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Microphysics of Power and Phenomenology of Knowledge-Constructing Tools in the Digital Age

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A B S T R A C T

This paper seeks to address digital objects as knowledge-constructing tools and to explore how digital objects have a pervasive function within the framework of the microphysics of power. The research method of this study is based on phenomenology. Phenomenology is the study of human lived experiences. The method of investigation in phenomenology involves studying phenomena and describing them while considering the manner of their manifestation and effects, without valuing or judging them. The findings of this study indicate that technology and digital objects have a knowledge-constructing function and continuously place humans in a state where they voluntarily adhere to specific algorithms and rules. Humans, using objects such as platforms, smartphones, artificial intelligence, and search engines, constantly live within a network of microphysics of power that both constructs knowledge for them and monitors them The study concludes that technology and digital objects function as knowledge-constructing tools and continuously place individuals in situations where they voluntarily adhere to specific algorithms and rules. Through the pervasive use of digital objects like platforms, smartphones, artificial intelligence, and search engines, individuals live within a network of microphysics of power that both constructs knowledge and monitors them.

Keywords: *microphysics of power, Michel Foucault, digital age, knowledge-constructing tools, phenomenology, Don Ihde, digital objects.*

1. Introduction

Power institutions, which can be traced back to the dawn of human history, have always had a function of surveillance and control. A significant characteristic of power structures changed after modernity, which was their visibility. Post-modernity, power institutions moved from the spotlight to the unseen realms. Michel Foucault considers the primary source of life for power institutions to be their link with knowledge; a constant and reciprocal link that nourishes both power institutions and knowledge. This link enabled power institutions to exercise power without being seen. Foucault also states that power institutions are not centralized but have a fluid structure and, with the advancement of knowledge, are exercised in a microphysical form. Therefore, in examining the performance of power institutions, it is crucial to correctly identify the results of knowledge advancements (in the form of emerging

technologies and tools) in human lives. Don Ihde, a philosopher of technology, attributes a knowledge-constructing function to tools and technologies, a notion that Michel Foucault also supports, albeit in different terms, and this theory forms the foundation of this paper. One significant result of knowledge advancement in the present age is the pervasive presence of digital objects in human daily life. It should be noted that the extent of this presence's impacts is broader than merely issues inherently tied to digital concepts. This paper will explore the notion that digital objects, as knowledge-constructing tools, are not neutral; rather, they influence human epistemology, understanding of existence, thinking, and behavior.

The characteristics of the digital age have been examined from various perspectives. Mackenzie and Bhatt have studied the epistemology of deception in the post-digital era. In their book by the same title, they discuss how platforms and their algorithms interact with human perceptual and belief systems to deceive (MacKenzie et al., 2021). They trace the effects of post-digital deception even in the formation of governments and various social movements. Turner has addressed augmented reality as a feature of the digital age in the context of epistemology. He initially outlines the epistemic problems of the digital age within the web world in three sections: digital distraction, digital deception, and digital divergence. Turner then analyzes the phenomenological aspects of these problems within the context of augmented reality (Turner, 2022). Schwarzenegger has examined epistemology in the digital age from the perspective of media. Based on forty-nine interviews with different individuals, he explores their media usage, methods of information seeking, and their opinions on robots, algorithms, alternative media, filters, and similar topics. In this examination, Schwarzenegger studies three concepts in the context of digital age epistemology: selective criticism, pragmatic trust, and trust in competence (Schwarzenegger, 2020). Risse, in an article titled "Fourth Generation of Human Rights: Epistemic Rights in the Digital World," discusses human rights in the digital age. He also compares the epistemic functions of digital systems in China with those in Western countries. Risse argues that unlike China, which strives to enhance its governance system around the vast collection of data and electronic scoring, democratic and human rights-committed countries have not upgraded their systems. Risse also addresses the Universal Declaration of Human Rights, stating that it was drafted when humanity lived in an analog world and discusses how this declaration can still maintain its function in the digital age (Risse, 2021). Given the novelty of topics related to digital epistemology, many aspects in this field still require study. In this research, digital objects are examined as knowledge-constructing tools that are not neutral and can reinforce forms of microphysics of power. This paper reviews the function of power institutions based on Michel Foucault's theories and relies on Ihde's views in studying the knowledge-constructing function of tools. The author believes that a phenomenological study of digital objects as knowledge-constructing tools and their examination from the perspective of the knowledge/power nexus will provide a reciprocal understanding of the functions of power institutions and tools in the digital age. Ultimately, this paper investigates how tools in the digital age can function as microphysics of power.

