CHALLENGES OF THE INFORMATION SOCIETY IN RECOVERING AND USING INFORMATION IN DIGITAL ENVIRONMENTS

DESAFIOS DA SOCIEDADE DA INFORMAÇÃO NA RECUPERAÇÃO E USO DE INFORMAÇÕES EM AMBIENTES DIGITAIS

[1]Samyr Santos Delfino
[2]Júlio Afonso Sá de Pinho Neto
[3]Marckson Roberto Ferreira de Sousa
Universidade Federal da Paraíba[1,2,3]

Correspondence to Author

Samyr Santos Delfino
Universidade Federal da Paraíba
João Pessoa, PB - Brasil
E-mail: samyrsd@gmail.com
ORCID: https://orcid.org/0000-0002-2221-3192

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ABSTRACT

For contemporary society, also known as the information society, information is considered to be its most valuable asset. But even at the heart of this new society, the sheer volume of information triggers a number of problems.

Freedom in communication, made possible through the use of the internet and social networks, associated with the lack of hierarchy in the production and dissemination on the internet, enhances the emergence of a flood of information that hinders the ability of their users to analyze and critique.

Problems such as post-truth, fake-news and misinformation are becoming increasingly common and raise questions regarding the quality of the members of this society, since opinion formation is directly influenced by the quality of information available on the Internet and social networks.

With this in mind, it is considered opportune to conduct a bibliographic research in order to investigate actions aimed at identifying fake-news in the context of post-truth, as well as combating its production and dissemination, since at the present time when If the information society is found, there are potential problems related to the large volume of information available.

KEYWORDS

Information, fake news, information society.

RESUMO

Para a sociedade contemporânea, também conhecida como sociedade da informação, a informação é considerada como sendo o seu bem de maior valor. Porém, mesmo sendo o cerne dessa nova sociedade, o grande volume de informação desencadeia uma série problemas.

A liberdade na comunicação, possível através do uso da internet e das redes sociais, associadas à ausência de hierarquia na produção e disseminação na internet potencializa o surgimento de uma inundação de informações que dificultam a capacidade de análise e crítica por parte dos seus usuários.

Problemas como pós-verdade, *fake-news* e desinformação se tornam cada vez mais comuns e despertam questionamentos referentes à qualidade dos integrantes dessa sociedade, uma vez que a formação de opinião sofre influência direta da qualidade das informações disponíveis na internet e nas redes sociais.

Pensando nisso, se vê como oportuno a realização de uma pesquisa bibliográfica com a finalidade de investigar ações visando a identificação das *fake-news* no contexto da pós-verdade*,* bem como, combater a sua produção e disseminação, pois no atual momento em que a sociedade da informação se encontra, percebe-se o surgimento de potenciais problemas relacionados ao grande volume de informações disponíveis.

PALAVRAS-CHAVE:

Informação, *fake News*, sociedade da informação.

Introduction

The ability to analyze and critique available information in order to understand the world around us and thereby decide whether or not to make use of such information, or simply to decide whether to share it with other members of society, is a desire and a need for all members of contemporary society, also known as the information society.

The presence of technologies, also known as information and communication technologies (ICTs), in the daily lives of the members of the information society exerts a huge influence on their lives, imposing impacting changes on their social and economic relations and favoring the emergence of new habits. provide changes in the performance of basic daily activities, such as the communication process itself.

The large number of existing media enables the production and dissemination of an abundant volume of information, providing an information overload that results in various behavioral changes of members of the information society. Coupled with this large number of communication channels can also be mentioned the fact that the internet allows real-time integration independent of geographical issues that were once perceived as barriers to the flow of information.

In an environment with high potential for social interaction, the production and dissemination of information becomes a point of concern in a scenario where the same user can assume both the role of producer and consumer of information. This increases the complexity of ensuring the quality of the information shared there.

According to Varela (2007), the degree of development of a society can be evidenced by the quality of information available to its community, thus being of low quality and credible information, such as false, unchecked information, such as rumors, slander or defamations also known as fake news become a big problem for the information society.

