

Information Sciences: from Philosophy to Epistemology

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Abstract:

The emergence of modern societies has led to significant structural and intellectual advances, marking the beginning of the era of media and information sciences. These advances have been made possible by contemporary technological innovations, which have played a crucial role in shaping the landscape of mass and virtual media. These forms of media, with their informational, cultural, and developmental aspects, have been driven by the ongoing evolution of the sciences. The rapid pace of this evolution is largely due to advances in digital technology, including the use of artificial satellites and computers.

The goal of Information Sciences is to study the media phenomenon both as a tangible reality and as a field of practical study. This examination is conducted through the application of concepts and scientific theories that emphasize the interconnectedness of information science with other disciplines in the social sciences, including philosophy. Philosophy plays a crucial role in the continuous search for the truth about the media phenomenon, and in aligning it with intellectual endeavors. The development and progress of the information sciences pose significant epistemological challenges that continue to stimulate research and debate among scholars. These challenges arise primarily from the complex origins of these sciences themselves

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1. Introduction

The social sciences grew out of a deep intellectual curiosity about social life and a desire to study its various phenomena scientifically. These sciences are closely related to society and have flourished with the scientific capabilities of modern man. Among them, information and communication sciences have proven to be of great scientific value, playing a crucial role in raising awareness, guiding individuals, and enabling them to explore new concepts and generate innovative ideas. As a result, information sciences have contributed significantly to the advancement of scientific knowledge. Despite challenges in their early stages, these sciences have undergone substantial development, ultimately strengthening scientific and technological progress in the field of media. It's important to highlight that the media, with its communication elements deeply rooted in society, holds a profound sway over individual perceptions, intersecting with the standards of scientific thinking.

2.The Nature of Information Sciences:

Each form of media, with its distinct style and theories, aims to convey information and achieve overarching goals that reflect the characteristics of the audience. These objectives stem from the fundamental values associated with societal components, intending to integrate into society and promote the interests of individuals.

In other words, media presents news, information, ideas, and anything that can be received for retrieval and use when needed. This encompasses shaping opinions on various social facts, enabling us to comprehend their significance and grasp what is happening in society. In the early 21st century, the media is regarded as an indicator of democratic and cultural development, representing a force that determines multiple strategic balances.(Bernard: 1992,p100)

These balances show the amount of information that individuals, institutions, and societies possess, as well as its quality and importance to them. The availability of this news and its specifications grants everyone a stronger position and an increased ability to act and make decisions.

Media is a powerful and complex phenomenon that provides the public with significant cognitive capabilities. It reveals the intellectual and linguistic skills used by media professionals not only to describe the reality reflected in media messages, but also to help shape people's perceptions of that reality. The language of the media goes beyond merely reflecting events and facts; according to thinker Jacques Jackson (1896-1982), it influences and constructs the process of perceiving and understanding reality. The creative use of media data plays a crucial role in this process. (Bernard:1992,p101)

In this context, the field of Information Sciences encompasses the study of media as a concept, phenomenon, reality, and everyday institutional practice. It can be considered as one of the most influential factors in the sustainable development of nations. On the one hand, it is a fundamental and additional source of media value, and on the other hand, it is a raw material for forming opinions that measure the development of human societies.

information sciences have developed within the intellectual and scientific currents that accompany the development of the modern concept of society. This is expressed through various approaches such as situational theory, structural functionalist theory, conflict theories, symbolic interactionist theory, and other theoretical models that have emerged in the context of globalization. These theories examine the evolution of perceptions, attitudes, and individual, collective, and institutional practices toward political, economic, social, and cultural events embedded in society. They reveal the vastness, vitality, and tangibility of the field of information science, which extends to all units of society, from individuals to groups, through official and unofficial institutions....(Armand &Michèle: 1986,p86)

For this reason, information sciences have always reflected the trajectory and dynamics of societies at each stage of their evolution. They are inextricably linked to the results of media processes that influence individual perceptions of surrounding events and facts. Historically and intellectually, they stand out as the expression of a rich experience of emergence and development.(Armand &Michèle :1986, p 88)

3. Philosophy of Information Sciences :

The philosophy of media reflects the shift in the image and position of intellectual activity, evolving from modern philosophy to contemporary philosophy. Ideas have traversed vast realms of the philosophy of science, encompassing all forms of human intellectual activity, emphasizing the importance of objectivity, realism, evidence, precision, clarity, criticism, etc., with the aim of reconciling and emerging as an advanced democratic intellectual experience. (Besnier :1998, p340)