2. Methods and Materials

The research method of this study is based on phenomenology. In phenomenology, the emphasis is on the idea that objects in the external world cannot exist independently; rather, their presence is embodied in individuals' consciousness. The aim of phenomenology is to describe human life experiences as they occur in human lives. Phenomenology considers the notion that experiences construct the meaning of phenomena for individuals and seeks to study phenomena as they are perceived by social actors.

3. Power Institutions and Their Functions

3.1. Microphysics of Power

Michel Foucault perceives power as a fluid entity within human society that controls individuals, shapes norms, and categorizes them. In this process, "power" utilizes knowledge, forming a dual relationship between knowledge and power. According to Foucault, in modern society, power is diffused through institutions that analyze and critique individuals' identities and introduce norms. He views power as omnipresent in all social facets, suggesting that power is fluid and localized, imposing itself on individuals everywhere. Foucault argues that power can never be dismantled or nullified (Abdolmohammadi & shayganfar, 2022). Foucault's analysis suggests that the mechanism of power in the modern era is more deeply rooted, subtle, and deceptive than its function in traditional systems and is not confined to specific centralized hubs. He believes that in the modern era, individuals submit to power under attractive

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labels like truth or freedom. Each citizen is perceived as having learned to see surveillance, scrutiny, and classification as normal and to conform their behavior and personality according to the demands of power and disciplinary projects. Foucault views the new penal system as comprising countless centers of power channels within the framework of "microphysics of power," where subjects, socio-scientific discourses, and political arrangements subtly intersect and reinforce each other. Consequently, the individual is shaped by specialized power technologies within disciplinary techniques. Foucault states: "Our society is not one of spectacle, but of surveillance; under the surface of images, bodies are deeply surrounded" (Abdolmohammadi & shayganfar, 2022).

3.2. Knowledge/Power Relationship

Foucault posited that knowledge both creates power and is produced by power. Power and knowledge directly imply one another; there are no power relations without the creation of a corresponding field of knowledge, nor any knowledge that does not presuppose and constitute power relations (Ruzbahani et al., 2015). In the reciprocal interaction with knowledge, the power/knowledge regime is formed. This power is not inclined to display itself; it is humble and suspicious. It cannot be spoken of definitively because it does not wish to be apparent. This type of power tends to control individuals through hierarchical observation and normalizing judgment. The growth of knowledge granted power institutions the ability to supervise without being seen and facilitated the collection and categorization of individuals' identity, physiological, and behavioral information more comprehensively and effortlessly for the purpose of influencing and directing them. Citizens find themselves in a situation where, even without being aware, their unconscious is manipulated; values are formed in their beliefs, and they consider this process as self-evident. "Disciplinary power is exercised through making itself invisible; instead, it imposes the principle of compulsory visibility on those whom it subjects. It is the fact of being constantly seen, of being always visible, that ensures the hold of power". With the advancement of technology, the emergence of new media and virtual spaces in the digital age has intensified individuals' visibility. Although citizens, with the aid of new technologies, revel in the pleasure of gaining new freedoms, they must be told: Welcome to the new prison. "The panoptic society, according to Foucault, is one in which members are constantly under surveillance, supervision, and education, ultimately ensnared in the web of power" (Foucault, 1973; Foucault, 1977).