The destructive potential of fake or fake news is incalculable, given the high level of interactivity among social network users, enabling a reach that can easily reach millions of users in a short time. Even with this destructive potential, a point that draws attention is the fact that, according to Azzimonti and Fernandes (2018), few studies are being conducted focusing on how the presence of fakes news in social networks and media affect misinformation and polarization. in a society.

In addition to the negative potential caused by sharing fake news, other problems may be linked to the production and dissemination of a large volume of information through social networks and other means of sharing information in digital formats. Second, Fontes and Gomes (2013) the members of the information society live a certain constant dissatisfaction, which makes them always looking for something new. The immediacy present in this society has made the time of satisfaction with information become smaller and smaller, because the number of possibilities for new information to be available increases anxiety and, thus, the search for satisfactory information becomes endless.

Analyzing this scenario, the area of information science provides viable reflections to list the main problems and also pointing out the possible solutions that can be taken in order to mitigate this controversy. Following this reasoning, there is the emergence of some concepts, among them it is worth highlighting the concept of post-truth, incorporated in 2016 to the Oxford dictionary that presented the following definition:

> Relating or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief. (OXFORD, 2016)

As for possible solutions, some actions taken in the field of education, as well as in the legal area, are identified through the creation of laws that aim to regulate the creation and dissemination of this information in an attempt to hold its authors responsible for possible damages that may occur. may occur.

Given the above, it is quite appropriate to conduct a bibliographic study that aims to gather information regarding practices in the areas of information science, education and legal sciences, in order to define a set of actions that can be implemented for a better understanding of access and use of digital information that is shared on the Internet, in the fight against fake news, post-truths and misinformation.

In this sense, this article is subdivided into four topics, the first topic being the search for understanding and understanding about the concepts associated with the creation of the term "information society", the second topic is related to the problems identified in digital information shared on the internet, by understanding the concepts associated with zombification "which is the impact that the consumption of false information has on the members of a society" of information and post-truth. In the third topic, studies related to the good practices of access and use of digital information in the educational environment will be explored, as well as the legal initiatives carried out with the purpose of standardizing and making the authors of fake news responsible. Finally, in the fourth topic will be presented the final considerations containing observations on the problems and actions to solve these issues, improvements identified throughout the article.

Information Society

For Oliveira (2012), innovation is a fundamental characteristic of human beings in their search for survival. This must be one of the most striking features of contemporary society due to the strong presence of technological resources that are in all segments of society.

The presence of information technology (IT) can be perceived all the time and everywhere. Simple activities such as conducting a face-to-face conversation are being replaced by dialogues conducted by instant messaging applications, which completely

changes the way information is generated, stored and shared.

The influence of technology on the behavior of society began shortly after World War II, the third industrial revolution, marked by the increasing use of computer resources in production processes. However, with the creation and popularization of the internet, globalization emerged as a process that establishes the economic, social and cultural integration between markets and people in the various countries of the world, and this influence gained strength and, indeed, changed (and still has been changing) the habits of contemporary society.

The aforementioned technological influence propitiates the creation of a migration scenario from a traditional to a digital world, where the use of technologies overcomes traditional habits. An example of this change can be seen in the communication process, such as electronic communication, which is preferred by the population. The choice of electronic resources is justified for several reasons, but agility and practicality are the most significant. In this sense, according to Le Coadic (2004), it is correct to state that electronic systems shorten the execution time of information search and processing tasks.

Technological advances have exerted a strong influence on various organizational, technical and administrative changes, enabling information to be the status of most valuable asset to society and thereby creating the information society.

The concept of the information society, which according to Werthein (2000), was used in the early 21st century as a substitute for the complex concept of "postindustrial society" refers to an "informational" society influenced by the emergence new technologies with greater emphasis on the flexibility, agility and mobility of the information produced, consumed and shared by all members of this society.