Philosophical ideas evolve within concrete and diverse intellectual contexts, aiming to resonate with people's lives and realities, drawing on, for example, phenomenism, logical linguistic analysis, and other time-tested approaches. Thus, media philosophy asserts that each medium possesses its own continually technologically reproduced ideology. This ideology, simply an expanded thought and vision of perception, influences consciousness, ideas, and conceptions. Contemporary philosophy examines modern media and their means not only as tools for the dissemination of information, but also as part of a series of technological developments that have changed the face of society as a whole. It therefore focuses on the media effects that manifest themselves in society regardless of their content. (Besnier :1998, 345)

In reality, the philosophy of information sciences aims to analyze media-related issues related to media policy, emphasizing media reality and its social contexts. It is crucial to understand that all media operations are linked to interests that depend on the public as the receiver of the media message and the resulting consequences. This philosophy also examines the philosophical origins of the media, their positive and negative effects, in order to assess their impact as a social and cultural phenomenon. It helps shape social consciousness through representations of reality, dissent, surveillance, and other aspects of the relationship between media and society. (Besnier :1998, p350)

Some philosophers argue that communication theories are essential to media philosophy as they encompass media doctrines and communication principles. Contemporary philosophy of information sciences is characterized by a transition from the philosophy of consciousness and self-inherited from the Enlightenment to the philosophy of language and semiotics, marking a shift from Hegelian Marxism to postmodernism. This evolution highlights the change in the concept of ideology, from a structure of intellectual justifications of reality to a scientific logic for science and technology. It gives rise to new mechanisms of ideological falsification, which are particularly evident in the contemporary world. Many philosophers discuss the end of ideology or grand narratives, similar to Jean-François Lyotard (1924-1998), who describes the media age as transparent, professional and credible in the transmission and reporting of events...(Lenard Jean François :2004, p17)

In reality, the media age has not witnessed a decline of ideology, but rather a flourishing of new meanings and previously unknown forms. Thanks to the belief in media and rapid communication, interactivity and connection have become media-ideological mechanisms that successfully propagate the communicative illusion on a large scale. Thus, through a media ideology that adopts facts in advance and then asks people to engage with them, the illusion of participation is created, leading individuals to believe they are involved without choosing to be.

In this way, the media perform tasks similar to the well-known traditional tasks of ideology, including the creation of fictitious and deceptive societies that people believe to be real and true. Therefore, the philosophy of information science examines how the media shape perception by confining individuals, giving them images, and making them prisoners of these manufactured images, which are reflections of reality and not reality itself. This philosophy is also interested in the credibility of artificial reality, which surpasses the credibility of actual reality through what the image and the culture of the image leave behind when they become substitutes for reality. This, of course, has a philosophical significance in that it suggests that individuals know little about the society in which they live if they do not follow what the media broadcast and provide. For these reasons, the media tend to monopolize credibility at the expense of a direct and healthy understanding of lived facts. (Lenard Jean François :2004, p20)

For the sake of clarity, let's emphasize that media philosophy explains the ideological role of the media through the material transformation of ideology that occurred in the 20th century due to the decline of cultural-intellectual discourse. In this regard, the philosopher Louis Althusser (1921-1990), who linked ideology to the state, argued that the media legitimately belong to state apparatuses, which are tasked with affirming and disseminating a set of values and norms that contribute to the maintenance of existing relations of production. In other words, the media institution is a mechanism through which state ideology passes, exercising not material violence but ideological coercion in the form of intellectual coercion. (ALTHUSSER :1970, p173)

As for the thinker Marshall McLuhan (1911-1980), he believed in the technological necessity, especially information and communication technologies, which undeniably and fundamentally influence societies. Based on this, he developed ideas about the relationship between media, communication, society, and the social changes that determine their nature and approach to solving their problems. He attempted to take a neutral position, asserting the neutrality of the media, which cannot be judged as positive or negative, being a necessity and simply a means of transmitting news, information and opinions. According to McLuhan, the mission of the media is information and transmission, so one should refrain from moral and evaluative judgments when studying it. Instead, it is essential to understand the phenomenon of social change and its elements in order to adapt and/or overcome, under the best conditions, the challenges of technological necessity imposed on contemporary societies. (ALTHUSSER :1970,174)

Furthermore, the philosophy of information sciences has evolved from the philosophy of public opinion, which deals with the ideas and meanings associated with this concept. It has also been nourished by the philosophy of information, exploring the different meanings that the term "information" carries in the field of general information theory. It has also addressed technical issues related to abundance, semantic truth, and other matters, laying a solid foundation for computer science and computer modeling. Media philosophy has also benefited greatly from media advertising, which studies the collective mindset influenced by information and communication technologies. (ALTHUSSER :1970, p76)

In addition, it has used the processes of modern propaganda, which are characterized by conformity, stereotyping, repetition, avoidance of confrontation with the recipient, simulation of providing opportunities for dialogue, affirmation instead of debate and demonstration, stimulation of instincts, and the claim of neutrality, among others. These problems can lead

society into a vicious circle that weakens individual consciousness and prevents its development, thus preventing an adequate understanding of social events in all their dimensions.

In conclusion, it can be said that the philosophy of information sciences, which is essentially based on an epistemology inherited from Hegelian Marxism, strongly criticizes what modern media propose by reducing everything to mere images, scenes, signs, advertisements, thus eliminating personal experience and its role in the construction of the social meaning of events, without going through modern communication channels, which often treat and then reduce existing social reality. Our interest in the philosophy of information science and its relation to the formation of perception in society is a concern for philosophical discourses that have gradually become a common ground for intellectuals, thinkers, economists, the media, and even politicians. All of them have spoken about the failure, crisis, and collapse of contemporary societies in the age of technology and the dominance of the scientific vision in organizing various social issues and following their transformation and evolution through media means.(ALTHUSSER :1970 ; p78)

4. Epistemology of Information Sciences

The term "epistemology" refers to the theory of science, which is a modern term that includes various aspects. Epistemology is the basis for the critical study of the principles of various sciences, their representations, and their results, with the aim of determining their logical origin, emphasizing their value, and demonstrating their objectivity. Epistemology does not specifically focus on the scientific interpretation of events, but emphasizes the need to concentrate on the gradual construction of social sciences and the origin and development of their scientific mindset.(Blanché :1972, p9)

information sciences are of recent creation and constitute sciences open to all aspects of life and at multiple levels. They aim to produce meanings and interpretations of the transformations that societies undergo, generating discourses that accompany these changes as well as other discourses that examine their consequences. This raises difficulties, according to epistemologists, related to the impossibility of closing the field of these sciences, since it is fundamentally an open field that crosses all levels of society. Thus, it can be said that simply thinking about all aspects of society requires going beyond media specialization in response to an urgent necessity imposed by the nature of reflection on information sciences. For this reason, the question of the "epistemological barrier" resulting from the transition from specialization to non-specialization is raised in this context.(Blanché :1972, p11)

The question of the interaction between information sciences and other social specialties raises several cognitive problems, including the simultaneous emergence of a mixture of convergent and divergent knowledge, indicating the existence of a problem that requires the study and understanding of the scientific methodology underlying this mixture. Moreover, the epistemological problem resulting from this interdependence reflects the need for knowledge of information sciences in order to understand the limits of interaction between specialties, as well as the lack of scientific mastery of these specialties.(Bachelard :1971, p60)

Although information sciences are ancient as a form of human communication, they have evolved into modern academic disciplines, diversifying their intellectual concerns. These sciences

are also constantly renewed by technological advances, which has several implications. They bring together and intersect a range of social and even human sciences, illustrating the complexity of their field of study. (Robert :1981, p27)

From an epistemological perspective, information sciences raise the issue of the plurality of knowledge in the field of information knowledge, historically situated between the material and immaterial, the biological and the social, natural and cultural characteristics, global studies and limited sub-disciplinary studies, between society and the world, between the social actor and social structure, between the individual and society, between freedom of choice and social determinisms, between identity construction and the public as recipients of cultural reality. In this context, experts agree on a general consensus affirming that the intellectual interference observed in information sciences is caused by the diversity of research orientations that have marked many schools, including the Annenberg School, the European theoretical trend, and the American pragmatic trend. (Emanuel :1997, p50)

At the theoretical level, the components of the information sciences have evolved between technical, linguistic and psycho-sociological theories that have addressed the question of the impact of the media on the individual in terms of the nature, strength and, above all, the realism of the response to their influences. Epistemological studies have revealed the importance of the epistemological rupture that information sciences have experienced several times, through the qualitative change in the structure of their theoretical frameworks, in order to regulate the theoretical aspect. This can be seen, for example, in following the development of the question of the impact of the media on people, which has encountered several obstacles. At the beginning, there was the theory of direct impact, characterized by realism, followed by the theories of selective impact, which believed that the response is not mechanical or uniform, because members of society react differently to media messages based on their differences, having psychological predispositions, inherited and acquired characteristics and attitudes that influence them and vary from person to person. Thus, these theories argue that the media and their discourses are selectively received, closely linked to each individual's level of perception in society, depending on the nature and quality of their relationships with different beliefs and the prevailing value system within them. (Emanuel :1997, p52)

The theory of social categories establishes a link between media behavior and social categories, particularly the position of each individual within these categories. It allows for an understanding of the link between an individual's social position in the social structure, the reception of the message, and the formation of the response model. However, this perspective has raised new epistemological challenges by emphasizing that the impact of media is not necessarily powerful and differs significantly from the impact of social categories.