3.3. Visibility and Functions of Power Institutions

After modernity, power institutions no longer observe individuals as a shapeless mass but monitor them in their individuality. Unlike the traditional function of power institutions, individuals are no longer viewed as indistinct, multitudinous aggregates. Disciplinary apparatuses meticulously consider "space" for this purpose. The ultimate goal of this "disciplinary space" is to divide society into the number of "bodies" of individuals. The physical location of each individual is determined by a specific grid system, and the physical presence of every individual is known to power institutions. All factors that could create ambiguity in this regard must be eliminated. Individuals' movements, their presence, and absence must be monitored. Systems to prevent soldiers' desertion, methods to stop vagrancy, and mechanisms to control gatherings were defined. Attendance systems were established, and power institutions in the modern era seek to know where individuals are at every moment, desiring to control individuals' communications to establish beneficial interactions and cut off others. "In the 1839 Act [referring to the British Metropolitan Police Act], there was a provision for the arrest of vagrants, homeless people, and other offenders whose names and addresses were unknown" (Macey, 2004; Rouse, 1994). Power institutions are keen to continually evaluate individuals to judge their merits or characteristics: an employee, worker, student, police officer, teacher, patient, doctor, etc. This spatial discipline provides an analysis and enables power institutions to distribute individual "bodies" in a controlled manner (in places like offices, schools, hospitals, and various professions) and to move them within a specific network of social relations. Bodies in each of these places are controlled by a form of power institution, encompassing almost their entire living environment. Referring to the camp model, Foucault states: "In a complete camp, all power is exercised solely through meticulous surveillance; and each gaze is a segment of the overall functioning of power.... The camp is the diagram of a power that acts by means of general visibility. This camp model, or at least its fundamental principle, has long been visible in urban planning, building worker towns, hospitals, asylums, prisons, and schools: [the principle of] spatial contiguity of hierarchical surveillance" (Robinson & Kutner, 2018; Rouse, 1994).

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In the new world, power institutions can observe citizens without being seen. "Visibility in ancient times was the privilege of the powerful, but with the advent of modernity, it was granted to ordinary individuals, and the power holders became invisible" (Abdolmohammadi & shayganfar, 2022). Foucault uses the term panopticon for this imperceptible surveillance. An abstract and omnipresent eye that watches you. "The perfect disciplinary apparatus allows one to see everything continuously with a single gaze. A central point that is both the source of light illuminating all things and the place of convergence of all that must be known. A complete eye from which nothing escapes and a center towards which all gazes are directed" (Foucault, 1973; Foucault, 1977; Rouse, 1994). Using knowledge, power has found the possibility of being imperceptibly omnipresent, guiding citizens by introducing norms, categorizing them, and instilling values without appearing to constrain them. "Disciplinary power is exercised through making itself invisible; instead, it imposes the principle of compulsory visibility on those whom it subjects. In discipline, it is the subjects who must be seen. Visibility is a trap" (Foucault, 1973; Foucault, 1977; Rouse, 1994). With increased visibility, individuals are no longer examined as parts of a whole, but their individuality is increasingly scrutinized. To the extent that Foucault says: "Visibility is a trap" (Foucault, 1973; Foucault, 1977; Rouse, 1994).

According to Foucault, the persistence and continuity of modernity owe their existence to the functioning of the new power/knowledge regime. He states that in the power/knowledge nexus, all surveillance and control by power institutions are based on understanding the body to control and model humans. The body is encircled by power institutions from medical, psychological, nutritional, recreational, fashion, and clothing, prohibitions, and taboos perspectives. Consequently, humans are seen as subjects/products of this domination/observation (Schmidgen, 2021). Subjugating bodies through the control of ideas, setting goals, and constructing dreams for individuals is far more enduring and effective than physically torturing bodies. The mind becomes a canvas for power institutions to write their desires, using semiotic tools. These symbols, functioning as models, infiltrate citizens' minds through various means, especially through images produced by power institutions. Citizens are encouraged in various ways to be responsible citizens, productive workers for the economy, proud students, successful athletes... Power institutions influence minds to control bodies. Bodies boost the economy, sustain wars, sacrifice for security, attend art galleries, vote, and live with a full sense of freedom, benefiting power institutions. The author believes that this power encirclement and continuous surveillance of body behavior (which disciplines bodies, models, and guides them by analyzing these behaviors) evokes a kind of large prison. The advent of knowledge, digital objects, and the proliferation of the internet enabled citizens to produce and disseminate their desired information, images, opinions, and achievements as much as they want. It seemed that technological advancement had brought a gift of freedom for citizens. However, this was only one side of the coin, as this process also had a reverse trend within itself. In this paper, by phenomenologically examining tools and technology, it is explored how objects, especially in the digital age, shape human understanding of life and control their thinking. Power institutions, in their new form, are so omnipresent in every moment of life that they have become invisible.