According to Castells (1999, quoted by Werthein, 2000), the transformations towards the information society have some fundamental characteristics, namely:

- **Information as its raw material** - information becomes the center of attention, unlike in the past when technology was just an input in the pursuit of improvements in technology.
- **High penetrability of technologies in contemporary society** - information becomes an integral part of all human activity, individual or collective with these activities come under the direct influence of technology.
- **Preference for network logic** - the possibility of new technologies being implemented in any type of process.
- **Flexibility** - the use of technology allows the reversal, modification and reorganization of processes, following the concept of liquid modernity,

defined by Bauman (2001).
- **Technological convergence -** trajectories of technological development in several interconnected areas of knowledge.

Corroborating this understanding, Fontes and Gomes (2013) state that the emergence and popularization of the internet, which advances and renews itself daily, can be understood as responsible for the processes of reconfiguration of social and cultural practices in the information society. The choice of the internet to make the communication process viable gave rise to the option for immediacy, which in the ICT scenario can be represented by agility and mobility. These concepts refer to the idea of adaptability, where information becomes available regardless of its form, aligned with the concept of "liquid modernity" defined by Bauman (2001), which alludes to the flexibility and adaptability to the frequent changes that this society may undergo.

In addition to the need for adaptability to new forms of communication and social interaction, members of the information society are also forced to face other challenges related to the large amount of information they are exposed to on a daily basis, such as the inability to analyze and differentiate with each other. clarity and reflection the immense volume of information to which they are often exposed, which can be defined, according to some authors Oxford (2016) and Leite and Matos (2017) as post-truth, misinformation or just fake news".

Zombification of Information Through the Post-Truth Concept

Zombification is a current concept, created to exemplify the impact that the consumption of false or untrustworthy information on members of the information society. According to Leite and Matos (2017), the definition of Zombification refers to:

> the process of disseminating and consuming false or distorted information without realizing it, due to the lack of critical interpretation and source checking, contributing to the widespread infection of misinformation on the Internet. (LEITE AND MATOS, 2017)

This concept is very much in line with the scenario experienced by the members of the information society. Environments with abundance of information and low hierarchy index in the process of production, evaluation and dissemination of this information is conducive to the emergence of information with low credibility now known as post-truth, misinformation or fake news.

It is quite true that this type of information already existed, formerly known as slander, lies, among other terms often used before the popularization of the internet and social networks. It is also true that the emergence and popularization of the Internet, and other data-

flow features such as social networks, have greatly increased the incidence of producing and sharing false information, reaching a level where, according to Leite and Matos. (2017), the number of false information disseminated on the Internet is higher than the number of true information.

In this sense, it should be noted that, according to Alonso Muñoz and Casero Ripolles (2018), one of the factors that can influence a message to go viral is its content, even more important than the source from which this information was sent. generated.

This reality greatly hinders the ability to analyze and critique information, especially when it comes to judgment in determining whether certain information is legitimate and true or not. Such difficulty triggers the warning about the quality of the opinions currently being formed, as these opinions may probably be based on false information that did not originate from reliable sources.

The contribution of Information Science to advances in studies to combat tinnitus on the Internet is evident when one realizes that the crux of the problem in question lies in the information itself. It is noteworthy that the production, dissemination, access and use of information are already objects of study of Information Science.

Another highlight is the fact that Information Science is understood as a multidisciplinary area, which favors studies of this nature due to the need to understand well diversified elements such as cognitive studies and technological elements, such as mobile devices that allow greater agility. in accessing and using digital information, necessary for understanding the digital environment that this information is being disseminated.

Post-truth

The use of the term post truth is not recent, as according to the Oxford Dictionary (2016) the term was first used in 1992 by Steve Tesich, who wrote about the Iran scandals and the Gulf War.

Post-truth gained visibility in 2016 due to the large amount of information produced and shared via the web related to the US presidential election and the departure of the United Kingdom from the European Union (Brexit). That year the word after truth was elected the word of the year, according to the Oxford Dictionary (2016).

