following things.

5.1 Relevance Between Tangible and Intangible Forms of Surveillance

The very first part of our study is to examine the relevance between physical and digital surveillance by testing physical model assumptions with digital surveillance. All the hypotheses are approved by more than 50% which not only indicates that only active users on social networking sites have awareness, and fear of surveillance and they change and discipline their behavior concurrently it shows the awareness, fear, level of change, or discipline of passive users as well. Thus, the model panopticism or physical surveillance is still relevant to digital surveillance in view of active users and ultimately in view of passive users as well.

The findings of this study support the previous study of Manokha (2018) who examined the relevance of panopticism of early 19th and 20th centuries Western liberal societies with new mass surveillance of modern democracies. The author found that the model panopticism is even more applicable in the modern era of mass surveillance because of the concepts like face recognition, and categorization in the digital world.

Another previous study that supports our finding is of Mateescu et al. (2015) who studied how social networking sites are now used as an intelligence tool and for online policing by law enforcement professionals.

On the other hand, Haggerty and Ericson (2000) said that the model targets only workers and leaves the mainstream unmonitored. Our findings are in contradiction to their statement because our findings indicate that even active users are also the target of state digital surveillance.

According to Lianos (2003), the model of panopticism is made for the past and should not apply to the things for which it is not made for. Our findings are in contradiction to Liano's narrative. We see the applicability of this model in the modern age of mass surveillance and how social networking sites users are influenced by it. It clearly shows that the model is still valid even today.

5.2 T-test Results Interpretation

The independent sample t-test was run on all the proposed hypotheses of the study to compare the means of active and passive users of social networking sites. The typical interpretation of the independent sample t-test is that if there is a statistically significant difference between the mean of the two groups then it indicates that the alternative hypothesis is approved and if there is no difference between the mean of the two groups then it indicates that it rejects the alternative hypothesis and approves the null hypothesis. This is not the case in our findings. Since the respondents were asked directly about the hypotheses where most of the respondents agreed and strongly agreed. So, if the mean of both groups are the same that doesn't indicate that our proposed hypotheses are rejected and null hypotheses are approved by the respondents. The equal or slight difference in the mean of active and passive users indicates that almost both groups agreed and strongly agreed with the proposed hypotheses and the results are supported through the mean of all responses from respondents discussed in the data and analysis chapter.

5.3 Conclusion

This study aims to examine the relevance between physical and digital surveillance and to explore whether active users on social networking sites are more influenced than passive users. The responses were gathered from 150 respondents, 75

active and 75 passive users from three social networking sites i.e. Facebook, Instagram, and Twitter. The findings of our study show that there is still a relevance between physical surveillance and digital surveillance. It validates that the proposed assumptions of the panopticism model are still valid in today's digital surveillance era. Most of the users are influenced by it, they try to censor their behavior, they change or alter their behavior and they still have a fear of negative consequences under state digital surveillance. Our findings also show that all the proposed hypotheses are approved by more than 50% which means that active users are more influenced by state digital surveillance yet the findings also ultimately indicate the level of awareness and influence of state digital surveillance on passive users as well. Thus, after the deep analysis of responses, the findings of this study also infer that social networking sites have reduced the difference between active and passive users and we found that more or less every type of social networking sites user is influenced by state digital surveillance no matter what type of user he/she is. Thus, future studies on the association between both groups can be conducted to further test our subjective assumptions through empirical approaches.

5.4 Limitations

The most significant limitation that needs to be addressed in this study is that the study was cross-sectional in nature which means that the data was collected at a particular time which restricted the researcher to see other relationships such as the causal relationship between variables of interest. This study only focused on the predetermined cause which was the influence of state digital surveillance on online behavior and doesn't address other causal relationships. Secondly, the quantitative research approach aims at generalization by testing samples. However, due to time

limitations and other constraints, the researcher of this study drew a small sample of around 150 respondents only for limited generalization with no intent to overgeneralize the results. Thirdly, the researcher used the purposive sampling technique to collect data and intentionally didn't collect the data from average users of social networking sites. Also, the researcher didn't find any well-established measuring scale to measure the variables so the measuring scale was established by the researcher and tested for its validity and reliability. The measuring instrument used in this study consisted of closed-ended items only and it was a structured survey that lacks open-ended items and qualitative type of data. Lastly, few of the respondents were passive in the sense that they don't use any social networking site whereas the focus of the study was on active and passive users of social networking sites.