This was followed by the theory of meaning, which sought to introduce new meanings into media language in order to indirectly influence behavior. This was followed by the needs and gratifications model, which suggests that a significant portion of media use is directed toward the achievement of specific goals. Individuals consciously choose particular media to satisfy needs such as environmental monitoring, expression of intellectual orientation, manifestation of dissatisfaction, expression of emotional preferences, and entertainment. (Schmid :2012, p55)

In order to overcome the epistemological obstacles resulting from theories that attempt to exert an indirect influence on those who interact with the media in society, new perspectives have emerged, including a psychological approach to influencing the psychological structure of individuals. This makes the response to the reception of media messages based on the understanding that this process involves reflection and evaluation of its goals by the audience. The search for the best ways to overcome the difficulties of integrating the proposed theoretical models led to the use of what is called persuasive messaging, which shapes and changes behavioral criteria in a direction that carries new ideas and calls on members of society to determine a more significant response to media messages.(Blanché :1972, p120)

Information sciences have progressively enhanced their epistemological domain by considering the interaction between the public, media, and society. This perspective examines the role of media in society, addressing cognitive, emotional, behavioral, and mental effects of message transmission through the media.

Despite the Chicago School's emphasis on the role of media and communication in organizing individuals, groups, and institutions and the Palo Alto Group's circular feedback model, information sciences remain important tools for building democracy in various human societies. It is worth noting that technological inventions and innovations do not necessarily lead to the strengthening of democracy and the production of necessary social and cultural values in all cases. However, this reality does not affect the information sciences in terms of their ability to generate cognitive breakthroughs and advances, whether at the level of concepts, theories or methodologies.(Gayon :2006, p60)

In this realm, we have a clear example of what the thinker Habermas presented in the sociology of communicative action (1981), studying communicative action and interaction as partners in the process of symbolic exchange and linguistic dialogues. His goal was to examine interactional networks in a society shaped by diverse and multifaceted media production. Habermas challenged strategic action, indicating the direct utilitarian goals of the individual (Jürgen: 1987, p. 08), and then proposed objective action and cognitive action, imposing morality, integrity, and truth-telling on people. In this sense, Habermas attributed the causes of the crisis of democracy in contemporary societies to the existence of social mechanisms that do not facilitate the exchange and spread of media and communicative rationality in society. This means that these mechanisms often hinder the arrival of real media messages, real communication and real communicative relations in society. This led him to emphasize the importance of bridging the communication gaps between researchers and society in order to develop a critical efficiency for recovering the communicative power between thought and society, in a new model that replaces the classical social contract based on power sharing among members of society with principles such as difference, dialogue, tolerance and democracy.(Jürgen :1987, p32)

the epistemology of information sciences revolves around several intellectual, political, cultural, and developmental challenges, encompassing various issues related to the infrastructure of modern technologies, especially the Internet. It addresses issues such as the digital divide and information security, commonly known as cybersecurity. There are also economic considerations, including the intangible economy and e-commerce, as well as the impact of the Internet on education and employment. There are also social concerns that address the specific

needs of certain groups, such as women, children, youth and persons with disabilities. In addition, there are specific policy issues related to the impact of information science on democracy, the potential for creating an electronic democracy, and the legal framework of the Internet, including the realm of virtual reality. The epistemological landscape of information sciences is thus a multifaceted terrain that navigates the complex intersections of technology, society, and governance. (Balle :2006, p306)

And most importantly, all of these issues, whether functional or ethical, are currently the subject of significant debate among thinkers and researchers who present analyses and interpretations that express their stance on modern technologies and their relationship to what is social and cultural. The doubt surrounding the information sciences has, for various reasons, often touched on interrelated and powerful issues and knowledge. It has often refused to acknowledge their independence and scientific nature, even though these sciences are neither a branch of sociology nor of psychology. They are not just knowledge about empirical subjects that are thought to be related to the media. That's why Francis Ball attributes the reasons for this situation to the oscillation between technology and science in these disciplines, as well as the problem of terminology, the vast conceptual system, the mystery of paradigms, and the actual weakness of knowledge accumulation. Of course, according to Francis Ball, this doesn't mean that we should throw away everything that exists in the information sciences and start from scratch. (Balle :2006, p309)

5. Conclusion

The discourse on the philosophical and epistemological aspects of information sciences requires a profound reflection, taking into account the historical evolution of the phenomenon of communication and the technological revolution of the media. The classification proposed by Régis Debray, according to which communication has evolved from mental images (logosphere) to visual images (graphosphere) before transforming itself into moving images (videosphere), and at the same time, with the advent of modern information and communication technologies, the emergence of the concept of interactivity in communication through second-generation websites (WEB02), all these changes bring us back to a unique philosophical framework marked by a return to mental communication, which remains fundamental to other forms of information and communication.

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