Still in 2016, the Oxford Dictionary incorporated the term into its publication as an adjective with the following definition: "Relating or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief."

Other definitions or associations to the term post-truth emerged at this time, such as terms such as unchecked information, gossip, slander, and slander. In the digital world post-truth is even better known by the term fake news which means fake news.

According to Monteiro (2016) quoted by Silva, Luce and Filho (2017) considering the massive presence of post-truth reports related to political items, it is suggested the emergence of a political post-truth, described as:

> part of the process of accelerated / amplified dissemination of data generated in Information / Communication Technologies - ICTs, in view of the rapid dissemination, in which endless versions of facts are inevitable, which would be important / relevant if it eliminated nonsense of dichotomies, but the verifications increasingly complex, diverse, diverse ... have generated this obscure face, 'polyatomic' / 'multichotomies' the B side, the dark side of realities; - In this way, skewed / distorted / rumored / gossiped information specialists ... (spin doctors) take advantage of the uncertainties / insecurities caused by breaking dichotomies creating post-truths, new truths, pseudo-truths, half-truths ... supported by evidence / conviction, as facts have become hybrid / complex to verification. (MONTEIRO, 2016).

Still on the understanding regarding post-truth, Keyes (2004) suggests the presence of a third element in the informational context, where there is information that cannot be classified as completely true or as completely false. In this sense, Higgins (2016) presents a relativistic view on post-truth where understanding may vary from person to person, thus opening another question: what would be true?

Understanding/defining what is or is not true is a very recent subject of study that, according to Silva, Luce and Filho (2017), there are few studies conducted within the Academy, having as a complicating factor the speed of production and dissemination through from social media.

Even if it is a recent theme, with few academic references, it is possible to identify works that point out ways of verifying informational content online. As with Tomáel et al. (2001), which emphasizes the consistency and reliability of information as ways of verifying its veracity. The first refers to the content of the information, that is, if the data presented are coherent, the second analyzes the credibility of the source that elaborated it.

The uncertainties related to the post-truth, particularly the difficulty in defining what is true and what is false, coupled with the increasing use of social media by much of contemporary society has greatly spurred the creation and sharing of spontaneous information.

Spontaneous information arises through a process without hierarchy, where freedom of production provides for the creation of information based on opinions, untruths and "own

truths" that are created by anyone and shared as absolute truths through social media. According to Marteleto (2001), this phenomenon can be called as the "Post-Truth Age".

The term "post-truth age" came from expanding access to information through the popularization of Internet use, especially via social media, especially on Facebook, Twitter, YouTube and WhatsApp that have a wide reach and penetration to the average user. from Internet.

The existence of post-truth is not related to the growth and popularization of technology, especially the internet and social networks. However, it is evident that the use of these technological resources enhances the impacts provided by the creation and sharing of this information.

Studies on the impacts and actions to combat tinnitus, fake news and post-truth on the Internet are complex and this complexity is even more evident when analyzing the possible motivations that lead a user to produce or disseminate false information, because this practice it may only be the result of your ignorance or even an intentional attitude aimed at causing misinformation motivated by some illicit demand.

Thinking about preventing and combating this reality goes far beyond thinking only about issues related to motivations, whether intentional or not, that lead a user to produce and disseminate this information on the Internet. It is necessary to seek understanding regarding the reasons why users prefer information without credibility over information from reliable sources.

Awareness of the Use of Digital Information

When talking about actions related to digital culture, awareness of the use of digital information or just digital information, possibly the first reflection that is made is related to the activities of fostering digital inclusion. Actions that benefit digital inclusion are beneficial, at first, to foster a culture of social inclusion, but if poorly designed, can potentiate the impacts generated by the creation, dissemination, access and use of false information.

In a globalized scenario, where contemporary society is recognized as the information society due to the strong influence arising from the presence of technology. Not being digitally included refers to a social exclusion, this statement becomes true when we recognize that various social practices have changed with the inclusion of technology in the daily life of the information society.

According to Silva (2005), digital inclusion is a topic of great social and economic interest, for this reason the government invests in the development of various fomentation actions following the premise that without "digital citizens" there is no "electronic government". This interest initially consists in justifying improvements in the quality of life of digitally included people, but it is evident that these actions favor the increase of business relationships, as electronic business transactions increase significantly, as more individuals are included in the digital universe.

Regarding issues related to the quality of digital information, the central object of this work, digital inclusion actions with a unique and exclusive focus on the insertion of members of society in the digital means of communication and interaction represent a risk to increase the production of false information, regardless of the motivation and thus favoring the increase of post-truth adept users. As a way to combat this problem, it is necessary to develop actions related to the conscious use of digital information, thus providing the emergence of conscious users, whose fundamental concern is to prioritize reliable information for the development of quality knowledge.

Given the complexity that exists for the development of studies related to the theme of access and use of digital information in a conscious way, we can see the contribution that the area of Information Science can make available, not only because it has information as its core of its object of study, but its multidisciplinary feature allows CI to engage in an efficient dialogue with other areas of study such as ICT and education.

Education for Information Competence

The movement of education for digital information had as its main landmark the end of the twentieth century through a worldwide mobilization in favor of the insertion of society in this new context of the information society. Throughout this period, various initiatives have been undertaken in various countries to build national policies aimed at building programs capable of making society acquire, in fact, the status of an "information society".

In Brazil, according to Silva (2005), this effort resulted in the publication of the Information Society Green Paper (SOCIEDADE, 2000). Also, according to the author, the publication brings the concept of digital literacy that consists in the formation of citizens not only qualified to deal with technological resources, but also with knowledge in the use of digital platforms in favor of personal and collective interests.

According to Society (2000), education can be seen as a determining factor for social inequality. In this sense, the author states that:

> Education is the key element in building a society based on information, knowledge and learning. A considerable part of the gap between individuals, organizations, regions and countries is due to unequal opportunities for developing the ability to learn and realize innovations. (SOCIETY, 2000)

Still on digital literacy, it is evident that for its viability it is necessary that the citizen has the ability to perform the retrieval of digital information available on the Internet. In this sense Le Coadic (2004) contributes the following comment:

> The amount of information on the Internet leads to questions about the skills needed to learn and learn to inform, where to acquire information is a warning about the absence of such learning in the education system. (LE COADIC, 2004).

The contribution of Le Coadic (2004) brings up the impact of the volume of digital information available on the Internet and the absence of this theme as an object of study in the field of education. This contribution allows to highlight the need to reformulate the foundations of education for the information society, which has already been conceptualized as a "digital literacy", including a better understanding of elements impacted by the excessive production of information and their impacts on the environment. the society.

In addition to education, legal initiatives can also be seen as important in combating the production and proliferation of fake news and in the more efficient selection of information by prioritizing the choice of information from the most reliable sources. In this sense, it is considered opportune to study the laws created in order to regulate the production and dissemination of information in digital environments. Like the internet and social networks.

Regulation for Access and Use of Information in Digital Environments

Within the legal scope, as regards the conscious and responsible use of information made available on the Internet and social networks and regulations that provide for punishments for transgressors, we highlight the "Internet Civil Framework" (Marco Civil da Internet), also known as Law No. 12,965 / 2014 and the General Data Protection Act (LGPD), also known as Law No. 13.709 / 2018.

The "Internet Civil Framework" (*Marco Civil of the Internet)* project started in 2009 but was approved only in 2014. According to Brazil (2014), it establishes principles, guarantees, rights and duties for the use of the internet in Brazil and determines the guidelines for its operation. Union, States, Federal District and Municipalities.

"Internet Civil Framework" (*Marco Civil of the Internet)* proposal is to address topics such as network neutrality, privacy and data retention. In addition, other points are related to

the social function of the internet in terms of guaranteeing freedom of expression and the transmission of knowledge and the definition of liability obligations of users and providers.