5.4 Recommendations

This section enlists potential suggestions, and changes for future studies. Firstly, if the study will be conducted during different time intervals (time series), the results will be more reliable as compared to the results of a cross-sectional study. Moreover, future research through the time-series method gives more details about other types of causal relationships between variables of interest which is not possible in cross-sectional studies. Secondly, future research can be done by using a qualitative research approach or mixed method research to get both types of data i.e. quantitative and qualitative. Furthermore, future studies may include average users or incorporate in-depth interviews of surveillance agents to draw empirical inferences and meaningful conclusions.

Panopticism is not yet studied extensively in countries like Pakistan as compared to Western countries. The simple content analysis can also be a useful strategy for future

studies. Apart from the research approaches, the model itself gives dynamic dimensions for scholars to study it in multiple ways such as panopticism can be studied in the context of the invasion of privacy, face recognition, the concept of categorizations, digital personas, or real identity on digital surfaces. Website users, online community users, blog writers, journalists, speakers, influencers, activists, or politicians any group can be taken as a sample for future study. Panopticism can also be studied in the context of relevance and contradictions with different theories and new practices in the field of mass surveillance and digitalization.

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Appendix

Survey Questionnaire on Online Behavior Under State Digital Surveillance

This appendix consists of the survey questionnaire which contains a few demographic questions, two multiple-choice questions, and a 5-point Likert scale consisting of 15 items. The scale is established by the researcher himself to measure the variables.

1) Gender

○ Male ○ Female

2) Age ○ 18-25 ○ 25-30 ○ 30-35 ○ 35-40

3) Highest Level of Education ○ Bachelor (undergraduate / graduate) ○ Masters/MPhil (Postgraduate) ○ PhD

1) **Generally, are you an active user or a passive user of Social media?**

   ○ Active User ○ Passive User

2) **Which one of the following platforms do you use as an active or passive user most of the time?**

   ○ Facebook ○ Twitter ○ Instagram

Agree or disagree

- We assume that digital surveillance by the government sector has more influence on active users than passive users.
- Secondly, we assume that the level of an education/awareness has an impact on the understanding and influence of digital surveillance.

1) **I feel that active social media users are more aware than passive users of the existence of surveillance programs over the internet by the government.**

   - Strongly Disagree

- Disagree
- Neutral
- Agree
- Strongly Agree

2) **I feel that active social media users believe more than passive users in invisible or (behind-the-screen) government digital surveillance.**

- Strongly Disagree
- Disagree

  Neutral

  Agree
- Strongly Agree

3) **I feel that active social media users believe more than passive users that digital surveillance by the government is a real thing.**

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

-
-

4) **I feel that active social media users believe more than passive users that someone is constantly watching their online behavior on social media.**

   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

5) **I feel that active social media users believe more than passive users that their online activities on their social media are visible to digital surveillance agents.**

   - Strongly Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

6) **I feel that active social media users believe more than passive users that even their real identity is not concealed in front of digital surveillance agents.**

   - Strongly Disagree

- Disagree
- Neutral
- Agree
- Strongly Agree

7) **I feel that active social media users make an effort more than passive users to conceal their identity and personal information on social media.**

- Strongly Disagree
- Disagree
- Neutral

Agree

Strongly Agree

8) **I feel that despite their efforts, active social media users believe more than passive users that there is no way to hide their online identity from digital surveillance agents.**

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

-
-

9) **I feel that active social media users more than passive users feel threatened if they share something inappropriate on social media.**

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

10) **I feel that active social media users believe more than passive users that the one who is watching them will punish them.**

-
-

Strongly Disagree

Disagree

- Neutral
- Agree
- Strongly Agree

11) I feel that active social media users more than passive users try to discipline themselves on social media to fulfill the expectations of surveillance agents.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

12) I feel that active social media users more than passive users try to censor their political debate, online criticism, and their opinions that may consider offensive under government surveillance.

- Strongly Disagree
- Disagree

- Neutral

Agree

Strongly Agree

13) I feel that active social media users more than passive users monitor, alter or completely change their online behavior on social media in a desired way to escape threats coming from government surveillance agents.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

14) I feel that the level of education/ awareness has an impact on the understanding of social media users about digital surveillance.

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly Agree

15) I feel that the more you are aware of digital surveillance, the more your online behavior is influenced by digital surveillance.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree.