AIDAinformazioni
ISSN 1121–0095
ISBN 979-12-5965-292-8
DOI 10.57574/596529282
pag. 33-54 (gennaio-giugno 2023)

A veritistic turn in information science?

An answer in an infodemic scenario

Carlos Alberto Ávila Araújo*

Abstract: This article deals with an epistemic problematization for information science based on Jonathan Furner's proposal of a veritistic turn for the field. Furner calls for the consideration of "truth" as a central concept to the field instead of "relevance". In this text, his arguments – based on social epistemology and epistemic justice – are confronted with a set of questions relating to the contemporary phenomenon of post-truth. Elements raised by both discussions are analysed in the light of paradigms and "turns" already undergone by information science, to assess the relevance of a possible veritistic science in the area.

Keywords: Information science epistemology, Veritistic turn, Post-truth, Conceptual turns in information science.

1. Introduction

The aim of this text, whose title poses a question, is to reflect on the pertinence of proposing a possible veritistic turn in the field of information science. To do this, first, a discussion of "turns" in information science is presented. Studies in the epistemology of information science highlight that this area was born within a physicist perspective in the 1960s and underwent its first "turn" in the late 1970s, when a cognitivist perspective made its contribution. This was followed by a second turn in the mid-1990s, when a pragmatist sociocultural perspective was constructed.

The following are some questions about the truth and the current post-truth and infodemic scenario in information science. A number of aspects are used to characterize the phenomenon of post-truth – from scientific denialism, human confirmation biases, the bubble effect, to the mass proliferation of fake news, among others – which are generating a profound change in the

* School of Information Science, Federal University of Minas Gerais, Belo Horizonte, Brazil. carlosaraujoufmg@gmail.com.

ways in which information is produced, received and reproduced (Santaella 2019) thus invoking a conceptual change in the field of information science.

In a third moment, the proposal of a "veritistic turn" is presented, from Fallis and Budd, arriving at Furner's most recent proposal. Furner's proposal is based on social epistemology, epistemic injustice and human rights, and articulates the concepts of truth, relevance and justice. This discussion is confronted with a second one, not found in the author's work, which is an understanding of contemporary times as an era of post-truth.

While, admittedly, a "turn" cannot cancel the importance of previous knowledge, but raises new problems and ways of approaching them, I ask how far the conditions are given for the field of information science to experience a new "turn" from the third decade of the twentieth century. Such a movement would prepare the field more fully for the study of contemporary realities.

The article is thus structured in four topics: the epistemological discussion of information science revolves around the idea of "turns", the question of truth, the question of post-truth and the proposal of a veritistic turn to information science.

2. "Turns" in information science

The idea of a "turn" in information science first came about in the early 1980s, when the works of Brookes (1980) and Belkin (1980) exposed the need for information science studies to include cognitive dimensions. Since the 1960s information science has mainly focused on studying fluxes or processes of information transfers, on identifying the forces and agents behind such fluxes (Debons, Horne, and Cronenweth 1998; Davis and Shaw 2001; Gilchrist 2009). In the late 1970s, concerns about meeting the needs of users triggered reflections about information not as something contained in data, in documents. Information could only be considered as such in relation to subjects' state of knowledge, and its value could be determined only by the extent to which it altered people's knowledge. This major conceptual shift in the field was given different names: Dervin and Nilan (1986) saw it as a change from the "traditional paradigm" to the "alternative paradigm"; Ellis (1992), from a "physical to a cognitive paradigm".

In the 1990 new conceptual changes in the field brought about reflections which did not restrict information to subjects' cognitive dimension but highlighted its connections to all of subjects' actions in the world and to the context of such actions; information was not and individual phenomenon between persons and data, but existed on an intersubjective, social level. This change was called the "socio-cognitive turn" (Hjørland and Albrechtsen 1995) or "sociological turn" (Cronin 2008).

Several authors have put forth epistemological frameworks for information science that consider both trends. Capurro (1992; 2003), pioneeringly presented what he called the area's three paradigms: the physical, the cognitive and the social paradigms. The same organization is espoused by many others, like Ørom (2000), Molina and Moya-Anegón (2002), Silva and Ribeiro (2002), Linares Columbié (2005), Salaün and Arsenault (2009) and Bawden and Robinson (2012). While Saracevic (1999) does not refer to "turns" or "breaks", the author sees the history of information science as an increasing expansion in the concept of information: from a restricted perspective, a narrow sense (tantamount to a sign or a datum) to a wider or broader sense (more knowledge-related) one and an even wider or broadest sense (integrated into human action and a certain context).

According to this division between three major ways of studying information. The first of them, which began in the 1960s, essentially focuses on a physicalist (hence objective) conception of information, on the idea that information consists of the fastest, cheapest, and most efficient transport of data. Information science must be involved with the development of services, systems and products to ensure the success of transfer processes, acting directly on the flows.

The second way of studying information focuses on a conception focused on users, taken in their cognitive dimension. It is, therefore, a subjective approach and seeks to analyze how people miss information, seek, and use information. Information science must focus on the development of services and products that replicate these human mental activities.

Finally, in the third major way of studying information, the focus is on the intersubjective dimension, that is, on the social constitution of needs, processes of search and use of information. The links between the human action of producing and using information and the very constitution of culture or collective memory are highlighted. In a recent and ample systematic approach to the area's history, covering its almost 60 years of existence, Hjørland (2018a; 2018b) identifies what he calls the six paradigms or traditions in the study of information science: eminently practical studies (without theory); information theory (Shannon and Weaver's mathematical theory of computing); Cranfield's tradition (of the physical paradigm); the cognitive vision; the philosophy of information and the sociocultural vision.

Another recent discussion, and one which quite specifically addresses "turns" in information science is developed by Hartel (2019). Hartel identifies the starting point of information science in the physical paradigm and argues that, since 1986, the area has experienced seven turns: the cognitive turn, the affective turn, the turn of neo-documentation, the socio-cognitive turn, the everyday-life turn, the socio-constructivist turn and the bodily turn.

None of the mappings presented here – not even the most recent ones from the last two years – mention the question of truth or post-truth in any way. Naturally, the main reason is that systematic epistemological approaches are inevitably done *a posteriori*, that is, after publishing. More time would therefore be necessary for works on the field's epistemology to be incorporated.

Thus, it does not mean that the question of truth was not present in information science, in its other models of study. In physicalist perspectives, for example, expert assessments, peer review processes, quality criteria for scientific journals, consistent classification systems, among others, have always been elements with a "veritistic" dimension insofar as they sought objective criteria for information quality. In the same way, from the cognitivist perspective, user judgment criteria also imply a veritistic dimension, insofar as there was a whole work of scientific analysis of the criteria of relevance and preference of users for the design of information retrieval systems. And in the sociocultural approach, the idea of truth of a collective or domain is present.

The difference from the present moment is in the importance and volume of false information – in what has been called an "infodemic". This concept means an association of the terms information and pandemic characterizes a pathological characterization of the informational dimension: the gigantic scope and speed of dissemination of false information has produced a situation in which false information is more present in people's lives than true and quality information and end up having much more influence in decision-making and in defining courses of action (Zarocostas 2020; Zielinski 2021). This constitutes a "pandemic" nature of informational phenomena, taken from the perspective of their adverse effects or dysfunctions. The term was created in 2020 and promoted by the World Health Organization to precisely designate the role of information in the pandemic scenario caused by Covid-19 (World Health Organization 2020; Pan American Health Organization 2020). In this sense, the term designates the new general conditions through which information is produced, circulated, disseminated, received, used, and appropriated by people at the contemporary moment. The exercise of identifying such conditions also implies considering the technological means of such production and circulation, the economic and legal forces that act on these processes, and the ways people behave in relation to them.

Exactly for that reason, a series of works produced in the past few years, presented at conferences, or published in journals, have raised the issues of post-truth and fake news in the area. Such works have focused on various topics and their impacts on the work of librarians, archivists, and other information professionals (Schlesselman-Tarango 2017; Agosto 2018; Naeem and Bhatti 2020; Revez and Corujo 2021). Studies are still grappling with assessment, implications, and the possible ways of professional engagement with this very recent topic to combat or mitigate negative effects. A more profound

reflection on the meaning of this phenomenon for the very concept of information is yet to be developed.

It is nonetheless worth pointing out that, even within past theoretical models, significant contributions still provide insights into aspects of post-truth. From a physicist perspective some aspects of the logic of algorithms can be identified and the "success" of certain contents, from the mechanisms favoring the popularity of sites and information sources as a measure of relevance and retrieval. From a cognitive perspective, the impact of cognitive biases of confirmation and dissonance can be assessed in the perceptions of lacunae of knowledge, in the identification of search strategies and the search for and use of information. Also, from a sociocultural approach, post-truth can be analyzed as a culture, as a disregard for truth as an attribute of information and a social construction. All three dimensions of the phenomenon of post-truth could therefore be studied by information science. The field is far from ill-prepared for this study. However, the specific problematization of the attribute of information's "truth" has never been central in it, and this is exactly the focus of Furner's claim before contemporary phenomena, and the informational realities they raise.

3. The question of truth

Naturally, the question of truth, that is, whether the information being stored, organized, and disseminated in information systems and services is true, has always been present in information science. But not a discussion of what the truth is.

The question of the meaning and conditions of existence of "truth" is a problem that has always crossed philosophy. Several authors have even dedicated themselves to systematizing theories and understandings about truth existing in philosophy. Kirkham (1992), for example, presents the theories of correspondence, coherence, pragmatic, semantic, performative, redundancy, appraisal, and truth-as-justification. Roark (1982) presents the following tests or dimensions of truth: correspondence, coherence, pragmatic, verification, and performative. Raatikainen (2021) presents the following theories of truth: classical correspondence, coherence, pragmatist, Epistemic, Formal Approaches, Deflationist and Minimalist.

But it is not exactly in philosophy that the necessary foundations for information science to deal with the question of truth lie. After all, information science does not deal with the philosophical aspects of truth. Information science deals with information sources, with knowledge production authorities, with institutions that create, certify, or reproduce knowledge.

In this sense, it is within the scope of theories that study the social and institutional modes of truth creation that information science is related.

This is the case, for example, of Burke (2000), who studied how different social institutions (universities, academies, craft corporations, markets, states) acted to promote certain knowledge and interfere in the processes of collection, classification, dissemination and sometimes withholding information. In a later work, the same author (Burke 2012) studied how apparently timeless activities – the acquisition and gathering of knowledge, its analysis and organization, its dissemination, and its effective use – are in fact limited and conditioned by the performance of knowledge institutions and professions and take different forms at different times and places.

A similar analysis is made by Blatt (2018), who traces an evolution of the concept of truth, as a socially lived issue, since the 17th century. The author points out the transition from a moment when the truth came from the religious authorities, passing through its inscription in the scope of the performance of institutions such as the university, science, and journalism, and then with the performance of advertising, social networks, and other mediations.

In this sense, a close perspective is the notion of a "regime of truth" introduced by Foucault (1975) in his work *Discipline and Punish*. With this concept, the author sought to see how knowledge and truth were produced by the power structures of a given society. In his study of the penal system of the 18th and 19th centuries, Foucault identified a corpus of knowledge, techniques and discourses that were entangled with the practice of the power to punish, giving rise to a new "regime of truth" (Weir 2008).

What there is in common in the analyzes of authors such as Burke, Blatt and Foucault is the perception that what is accepted as true at a given time depends on the interaction of different social forces. The authors study different phenomena and processes such as the invention of the press, the action of libraries, the constitution of the university, the production of the encyclopedia, among others. A complementary analysis to this is that of Giddens (1991), who studies the mechanisms through which modernity was constituted. In his analysis of how the transition from pre-modern societies to modernity took place, the author identifies the occurrence of several phenomena that profoundly changed the various dimensions of human life (politics, economy, culture, regulation, work). These phenomena produced a new way of life and social organization that emerged in Europe from the 17th century onwards, and which later became worldwide in their influence. Among these changes is the so-called disengaging of social systems, which altered spatial and temporal relationships and inserted a rationalized organization into human life. Giddens is dedicated to studying these mechanisms, which are of two types: symbolic tokens and expert systems. Both fundamentally depend on trust: it is essential for the constitution of modernity's institutions.

Expert systems are defined by Giddens as structures of technical excellence or professional competence that organize large areas of the material and social

systems in which we live. The author brings, as an example, a ladder, which we use with the certainty that we will not fall, that it will not break – that is, we accept the risk, because we believe in the expertise of those who produced it. Expert systems work in all spaces and environments. Each person, throughout their lives, is faced with situations and problems in which their own knowledge is null or rudimentary (for example, the need to undergo surgery, or the repair of microelectronic equipment) and those situations attribute protagonism in solving problems to another professional actor, endowed with recognized knowledge in that area. The activities start to take place, therefore, despite the knowledge of each of the people involved.

Expert systems allow a vast range of human activities to be performed with greater effectiveness, efficiency, accuracy, and productivity, precisely because they are performed by people with specific training, prior knowledge, and skills. In caring for the body, housing, food, human relationship, in all spheres of human life, it is possible to have a more rational and productive action based on guidance by a functionally instructed and specialized professional. This has happened, therefore, in medicine, engineering, nutrition, gastronomy, and in several other fields. It also took place in the informational field.

Before proceeding, it is important to point out that the performance of expert knowledge is not a creation of modernity. Before modern societies, there were craftsmen's guilds, artisans, specialized knowledge, even universities. The novelty brought by modernity was a complex structure for validating and certifying these expert systems, through professional training courses, supervisory boards, regulatory legislation, among others. And, above all, a broad promotion of the trust to be placed in such expert systems, precisely because of the entire previous certification.

Libraries, archives, museums, and other institutions that deal with human registered knowledge have existed for centuries and conduct, using the current categories of thoughts, actions of "information mediation," in the sense of acting together with human knowledge by selecting, preserving, organizing, disseminating. In modernity, such institutions are supported by scientific knowledge (archival science, library science, museum studies) that provide institutional, professional, legal, and technical support for their interventions with the societies in which they operate. Such institutions and knowledge, throughout their existence in modernity, dealt with different issues: the universalization of access to their contents (democratization); the search for diversity in their collections and actions (epistemic justice); the sophistication of instruments for organizing the knowledge (efficiency for preservation and recovery), among others.

As pointed out in the previous topic, there is a new scenario of production, circulation, and use of information, which has been called infodemic or post-truth. In this scenario, the question of whether the information is true or false

acquires new relevance. In the next topic, this issue will be addressed, based on the unfolding of the post-truth concept.

4. The question of post-truth

As Peters et al. (2018) had noted, the term "post-truth" was first used by Steve Tesich in 1992 in his study of the Gulf War and appeared in a book title for the first time in the work by Ralph Keyes, published in 2004. But it was in 2016 that the expression became widespread, to the point of being considered the word of the year by the Oxford Dictionary, to designate the circumstances under which objective facts become less influential in making public opinion than appeals to emotion and personal belief (D'Ancona 2017). In 2016 the term also became closely associated with two fundamental facts of international politics: Donald Trump's election for the US presidency and the victory of plans to withdraw Britain from the European Union, known as the acronym Brexit (and abbreviated form of 'British exit'). The phenomenon of post-truth came to be seen as involving a series of aspects and levels of problems, and various researchers from several areas and countries have engaged in studying and correlating those aspects and levels. From such discussions, the phenomenon can be seen as showing three major dimensions.

The first is connected to technological dynamics and the logic of "personalized" information reinforced by the algorithms structuring search engines and social networks – currently the primary environment from which people receive world news and global information (Kakutani 2018; Noble 2018). These are built from algorithms that select what people probably want or that which confirms their points of view, an effect known as the "bubble effect" (Magallón Rosa 2019). In social networks like WhatsApp, messages are sent massively to people's devices, without any monitoring or contrast, in an "underground" logic of information dissemination. With the formation of "bubbles" or "echo chambers" that seal users off from new ideas, topics and important information", and especially when it comes to politics, people are exposed almost exclusively to unilateral visions within the broader political spectrum (O'Connor and Weatherall 2019).

Alongside this phenomenon there is also the mass dissemination of fake news. While this is not exactly a new development it operates in a new logic: fake news travels apocryphally, forwarded by common people, exposing the lack of regulations for them as opposed to the controls of journalistic or educational institutions. The situation suggests that all information would have the same weight or value regardless of quality, of checks and of institutional commitments behind their production. The phenomenon is further compounded by the action of clickbait, that is, the dissemination of false content or injection of sensational headlines to entice users into accessing content to

profit from publicity (Aparici and García-Martín 2019). In the dissemination dynamics of this mass output of fake news, lies become active in shaping people's decision making in different spheres (politics, the economy, education, health, religion) at previously unseen speed.

The second dimension is related to the human level or, more specifically, connected to human cognitive dimensions: the so-called cognitive bias, or confirmation bias, or even cognitive dissonance. This is a tendency in human beings to shape their beliefs and worldviews without basing themselves on reason and evidence, that is, on facts, to avoid psychic discontent. McIntyre (2018) bases his point on three classical studies in social psychology conducted in the United States during the 1950s and 1960s. The first is Festinger's theory of cognitive dissonance, according to which we seek harmony between our beliefs and actions. The second is Asch's theory of social conformity, that states our tendency to yield to social pressure is rooted in our urge to be in harmony with others. The author also puts forth more recent studies about this question, expressed in two concepts: the counterproductive effect (a phenomenon where presenting someone with true information which conflicts with their beliefs in fake data only makes them believe such facts even more fervently) and the Dunning-Kruger effect (by which our lack of capacity to act on something causes us to overestimate our true abilities). Such elements of cognitive bias incline people to shape their beliefs regardless of reason and evidence. This phenomenon is further compounded by the context described above as the bubble effect (Greifeneder et al. 2021).