With regard to LGPD, its approval had a direct bearing on events related to data security scandals that resulted in information leaks that influenced events such as presidential elections, as well as sales of large masses of data containing sensitive user information.

In this sense, according to Brazil (2018):

> This Law provides for the processing of personal data, including in digital media, by a natural person or legal entity governed by public or private law, in order to protect the fundamental rights of liberty and privacy and the free development of the personality of the natural person. (BRAZIL, 2018).

In Article 2 of the aforementioned Law, the discipline of the protection of personal data is based, among others, on respect for privacy and the inviolability of intimacy, honor and image. These topics are closely related to the need and desire to regulate and punish the practice of producing and disseminating fake news and purposeful misinformation regardless of their motivation.

Final Considerations

The presence of ICTs in everyday life in society is a reality that cannot be reversed, on the contrary, what is expected for the near future is that this man-machine relationship will be even closer, to the point of being confused in certain contexts.

In this scenario, the performance of the Information Science area is extremely relevant, with studies in the subareas of information architecture, user studies and pervasive information architecture aiming at the development of improvements in this relationship, enabling the development of resources for a better retrieving, accessing and using information made available and shared on the Internet and social networks.

Regarding actions in the area of education, it is evident a gap that needs to be filled in educational policies that aim at greater understanding, reflection and critical sense on the part of society regarding the selection of information that will serve as a basis for the formation of these citizens' opinions. It is worth noting that these actions, when well designed and implemented, have great potential to offer society positive results that can be perceived by reducing the number of false information available on the Internet and social networks.

Still regarding the actions related to the area of education, a question remains open and may serve as a basis for the development of future works: when is the moment to insert

studies on the conscious use of technological resources in the academic life of a citizen? The importance of this question becomes evident when we recognize that contact with ICT resources has been occurring earlier each day.

Within the scope of the legislation, the creation of the Internet Civil Framework and the General Data Protection Law can be recognized as important advances in the search for the use of a more conscious internet. However, considering its short time of creation, it has not been possible yet. To identify outcomes, however, they are expected to be identified in the near future.

In addition to the actions mentioned in this paper, several others have been carried out to combat the rise of fake news on the Internet and social networks through the use of technologies developed by ICT companies. A good example of this is Facebook's use of neural networks, which demonstrates a clear investment in Artificial Intelligence to analyze trillions of shared posts. The goal is to identify fake news and thus avoid sharing it due to lack of user knowledge about it.

The joint action of society and government to develop actions in the field of education, technology, social policies and regulatory measures can be seen as an excellent indication of society's desire to combat the irrational use of internet and Internet resources. social networks, this shows that the idea that the internet is a "land without laws" is no longer being accepted.

The speed with which technology advances becomes an aggravating factor in the search for this control, but as mentioned by Castells (2005):

> The internet is a tool that develops but does not change behaviors; on the contrary, behaviors take ownership of the internet, amplify and empower themselves from what they are. (CASTELLS, 2005, p. 273)

The idea of focusing on users to develop actions to combat fake news, misinformation and post-truth strengthens as the best way forward, as problems are generated due to user behavior and will be through improvements in this. behavior that solutions will be identified and applied.

References

MUÑOZ, A., L., RIPOLLES, C,. A. **Comunicação dos líderes populistas europeus no Twitter: Configuração da agenda e o efeito 'mais é menos'**. El Profesional de La Información , 27 (6). doi: 10.3145 / epi. 2018.

AZZIMONTI, M., FERNANDES, M. (2018). Redes de mídia social, notícias falsas e polarização. Disponível em: https://ideas.repec.org/p/nbr/nberwo/24462.html Acesso em 04 nov. 2019.

BAUMAN, Zygmunt. **Modernidade líquida**. Rio de Janeiro: Jorge Zahar Ed., 2001.

BRASIL. Lei Nº 12.965, de 23 de Abril de 2014. **Marco civil da internet.** Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/l12965.htm. Acesso em 10 fev. 2019.