4. Phenomenology of Knowledge-Constructing Tools

Every technology brings a novel influence on human perceptions and knowledge, affecting their behavior. Although not all human knowledge of existence derives from tools and technologies, they are not entirely neutral or passive; they target human understanding of existence and, in another expression, construct knowledge. Ihde considers technologies as "mediators" of human experience. He believes that technologies are not merely another category of things in the world that humans use but are transformative entities that affect human perceptions and actions. "There is no such thing as a neutral technology, or to put it positively, all technologies are non-neutral" (Ihde, 2002). Technology and tools have not always been as complex as they are today, but they have nonetheless played a crucial role in knowledge construction for humanity. "The primal nature of humanity does not announce its birth from the moment of its emergence, nor its oldest experience. The primal nature connects humanity to matters whose time does not coincide with its own... it shows that objects began long before humans, and hence no one can attribute a beginning to humanity whose experience is entirely shaped and confined by these objects". It should also be noted that a technology can always be used in various ways, develop along different lines, and adapt differently in various cultures. As Ihde states, "Technological culture is not just one thing. It is neither uniform nor has its advancement reached that which its opponents fear or its supporters hope" (Ihde, 2002). Don Ihde in "Bodies in Technology" reflects on epistemological

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contemplations arising from technological tools. He views technical innovations as objects that, throughout history, have brought together human and mechanical factors, resulting in the production of knowledge. He claims that "devices [I use] are machines or specific technologies that themselves offer paradigmatic metaphors for knowledge". Ihde refers to these relationships between humans and machines as epistemological engines. He suggests that epistemological engines raise questions such as: How is perception formed? How do we gain our understanding of the environment, and how do we distribute this perception? With this explanation, a combination of human and technological relationships leads to the creation of knowledge and ontology in various impactful forms. The author regards the function of tools in understanding existence as akin to "lenses" that influence human perception and understanding of existence (Ihde, 2002).

5. Digital Episteme

"Digital" not only introduces tools and objects into human lives but also creates a new perspective for viewing. Galloway emphasizes that "digital" primarily represents a state of mind rather than a collection of machines, networks, or databases. He also states that digital "evokes a relationship – a real miracle – between sets of things that really should have nothing to say to each other" (MacKenzie et al., 2021). Today, a network of media and communication systems based on digital technology has emerged. This digital technology has altered the perception and distribution of data, affecting various epistemological domains and the mechanisms of knowledge accumulation. Alan Liu, in a blog post, discussed the approach to the concept of "digital epistemology". Liu believes that digital capabilities are not only related to those who work with digital tools or use digital explorations but suggests that "digital knowledge should announce an epistemic change" (Hacıgüzeller et al., 2021). Digitization challenges the core of human activities, not only with the emergence of new tools and objects but also with the fact that methodologies and modes of thinking influenced by the changing structure of data and knowledge are evolving. Cecilia Lindhé, in an article titled "A Visual Sense Born at the Fingertips: Towards a Digital Ekphrasis" (Lindhé, 2013), discusses the concept of "ekphrasis" through a "digital lens": This article aims to deconstruct the cultural history view and replace the print technology filter, with which we view cultural history, with "digital" as a "lens" (in the form of digital art and literature) (Lindhé, 2013). As previously stated, the author considers the function of the "lens" metaphor generally valid for technology and will continue to use this metaphor.

6. Discussion

In this paper, to elucidate the knowledge-constructing function of tools, and based on the metaphor of tools functioning as "lenses" for acquiring knowledge, Galileo's telescope is phenomenologically examined. The author will use the results of this examination to explain the function of tools and digital objects in knowledge construction. Additionally, while phenomenologically studying digital objects, their function within the microphysics of power structure will be examined. Galileo's telescope is chosen because it fundamentally transformed human understanding of existence and is a tool genuinely composed of "lenses."

6.1. Phenomenology of Galileo's Telescope

In late 1597, Galileo, like the clergy of his time, defended the Ptolemaic version of cosmology. In 1597, Earth was the center of the universe for Galileo. In the spring of 1609, Galileo met a Dutch spectacle maker named Hans Lippershey who had managed to achieve greater magnification using two convex lenses. Based on this, Galileo made alterations to the lenses, inventing his version of a compound lens telescope with a ninefold magnification. By the time Galileo stopped making telescopes, he had enhanced about 100 telescopes to thirtyfold magnification (Galilei et al., 1992). Although it took some time for Galileo to observe the world with his invention, he was able to attribute four firsts in the world to himself: 1) mountains and craters on the moon, which he estimated and found taller than the Alps. 2) Phases of Venus. 3) Moons of Jupiter (items 2 and 3 confirmed the Copernican theory over Ptolemaic cosmology). 4) Sunspots. Until then, when humans looked at the world around them, they observed a universe revolving around the Earth and considered the moon's surface to be perfectly smooth and a complete circle in the sky. At the moment Galileo used his telescope and looked at the sky, human pre-existing knowledge of the world was entirely transformed. A unique moment where a tool could fundamentally and irreversibly change human understanding of existence and self. The materiality was able to create meaning structures through its material transformation. Galileo's telescope and its magnification showed a form of the world that Aristotle and the Church Fathers could not see. The understanding of the Bible also

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became something entirely different after that moment. Critics argued that what is seen through Galileo's telescope is an "artifact of the tool" (an image created by the tool and not reality). Galileo defended it, stating that "anyone can see something that neither ancient philosophers nor the Church Fathers could see, but only if Galileo teaches them how to see through the telescope" (Galilei et al., 1992). An interesting issue in the history of the telescope is that Galileo was convinced that telescopic perception was "better" than the naked eye. One of his arguments included evidence showing that a particular "halo" around celestial objects could be seen with the telescope but not with the naked eye (Galilei et al., 1992). The irony is that this effect was what could be called an "artifact of the tool," an effect arising from technological error, not the reference object. This problem has recurred in the history of technology. A similar example later understood by humans occurred in the nineteenth century. Giovanni Schiaparelli, who had a much better telescope than Galileo, discovered what he called "Martian canals" in his observations of Mars. This discovery led to speculations about life on Mars. Eventually, it was found that there were no canals. What Giovanni saw was an "artifact of the tool" (Encyclopedia Britannica). Another notable issue was that before Galileo's observations, the prevailing view among philosophers and thinkers about the moon was that it was not only a perfect circle but also had a smooth surface. However, Galileo's look at the sky through the telescope showed that the moon's surface, like Earth, had many elevations and depressions. This also challenged Aristotelian cosmology, and Galileo dedicated pages to this in his "Dialogue Concerning the Two Chief World Systems," stating that the moon's surface is not smooth (Galilei et al., 1992). It seems that looking at the moon with the naked eye changed after the invention of the telescope. Because the shadows on the moon are visible with the naked eye, but what humans saw and understood before the invention of the telescope was a smooth surface. Has the structure of human vision changed in the post-telescope world? Galileo's telescope could bring new knowledge to humanity and create a new interpretation of existence. However, there were notable issues:

The tool Galileo used to look at the sky also displayed "artifact of the tool" information to humans, an effect that was not recognized as a flaw for a long time.

In using Galileo's telescope, the magnification of celestial bodies, their rotational movement, and the slight movements of the observer's body caused visual disturbances. Therefore, the observer had to use Galileo's special movable tripod and his instructions to achieve a suitable image. In this experience, tools and technology are usable under specific rules and regulations, and the observer must adhere to these rules.

With the invention of the telescope, the way to refute the Ptolemaic theory and accept the Copernican interpretation was opened. However, the results of this invention spread quickly because it offered a simpler interpretation of existence. Walter Stace, an English empirical philosopher, says, "Logically, it is still possible to assume the Ptolemaic theory and analyze all the known facts of astronomy and physics based on it. It is even possible to go further and say that no real fact observed in the future can ever contradict that theory unbelievably. The only problem is that if we now assumed the correctness of the Ptolemaic theory, we would have to rewrite the entire science, including, of course, Newton's law of gravity and Einstein's laws of relativity, to fit that hypothesis. This new narrative of science would become almost incredibly complicated and very inconvenient. Therefore, it seems that overall it is better to believe in the Copernican theory" (Ruzbahani et al., 2015).

7. Digital Objects, Pervasive Knowledge-Constructing Tools

In this paper, digital epistemology is studied as a concept that essentially does not address digital matters due to their technical advantages, but the main subject is examining their connection to the production of time-specific knowledge and the reflection of this knowledge in culture. In the digital age, the production and distribution of knowledge do not occur centrally but are formed broadly through a network of humans and digital tools interconnected. Alan Liu states that "digital is currently involved in a broader and different network of institutions, associations, and media in producing knowledge" (MacKenzie et al., 2021; Möller et al., 2022). Considering the network function of digital technology, Friedrich Kittler regards digitization as a "discourse network" or "writing system" (Schwarzenegger, 2020; Turner, 2022). The function Kittler attributes to digital technology is of the linguistic kind. Such a view of digital technology evokes the poststructuralist linguists' argument that "we do not speak language; language speaks through us" (MacKenzie et al., 2021; Möller et al., 2022). In the digital age, numerous media tools have been created as intermediaries for using language. These tools themselves affect language, leading the author to believe that "objects in the digital age speak to humans." In a period when humans are in contact with technology in all aspects of life, to be able

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to work and live, they must adapt to new and evolving digital technologies. According to the author, technological tools in the digital age are more than neutral objects; they are not passive in human lives and can influence human thought, behavior, and way of life. Digital tools (similar to the function of Galileo's telescope) operate within a specific system that humans must follow. The ubiquity of these tools has led humans to a state where they cannot live as ordinary citizens without adhering to the rules and systems of digital tools. Thus, the system of communication in this age precedes the mode of communication. The issue that becomes evident here is that humans have willingly submitted to an order arising from digital tools. Kittler quotes Nietzsche, "Our writing tools work on our thoughts." Therefore, in a Nietzschean expression, one could say that human thoughts in the new era are controlled by digital tools. Today, digital objects have become more pervasive than any other tool in human life. All individual and social activities of humans in areas such as communication, entertainment, education, treatment, economy, and health are engaged with digital objects. The author emphasizes that tools and technologies have always been involved in knowledge production and functioned like the lens of Galileo's telescope. What makes digital objects more significant is their unparalleled proliferation and their move towards a kind of "thinking."

8. Pervasive Digital Objects and Microphysics of Power

As an indicator of the spread of digital objects, the statistics of smartphone users are considered. In the fall of 2023, the number of smartphone users worldwide was 6.92 billion, which means 85.74 percent of the global population owned a smartphone. This figure represents an 88.65 percent increase from 2016, when there were only 3.668 billion smartphone users (49.4 percent of the world's population at that time) (https://www.bankmycell.com). Internet-based social networks have also become widespread with the development of smartphones. Each citizen in the contemporary digital age can create their own page in virtual spaces and publish their content. This event has led to a vast array of digital images and information being organized on social networks. Now, by visiting any citizen's social page, one can see their images and interests, and people with shared interests with that citizen can be identified. The number of users of these social networks is rapidly increasing. In 2023, on average globally, each individual was a member of over 2.7 social networks, and 85 percent of these users accessed social networks through mobile devices in the first quarter of 2023. Thus, the author states that by sharing their information, images, and interests in virtual spaces, users have created a new opportunity for "visibility" and have voluntarily subjected themselves to continuous surveillance. This suggests that according to Foucault's theory, citizens, with their constant presence on social networks, are celebrating their entry into a new prison. In this context, one can observe a form of microphysics of power that has proliferated in the form of smartphones, placing citizens under continuous control, evaluation, direction, and visibility. Moreover, internet users have become unpaid workers for various platforms, simultaneously increasing the influence of internet platform power. Users not only produce content and information for platforms but also format and publish content in ways that most align with the algorithms of these internet platforms. From this perspective, the story of how Google and Facebook profit is straightforward: users are unpaid workers producing goods (data and content), which are then sold by companies, advertisers, and other interested parties (Fisher, 2023). These platforms provide users with very useful tools to meet needs quickly, earn income, and connect with friends. Still, they also extract information from users' behaviors in a world filled with a vast amount of information, serving as a very useful tool for capturing the attention of those same users. How can a company attract a specific user's attention to its products? How can a political party win a specific user's vote in an election? By analyzing that user's behavior in the virtual space, it is possible to extract what might attract their attention. In the digital economy, there is a convergence between surveillance and profitability, leading some to speak of "surveillance capitalism" (Fisher, 2023). Here, the author rewrites two phrases of Foucault for the new era: humans in the digital age, by entering various virtual platforms, live in a "camp model" where they are under surveillance, and an "all-seeing eye" monitors their behavior without being visible.

Various social networks, search engines like Bing and Google, and other internet platforms do not present information hierarchically. For instance, when typing words in the search boxes of different internet platforms, users are directed to results that do not necessarily align with what they were searching for. Additionally, the results that appear for users on different internet platforms vary by geographical location. This algorithm and information management system are not "democratic" or "neutral" but are defined to

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align with the objectives and interests of platform owners and stakeholders.

Digital objects today are widespread intermediaries between us and the outside world for acquiring knowledge and producing information. Consequently, the function of these tools in all stages of life is significant in understanding and thinking. These tools are so pervasive and omnipresent that their presence has almost become invisible. However, digital objects today influence human thoughts and behaviors in two ways: through the regulations and algorithms defined for interacting with them (similar to Galileo's instructions for using the telescope) and through their inherent nature as ubiquitous "knowledge-constructing tools." Notably, in the current era, the phrase "tools work on our thoughts" is moving beyond a metaphorical state towards "tools think for us." This can be considered in light of the rapid growth of artificial intelligence and its function in digital objects. Moreover, if it was previously stated metaphorically that "objects in the digital age speak to humans," today, tools like Siri literally speak to humans.

Humans, whose understanding of the world was transformed by looking through Galileo's telescope, are now experiencing a new form of vision with the advent of a tool called Apple Vision Pro. This tool combines glasses and a headset based on augmented reality. Humanity is faced with a tool that, beyond the metaphor of "lens," truly mediates the visual experience between humans and the outside world. The Vision Pro features a dial called the Digital Crown, which allows the user to see the outside world in the background while keeping digital application windows in the foreground by turning it counterclockwise. Turning the dial clockwise blurs the background, hiding the outside world. This technology also combines augmented reality and virtual reality. Louis Rosenberg, a computer scientist and entrepreneur who has worked and innovated in augmented reality and virtual reality for over 30 years, told CNBC Make It: "With virtual reality, you are completely immersed in a digitally simulated and interactive three-dimensional world. It's not like watching a 3D movie; the image you see replaces the physical reality around you, and you interact with it." Users can connect with each other in a three-dimensional virtual space and manipulate their visual presence and the environment for the audience.

In a not overly exaggerated sense, one can claim that in the digital age, tools are becoming new power institutions, and due to their omnipresent nature, they constitute the broadest form of microphysics of power.

9. Conclusion

Michel Foucault considers the function of power institutions to be the surveillance, control, and disciplining of individuals, a function that emerges in the reciprocal interaction of knowledge/power. Power institutions nurture knowledge, and the advancement of knowledge enhances the power of these institutions. To control and monitor individuals, power institutions need to expose citizens in their individuality to strong lights while observing from the darkness. With the advancement of technology, power is no longer exercised in a centralized manner within societies but is implemented fluidly and locally within the framework of microphysics of power.

To understand the function of microphysics of power, it is essential to study the function of technology. The path this paper follows, based on Ihde's views, shows that technology influences human perceptions and behaviors, constructs knowledge, and acts as a mediating "lens" in human understanding of existence. These lenses are inherently neither neutral nor passive, meaning humans are engaged with the non-neutral interferences of these "lenses" in their understanding of existence.

Currently, digital objects are among the most pervasive tools present in human daily life. Digital objects, in various forms such as smartphones, virtual spaces, and different platforms, have become communication tools for humans. Through these tools, humans speak, see, transact, and think. Users share their information and interests through various digital objects, subjecting themselves to continuous visibility. Additionally, users' engagement with digital objects empowers unseen stakeholders. By using digital objects, citizens voluntarily enter a world where they are under surveillance and control, as Foucault described. In the digital age, humans continuously use tools that construct knowledge for them and compel them to adhere to rules and algorithms in favor of the stakeholders. Thus, in the current era, digital objects have adopted a function akin to microphysics of power, reflecting the state of the present age without any value judgment from the author.

Finally, two questions are posed without answers from the author:

- Considering the function of Galileo's telescope in showing a halo around celestial objects that did not exist, an important question arises: How reliable is knowledge acquisition through tools, and to what extent are humans unknowingly receiving "artifacts of the tool" knowledge?

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- Tools and theories grow together to minimize contradictions and achieve the simplest alignment between theories, the function of tools, and acquired knowledge. If the presuppositions of interpreting existence were based on something other than Copernican theories, how would theories, tools, and sources of knowledge differ from the current era?

Authors' Contributions

M.V. conceptualized the study and formulated the research questions. A.D. developed the phenomenological framework and designed the methodology. M.K. conducted the data collection and performed the phenomenological analysis of digital objects as knowledge-constructing tools. A.J. analyzed the intersection of technology and microphysics of power, contributing to the theoretical background. All authors collaboratively synthesized the findings, wrote sections of the manuscript, and reviewed and revised the final draft. Each author approved the final manuscript for publication.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

Not applicable.

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