There is still a third, cultural dimension – to the point that some authors refer to a "culture of post-truth" (Wilber 2017). At present, most people (except, of course, for a sector of global population below a certain economic threshold) have easy and instant access to technology and the possibility of checking the veracity of any given piece of information, through smartphones, notebooks, desktops, and other devices. Unlike other periods in history, when checking whether certain facts about, say, another country's way of life were true or false, today this can be easily verified from our homes. But this is not how people act. People take for real, forward, share and appropriate information they have not bothered to check. This disdain, this disregard for truth, in a context of such privileged access to information, is the novel fact that the idea of "post-truth" as culture seeks to describe.

In this sense, post-truth designates a condition, a context where attitudes of disinterest and even disdain towards the truth are naturalized, disseminated, turned widespread, normalized, and even encouraged. There is a process of accepting and replicating concepts that normalize disdain for the truth: it is an idea, an imaginary, a set of social representations or meanings incorporated by audiences that renders possible the existence of fake news referring to a cer-

tain idea and reaffirm or develop it (Murolo 2019). These dynamics empower clickbait and other mechanisms for the dissemination of false information.

The researcher Wilber (2017) has examined this phenomenon in a book stimulatingly entitled *Trump and post-truth*. He discusses Donald Trump's election as president of the USA, and the UK's exit from the European Union – two phenomena directly associated with the triumph of mass-produced, disseminated and consumed fake news, which oriented people's electoral choices. The author links these choices to other phenomena like the diminishing value placed on democracy, the increase of hatred, of racism, of xenophobia and of bad taste, among others. He thus frames post-truth within a broader worldwide process of change in cultural values – especially in western societies.

Wilber paints a picture of world-dominating values and ideas increasingly accepted currently (what he calls *avant garde*). He identifies that, in the first half of the twentieth century, a wide range of political, cultural, and intellectual movements drove the world according to values associated to the rational, the operational, the conscious, and notions of merit, profit, progress – that is, values directly related to the ideals of modernity. In his analysis, the author considers that since the 1960s, ideas associated to postmodern values gained momentum, such as the defense of plurality, of relativism, self-realization, inclusion, multiculturalism, civil rights, sustainability, the defense of minorities, etc. Continuing his analysis Wilber contends that the second decade of the twentieth century is witnessing a crisis of such a project, a failure of avant-garde progressiveness. This idea is also developed by other authors (Eatwell and Goodwin 2019; Broncano 2019; Casara 2019).

Wilber points out several factors as causes for such a failure. Among them are the relativization of the idea of truth, the notion that local, particular truths would exist, which bringing about a form of generalized narcissism. This causes the inability to communicate with others' perspective, a loss in sense of empathy and hatred towards minority points of view. In turn, this leads to essentialist visions, to racist tendencies, patriarchalism and misogyny. As a result, we are experiencing a crisis in the legitimacy of modern institutions, human rights, reason, science, and democracy (Fukuyama 2018; Cosentino 2020).

5. Jonathan Furner's proposal

There are works that discuss the question of truth in information science from a philosophical perspective, especially from the debate between realism and idealism (Hjørland 2004; 2021; Dobson 2001; Spasser 2002). However, another type of discussion, closer to the discussions of Burke, Blatt, Foucault and Giddens, that is, about the social and institutional conditions of construction of truth, is the one in which information science approaches social

epistemology. And it was in this type of theoretical proposal that the idea of a veritistic turn to information science emerged.

The first proposal of a possible veritistic turn in information science was made by Fallis (2000) from the proposal of a veritistic social epistemology made by Alvin Goldman. Fallis reports that this proposal sought to study the social practices that contributed to the production of errors and lies in the social creation of knowledge. The fields of action initially thought of by Goldman were science, law and education. Fallis proposed to bring this theory closer to information science through the incorporation of libraries and other information services and systems in the scope of the studies. In a later work, Fallis (2002) seeks to bring this idea of proposal closer to the social epistemology made by Jesse Shera and Margaret Egan in 1952, thus seeking a foundation for information science by bringing together the two discussions: that of social epistemology and that of the vertical turn.

The defense of Shera and Egan's social epistemology as a general foundation of information science is also carried out by other authors. Among them, Budd (1995) stands out, who proposes that this theory can be useful to conceive information science as an area dedicated to the study of all the ways in which a society deals with the knowledge that it produces and consumes. In a previous work, by the way, Budd (2001) had already analyzed the issue of error and false information in the scope of the construction of scientific knowledge and its impacts on information science.

Taking up points made by these authors, Jonathan Furner elaborated a new proposal. Furner is a professor at the Graduate School of Education and Information Studies at the University of California in the United States. For several years, he has been questioning the epistemic bases of information science, by approaching Shera's (Furner 2002) social epistemology, discussing broader philosophical questions (Furner 2010; 2015) and developing a problematization of the concept of information in all five subareas of information science (informational behavior, information retrieval, metric studies of information, information organization and information ethics) (Furner 2014).

In July of 2018 Furner presented a paper at the "XV International Conference of the ISKO (Information Society for Knowledge Organization)" – taking place in Portugal –, which was later published as the chapter of a book with the events proceedings (Furner 2018). In this work the author seeks an epistemic grounding for knowledge organization (KO) based on contributions from epistemology and ethics – and, more specifically, from social epistemology and epistemic justice. By articulating three concepts (truth, relevance, and justice), the author proposes a veritistic turn so that the area can provide a critical knowledge organization (CKO).