BRASIL, Lei Nº 13.709, de 14 de Agosto de 2018. **Lei geral de proteção aos dados**. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2015-2018/2018/Lei/L13709.htm Acesso em 05 fev. 2019.

CASTELLS, Manuel. **A era da informação**: economia, sociedade e cultura. *In:* A Sociedade em rede, Rodrigo G. de Azevedo. São Paulo: Paz e Terra, 1999. v. 1.

CASTELLS, Manuel. **Internet e sociedade em rede**. *In:* MORAES, D. (Org.). Por uma outra comunicação: mídia, mundialização cultural e poder. 3. ed. Rio de Janeiro: Record, 2005.

FONTES, Gabriela Scroczynski, GOMES, Icléia Rodrigues de Lima Cibercidades: as tecnologias de comunicação e a reconfiguração de práticas sociais. **Inf. & Inf**., Londrina, v. 18, n. 2, p. 60 – 76, maio/ago. 2013.

HIGGINS, K.; Post-truth: a guide for the perplexed. **Nature**, Londres, v. 540, n.9. 2106. Disponível em: http://www.nature.com/news/post-truth-a-guide-for-the-perplexed-1.21054. Acesso em: 19 fev. 2019.

KEYES, R.; **The Post-Truth ERA:** dishonesty and deception in contemporary life. New York: St. Martin's Press, 2004.

LE COADIC, Yves-François. **A ciência da informação**. Brasília: Briquet de Lemos, 2004.

LEITE, Leonardo Ripoll Tavares, MATOS, José Claudio Morelli. Zumbificação da informação: A desinformação e o caos informacional**. Revista Brasileira de Biblioteconomia e Documentação** – v. 13, n. esp. CBBD 2017.

MARTELETO, R. M.; Análise de redes sociais- aplicação nos estudos de transferências da informação. **Ciência da Informação**, Brasília, DF, v.30, n.1, p.71-81, 2001.

MONTEIRO A. F.; **Comunicação hi-tech**: digital e pós-verdade política. *In:* PENSACOM BRASIL – GT5 Comunicação e Política, 1, São Paulo - SP, 2016.

OLIVEIRA, C. B; **Uma proposta de arquitetura da informação para o processo de inovação em centros de pesquisas**. Tese (doutorado) - Universidade de Brasília, Faculdade de Ciências da Informação, Programa de Pós-Graduação em Ciências da Informação (PPGCINF) – Brasília, 2012.

OXFORD DICTIONARIES. **Oxford dictionaries word of the year 2016**. Londres, 2016. Disponível em: https://www.oxforddictionaries.com/press/news/2016/12/11/WOTY-16. Acesso em: 19 fev. 2019.

SILVA, Helena et al. Inclusão digital e educação para a competência informacional: uma questão de ética e cidadania. **Ci. Inf.**, Brasília, v. 34, n. 1, p.28-36, jan./abr. 2005

SILVA, L. M.; LUCE, B.; FILHO, R. S.; Impacto da pós-verdade em fontes de informação para a saúde. **Revista Brasileira de Biblioteconomia e Documentação** – v. 13, n. esp. CBBD 2017.

Sociedade da informação no Brasil: **livro verde** / organizado por Tadao Takahashi. – Brasília: Ministério da Ciência e Tecnologia, 2000.

TOMAÉL, Maria Inês et al. Avaliação de fontes de informação na Internet: critérios de qualidade. **Informação & Sociedade**, João Pessoa, v.11, n. 2, p. 13-35, 2001.

VARELA, Aida. **Informação e construção da cidadania**. Brasília, DF: Thesaurus, 2007.

ZUCKERBERG, Mark. Conversation with Mark Zuckberg, 2016. Techonomy. Disponível em: http://techonomy.com/conf/te16/videos-conversationswith-2/in-conversation-with-mark-zuckerberg/. Acesso em 20 fev. 2019

WERTHEIN, Jorge. **Ci. Inf**., Brasília, v. 29, n. 2, p. 71-77, maio/ago. 2000