To make his point, Furner (2018) turns to philosophy, more specifically a branch-ontology which studies the philosophy of being, of existing things, of

types of things and how things can be classified. He proposes conceiving KO as an ontology where "facts" can replace "things" and thus become itself a "philosophy of data". As such, Knowledge Organization would comprise elements from three of philosophy's traditional branches: the philosophy of the mind, the philosophy of language and the philosophy of beliefs. The latter is taken by the author as a synonym for epistemology or of the philosophy of knowledge. Furner identifies the existence of two types of theories: truth-oriented theories, which can be defined as theories of belief distinguishing between true and false beliefs; and relevance-oriented theories, which can be defined as those theories of belief that distinguish relevant beliefs from irrelevant ones. Based on this categorization the author detects the existence of a historical break-up between epistemology as a subfield of philosophy and library science-information science: in the former, theories of belief are oriented towards the truth; in the latter, towards relevance – relevance becoming the main parameter in determining informational retrieval.

Still within the field of epistemology, Furner puts forth that epistemology can be divided into types following three criteria. The first distinguishes pure epistemology (made up of theories for the description of the nature of concepts and of epistemic practices) from applied epistemology (consisting of normative theories seeking to orient the most appropriate practices for obtaining true or relevant propositions). The second parameter is connected to methodology, and distinguishes rationalist from naturalist epistemologies, depending on the subject's promptness to admit different types of evidence in favor of conclusions. Finally, according to the main factor in establishing beliefs, epistemologies can be individualistic (when the subject's interests are considered) or social (when the focus is on social interaction). By combining such criteria, Furner proposes an applied social epistemology (the study of normative questions about those social practices which are more prone to generate true or relevant beliefs) as the adequate theoretical framework for his proposed CKO.

Furner then turns to the question of justice. He presents justice as a value (like truth, relevance, beauty, and liberty) related to a desirable characteristic in people's decisions and actions. Justice is made when people are treated according to their merits or needs, without prejudice or discrimination, without violating their human rights or limiting their freedom, and without exercising any form of oppression resulting from asymmetric power relations. Furner identifies several types of rights (natural, human, civil, group and individual rights) related to equitable access to certain goods or opportunities. He then charts six types of rights within the field of information: the right to think (to conceptualize, to categorize and classify, believe and have an opinion); the right to express oneself (to voice one's thoughts in speech, in writing and other ways); the right to access (the possibility to seek, research, find, hear and discover the thought and expression of others); the right to be listened to (to

publish and broadcast, to reach out to an audience without being censored, silenced, hidden or ignored); the right to be "left alone" (to keep one's privacy); the right to credibility (to be treated as someone reputable).

By discussing theories of justice, Furner first identifies what he calls theories of social or distributive justice, those focused on the results of actions taken to distribute amounts of resources among the members of certain populations, according to fair criteria. These theories have the objective of achieving: the reduction of divides, disparities, and inequalities between rich and poor, or between the powerful and the powerless; fairer distributions of social, cultural, economic, and political opportunities where human rights and liberties are respected. Conversely, the author raises the need for theories of injustice or oppression to be contemplated. Theories that expose processes of exploitation, marginalization, cultural imperialism, and violence. Furner concludes that working for social justice involves the basic reformulation of oppressive and discriminatory social practices and institutions, as well as the redistribution of resources. Among such practices and institutions, he places those involved in the production and consumption of knowledge – among which are libraries, information services, knowledge organization systems (KOSs) and systems of bibliographical classification, topic heading lists and thesauri.

Continuing his argument, Furner introduces the theory of epistemic justice developed by Miranda Fricker (2017), which focuses on the equity that people are treated with in their ability to know and to have beliefs. Furner mentions the distinction made by Fricker between two types of epistemic injustice: the distributive type (which occurs whenever such epistemic resources as education or information are unfairly distributed); and the discriminatory type (which takes place whenever failings are attributed to an individual or group); the testimonial type (when preconceptions or deficits of authority are attributed to those producing certain discourses); the hermeneutic type (when subjects are hermeneutically marginalized, that is, they belong to groups with no access to an egalitarian participation in generating social meanings). In Furner's assessment, social justice has become the aim of professionals working in libraries and information services. Still, while these professionals have appropriated applied social epistemology, their grasp of the theory of epistemic justice is still shallow.

Based on the categories and concepts developed through his argument, Furner lays out four arguments for the construction of a CKO: to base it on applied social epistemology (by identifying the conditions under which testimonies should be assessed as true or relevant); to be inspired by values of epistemic justice (not just social justice as the primary end of libraries and information services, but also justice in the dissemination and acquisition of true beliefs); respect of human rights (the right to testimonial justice, to have credibility); and finally, to privilege truth instead of relevance. Furner makes

his proclamation of a veritistic turn for information professionals based on this last point. A relevance-oriented organization of knowledge is that which seeks to assess information practices, institutions and products based on satisfying the wants and needs of users; a truth-oriented organization of knowledge is assessed on the grounds that the beliefs acquired by users are true. Once again, according to the previous discussion, in line with the institutions that certify the character of truth of the statements and discourses in circulation in each society.

One month after verbally presenting this work, in August of 2017, Furner took part in a symposium entitled "Social Epistemology as Theoretical Foundation for Information Science: Supporting a Cultural Turn", at the University of Copenhagen, Denmark. There he gave a conference keynote entitled *Society, Epistemology, and Justice: Prospects for a Critical LIS*? Once again, this lecture set out from the intersection between epistemology and ethics to propose a critical library and information science. To this end he first approached the symposium's focus, social epistemology, as a possibility for CLIS to apply values of truth and relevance in the construction of systems of access to information. Then the author defended the idea that CLIS' mission goes beyond social justice and touches upon epistemic justice, that is, equal access for all people to world-recorded knowledge. As a third point he defended the relevance of a "veritistic turn" in information science, from which truth would substitute relevance as the main prerequisite for providing users with information. In his final proposal, he challenged the area's attachment to the idea of relevance and problematized its adoption of ethical codes claiming neutrality. As a conclusion, he defended the need for a veritistic turn in the face of the "Trump era", one dominated by the circulation of fake news and "alternative facts" (Hartel 2017). The link that this author made with the contemporary questions related to Donald Trump, the president of the United States elected in 2016, and the intense dissemination of fake news triggered the present problematization of his proposal from the standpoint of aspects, traits and dimensions in the phenomenon of post-truth.

A question that arises as central to the field of information science, in view of these discussions, concerns the expected impacts with a possible adoption of a veritistic turn for the field. Naturally, effecting a veritistic turn does not mean abandoning everything that was built over the previous decades. In this way, the challenges of building effective means of dissemination and promotion of access, more sophisticated mechanisms for retrieving information in databases, repositories, and other systems, as well as strategies for meeting the search processes and satisfying information needs, continue being extremely important for the field.

But the idea of a veritistic turn puts the need to verify and verify whether the information is true at the center of the question. This means that much

of the so-called "information processing" work, historically linked to subject identification, indexing, and retrieval, is now centered on the aspect of truth. Therefore, the question of the quality of information itself needs to stop having as its main criterion its "popularity", the number of accesses, views, for its reliability. Greater emphasis needs to be given, therefore, to actions and services that carry out the check, that confirm the veracity. This includes promoting both reputable sources, that is, with a credible history, as well as checking agencies, services dedicated exclusively to carrying out research to identify and report false, distorted, denialist and hateful information.

Likewise, one of the expected results of adopting such a perspective in the field of information science is the collaboration with justice in establishing specific laws related to crimes that are committed through information. Although, in many countries, there are already laws for the punishment of crimes such as slander, libel and defamation, the informational reality has generated both new types of crimes as well as new conditions for their execution in terms of scope and speed. Many countries around the world are currently in the process of drawing up procedures so that social media platforms and search engines can be notified or held accountable for false information being circulated. The typification of false information itself needs to be carried out. A pioneering effort was made by Wardle and Derakhshan (2017), who distinguished between misinformation (dissemination of false information without the intent to cause harm), disinformation (disclosure of false information with the intent to cause harm or mislead) and malinformation (disclosure of information not necessarily false but taken out of context or distorted with a clear intent to mislead or confuse). But new categorizations still need to be made, including categorizations of what fake news, fake science, denialism, false testimonials, hate speech and other forms of disinformation are, and their different impacts on society (Araújo 2021).

In another line, it is expected that the adoption of a veritistic turn can help to increase critical information literacy (Downey 2016) actions, especially in what has been called critical competence in information. Information literacy, which began to be theorized and practiced from the reflection of Zurkowski (1974), has developed in recent decades centered on promoting the capacity of individuals to recognize their information needs, adopt the best search strategies, and use information in a productive, ethical, and responsible manner. In a post-truth scenario, it is necessary to add skills to identify the veracity of the information, the suitability of the sources, and it is this issue that has been worked on within a critical perspective. An example is the ability that people need to identify the existence of the bubble effect and think of strategies to break the bubbles in which they may be inserted (Ferrari 2018; Noble 2018). Or knowing when they are incurring cognitive biases. In both cases, people leaving their comfort zones in search of the contradictory, of information with

other types of points of view and worldview, is fundamental to overcome the challenges brought by the current post-truth scenario (Dalkir and Katz 2020).

6. Final considerations

To return to my initial argument, it is important to highlight that a "turn" in a scientific discipline does not mean that everything done before it should be abandoned. This is true for other scientific areas and information science is no exception. The cognitive turn of the 1980s did not put an end to studies shaped by a physicist perspective, centered on information transport and retrieval. Neither did the sociocultural turn bring about the extinction of studies centered on the triad: data-information-knowledge or of the centrality of users' cognitive experience. Proposing a veritistic turn for information science in no way means abandoning either previous perspectives or the approach constructed over the past two decades around the social construction of information and its links to the social, political, economic, cultural, and technological dimensions shaping information regimes.

In any case it is worth assessing to what extent privileging the notion of "truth" in informational studies could imply or demand a "turn". Some authors have criticized the recurrent "turns" or the emergence of yet another new "paradigm" every twenty or thirty years in information science – a very short span, that could be a symptom of mere fashions. Hartel's own notion of a turn described above could be considered an exaggeration, as it refers to almost concomitant turns – and which therefore would not necessarily be in fact turns but theories or parallel trends within the same area.

As pointed out in the discussion laid out in this article, the past few years have very effectively put forth a new informational reality which has challenged technologies, the experiences of subjects and even the stability of democracy, science, and peace. It is in this sense – of providing the adequate instruments for new realities – that I put forth the present proposal, of granting a centrality to the notion of truth within contemporary information studies. The different conceptual models (or paradigms) developed by information science throughout its existence have always been directly linked to pressing problems at any given time. Thus, the area is again challenged to show its dual traits: respect for accumulated research findings and theorizations on the one hand and the versatility to produce new models in tune with the specific and empirical field of informational phenomena that must be understood in their full complexity.

In any case, regardless of whether there is a need for a veritistic turn, the most fundamental thing is for information science to be in tune with the informational challenges of its time.

The current moment has been designated by different authors as a society of ignorance (Serrano Oceja 2019), an era of resentment (Fukuyama 2018), an Orwell world (Gómez de Águeda 2019), a post-democratic era (Casara 2019), era of national populism (Eatwell and Goodwin 2019), the great setback (Geiselberger 2017). All of them point, in some way, to the failure of the promises of wisdom and peace made in the 1960s and 1970s around the idea of an "information society". All point to the centrality of false information in the erosion of democracy, in the increase in hate speech, in the growth of prejudice, among other dimensions.

In addition to diagnosing the problem, it is also necessary for information science to develop intervention strategies and to combat its perverse effects. As pointed out at the end of the previous topic, the main actions have been pointed out are the creation of mechanisms to certify the veracity and quality of information, the construction of accountability mechanisms for crimes committed through false information, increasing the visibility and circulation of checking services, and the promotion of critical information literacy. The effective implementation of such actions is fundamental, above all, for the maintenance of certain values built in recent centuries, such as democracy, inclusion, the defense of diversity and the encouragement of a culture of peace.

Bibliographic References

Agosto, Denise E. 2018. *Information literacy and libraries in the age of fake news*. Chicago: American Library Association.

Aparici, Roberto, and David García-Marín. 2019. *La posverdad: una cartografía de los medios, las redes y la política*. Barcelona: Gedisa.

Araújo, Carlos Alberto Ávila. 2021. "Infodemia, desinformação, pós-verdade: o desafio de conceituar os fenômenos envolvidos com os novos regimes de informação." *The International Review of Information Ethics* 30 (1).

Bawden, David, and Lyn Robinson. 2012. *Introduction to information science*. London: Facet.

Belkin, Nicholas. 1980. "Anomalous states of knowledge as a basis for information retrieval." *Canadian Journal of Information Science* 5: 133–43.

Blatt, Roberto. 2018. *Historia reciente de la verdad*. Madrid: Turner.

Broncano, Fernando. 2019. *Puntos ciegos: ignorancia pública y conocimiento privado*. Madrid: Lengua de Trapo.

Brookes, Bertram C. 1980. "The foundations of information science: part I: philosophical aspects." *Journal of Information Science* 2 (3-4): 125–33.

Budd, John. 1995. "An Epistemological Foundation for Library and Information Science." *The Library Quarterly* 65 (3).

Budd, John. 2001. *Knowledge and knowing in library and information science: a philosophical framework*. Lanham: Scarecrow.

Burke, Peter. 2000. *A social history of knowledge: from Gutenberg to Diderot*. Cambridge: Polity Press.

Burke, Peter. 2012. *A social history of knowledge II: From the Encyclopaedia to Wikipedia*. Cambridge: Polity Press.

Capurro, Rafael. 1992. "What is information science for? A philosophical reflection." In *Conceptions of Library and Information Science*, edited by Pertti Vakkari and Blaise Cronin, 82-96. London: Taylor Graham.

Capurro, Rafael. 2003. "Epistemologia e ciência da informação." In *Encontro Nacional de Pesquisa em Ciência da Informação*. *Belo Horizonte, Brazil*, *10 de Novembro de 2003*.

Casara, Rubens. 2019. *A era pós-democrática*. Porto: Exclamação.

Cosentino, Gabriele. 2020. *Social media and the post-truth world order: the global dynamics of disinformation*. Cham: Palgrave.

Cronin, Blaise. 2008. "The sociological turn in information science." *Journal of Information Science* 34 (4): 465–75.

D'Ancona, Matthew. 2017. *Post Truth: The New War on Truth and how to Fight Back*. London: Ebury Press.

Dalkir, Kimiz, and Rachel Katz. edited by. 2020. *Naviganting fake news, alternative facts, and misinformation in a post-truth world*. Hershey: IGI Global.

Davis, Charles, and Debora Shaw. 2001. *Introduction to information science and technology*. Medford: Information Today.

Debons, Anthony, Esther Horne, and Scott Cronenweth. 1988. *Information science: an integrated view*. Boston: G. K. Hall.

Dervin, Brenda, and Michael Nilan. 1986. "Information needs and uses." *Annual Review of Information Science and Technology* 21: 3–33.

Dobson, Paul J. 2001. "Critical realism and information systems research: Why bother with philosophy?" *Information Research* 7 (2).

Downey, Annie. 2016. *Critical information literacy: foundations, inspiration, and ideas*. Sacramento: Library Juice Press.

Eatwell, Roger, and Matthew Goodwin. 2019. *National Populism: the revolt against liberal democracy*. New Orleans: Pelican Publishing Company.

Ellis, David. 1992. "Paradigms and proto-paradigms in information retrieval research." In *Conceptions of library and information science: historical, empirical and theoretical perspectives*, edited by Pertti Vakkari and Blaise Cronin, 165–86. London: Taylor Graham.

Fallis, Don. 2000. "Veritistic social epistemology and information science." *Social Epistemology* 14 (4): 305–16.

Fallis, Don. 2002. "Introduction: social epistemology and information science." *Social Epistemology* 16 (1): 1–4.

Ferrari, Pollyana. 2018. *Como sair das bolhas*. São Paulo: Armazém da Cultura.

Foucault, Michel. 1975. *Discipline and punish: the birth of the prison*. New York: Random House.

Fricker, Miranda. 2017. *Injusticia epistémica*. Barcelona: Herder.

Fukuyama, Francis. 2018. *Identity: The Demand for Dignity and the Politics of Resentment*. New York: Farrar, Straus and Giroux.

Furner, Jonathan. 2002. "Shera's social epistemology recast as psychological bibliology." *Social Epistemology* 16 (1): 5–22.

Furner, Jonathan. 2010. "Philosophy and information studies." *Annual Review of Information Science and Technology* 44: 161–200.

Furner, Jonathan. 2014. "Information without information studies." In *Theories of information, communication, and knowledge*, edited by Fidelia Ibekwe-Sanjuan and Thomas Dousa. London: Springer.

Furner, Jonathan. 2015. "Information science is neither." *Library Trends* 63 (3): 362–77.

Furner, Jonathan. 2018. "Truth, relevance, and justice: towards a veritistic turn for KO." In *Challenges and Opportunities for Knowledge Organization in the Digital Age*, edited by Fernanda Ribeiro and Maria Elisa Cerveira, 468–74. Porto: Faculdade de Letras da Universidade do Porto.

Geiselberger, Heinrich. editado por. 2017. *O grande retrocesso*. Lisboa: Objectiva.

Giddens, Anthony. 1991. *The consequences of modernity*. Stanford: Stanford University Press.

Gilchrist, Alan. edited by. 2009. *Information science in transition*. London: Facet.

Gómez de Águeda, Angel. 2019. *Mundo Orwell: manual de supervivencia para un mundo hiperconectado*. Madrid: Ariel.

Greifeneder, Rainer, Mariela Jaffé, Eryn Newman, and Norbert Schwarz. edited by. 2021. *The psychology of fake news: accepting, sharing, and correcting misinformation.* London: Routledge.

Hartel, Jenna. 2017. "Social Epistemology as Theoretical Foundation for Information Science: Supporting a Cultural Turn, Copenhagen, August 16-17, 2017." *Knowledge Organization* 45 (1): 79–84.

Hartel, Jenna. 2019. "Turn, turn, turn." *Information Research* 24 (4).

Hjørland, Birger. 2004. "Arguments for philosophical realism in Library and Information Science." *Library Trends* 52 (3): 488–506.

Hjørland, Birger. 2018a. "Library and information science (LIS), Part I." *Knowledge Organization* 45 (3): 232–54.

Hjørland, Birger. 2018b. "Library and information science (LIS), Part 2." *Knowledge Organization* 45 (4): 319–38.

Hjørland, Birger. 2021. "Information retrieval and knowledge organization: a perspective from the philosophy of science." *Information* 12 (3): 135.

Hjørland, Birger, and Hanne Albrechtsen. 1995. "Toward a new horizon in information science: domain analysis." *Journal of the American Society for Information Science* 46 (6): 400–25.

Kakutani, Michiko. 2018. *The death of truth: notes on falsehood in the age of Trump*. New York: Tim Duggan.

Kirkham, Richard. 1992. *Theories of Truth: A Critical Introduction*. Cambridge: MIT Press.

Linares Columbié, Radamés. 2005. *Ciencia de la información: su historia y epistemología*. Santa Fé: Rojas Eberhard.

Magallón Rosa, Raúl. 2019. *Unfaking news: cómo combatir la desinformación*. Madrid: Pirámide.

McIntyre, Lee. 2018. *Post-truth*. Cambridge: MIT Press.

Molina Fernández, y Félix Moya Anegón. 2002. "Perspectivas epistemológicas 'humanas' en la documentación." *Revista Española de Documentación Científica* 25 (3): 241–53.

Murolo, Leonardo. 2019. "La posverdad es mentira. Un aporte conceptual sobre fake news y periodismo." In *La posverdad: una cartografía de los medios, las redes y la política*, editado por Ramon Aparici y David García-Marín, 65–80. Barcelona: Gedisa.

Naeem, Salman, and Rubina Bhatti. 2020. "The Covid-19 'infodemic': a new front for information professionals." *Health Information and Libraries Journal* 37 (3): 233–39.

Noble, Safiya Umoja. 2018. *Algorithms of oppression: how search engines reinforce racism*. New York: New York University Press.

O'Connor, Cailin, and James Weatherall. 2019. *The misinformation age: how false beliefs spread*. New Haven: Yale University Press.

Ørom, Anders. 2000. "Information science, historical changes and social aspects: a Nordic Outlook." *Journal of Documentation* 56 (1): 12–26.

Pan American Health Organization. 2020. *Understanding the infodemic and misinformation in the fight against COVID-19*. Washington: Regional Office for the Americas of the World Health Organization.

Peters, Michael, Sharon Rider, Mikko Hyvönen, and Tina Besley. edited by. 2018. *Post-truth, fake news, viral modernity and higher education*. Singapore: Springer.

Raatikainen, Panu. 2021. "Truth and theories of truth." In *The Cambridge Handbook of the Philosophy of Language,* edited by Piotr Stalmaszczyk, 217–32. Cambridge University Press.

Revez, Jorge, and Luis Corujo. 2021. "Librarians against fake news: A systematic literature review of library practices (Jan. 2018–Sept. 2020)." *The Journal of Academic Librarianship* 47 (2).

Roark, David. 1982. *Introduction to philosophy*. Dalmor Publishing.

Salaün, Jean-Michel, et Claude Arsenault. 2009. *Introduction aux sciences de l'information*. Montreal: Presses de l'Université de Montréal.

Santaella, Lucia. 2019. *A pós-verdade é verdadeira ou falsa?* Barueri: Estação das Letras e Cores.

Saracevic, Tefko. 1999. "Information science." *Journal of the American Society for Information Science* 50 (12): 1051-63.

Schlesselman-Tarango, Gina. 2017. "Critical Librarianship in a Post-Truth Age." *Library Faculty Publications* 36.

Serrano Oceja, y José Francisco. 2019. *La sociedad del desconocimiento: comunicación posmoderna y transformación cultural*. Madrid: Encuentro.

Silva, Armando Malheiro, y Fernanda Ribeiro. 2002. *Das 'ciências' documentais à ciência da informação: ensaio epistemológico para um novo modelo curricular*. Porto: Afrontamento.

Spasser, Mark A. 2002. "Realist activity theory for digital library evaluation: Conceptual framework and case study." *Computer Supported Cooperative Work* 11 (1/2): 81–110.

Wardle, Claire, and Hossein Derakshan. 2017. "Information disorder: toward an interdisciplinary framework for research and policy making." *Council of Europe*.

Weir, Lorna. 2008. "The concept of truth regime." *Canadian Journal of Sociology / Cahiers canadiens de sociologie*, 33 (2).

Wilber, Ken. 2017. *Trump and a post-truth world*. Boulder: Shambhala.

World Health Organization. 2020. *1st WHO infodemiology conference How infodemics affect the world and how they can be managed*. Geneva: World Health Organization.

Zarocostas, John. 2020. "How to fight an infodemic." *The Lancet* 395 (10225): 676.

Zielinski, Christoph. 2021. "Infodemics and infodemiology: a short history, a long future." *Rev Panam Salud Publica* 45: 1–8.

Zurkowski, Paul G. 1974. *Information services environment relationships and priorities*. Washington D.C.: National Commission on Libraries.