
Media Misinformation and Information Management in the Era of New Technologies

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Abstract

It is critical to comprehend how information, when properly handled, may become an organization's major source of insight and competitive advantage. Information management is critical to attaining the organization's objective and strategy, confirming its business or area of activity, and ensuring the profitability of its human and tangible resources. As a result, companies frequently structure and classify information based on its organisation, functions, and activities; in other words, depending on documentary production, information flows between departments, archiving, and proof of what the information represents. Misinformation and disinformation are genuine challenges to quality information in the era of new technologies, where the digital paradigm shift is everywhere, and can threaten the effectiveness of good information management. The focus of this paper is to bring to the fore how organisations can address the dangers of this negative reality of misinformation by instituting essential information management practices through highlighting ideas and beneficial approaches. These include the requirement that all employees of an organisation should have media literacy abilities, which the institution can cultivate and explicitly supply through lifelong learning.

Keywords: Media, media literacy, misinformation, disinformation, information management; new technologies.

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Introduction

An organisation's most valuable asset is information. The organisations that have more information and know how to manage it more suitably to their vision and plan will be able to achieve competitive advantage than their competitors. The information that an organisation collects, files, processes, and produces is what gives it the competitive intelligence it needs to survive and succeed more than its competitors in the business or organisation of its environment. Analysing the environment, competition, politics, law, the economy, society, and technology allows for the forecast of future trends, the prediction of future issues, and the most effective options for achieving previously set goals. The collection, processing, production, dissemination, and use of information are all part of these researches, analyses, and projections, which help firms in making decisions and obtaining knowledge and competitive intelligence. Information is available on any mobile or fixed device with an internet connection, making it a weapon that is more accessible to everyone, allowing for faster learning, anticipation, and more ability to innovate (Barbosa, 2008).

Information management has its roots in documentary production and is critical to any organisation's success. The data and information that enters an institution can only be disseminated and used if documents are created or produced. Data are processed into information, which is then acquired and processed into knowledge through individual perception, comprehension, concepts, and values. As a result, information managers are essential players in the management of organisations; they are the organisers of knowledge and the various types of information that organisations distribute to their human resources. The speed and ease with which information is transmitted through information and communication technology have become a significant problem for companies and information managers in the new technologies' era. But there is also the "evil side" of the new technologies' era, which manifests itself in misinformation.

More than ever before, humanity is now confronted daily with floods of bogus news, which are shared with millions of people on social media. These are fake news taken out of context and dressed up as correct news. Only the most informed and equipped will be able to deal with the era of new technologies, separating information from disinformation, misinformation, and fake news, and the truth from intended deceit given by any digital

platform. “The lifelong development of critical and digital skills, in particular for young people, is crucial to reinforcing our societies' resistance to misinformation” (European Commission, 2018).

There have been significant shifts in the convergence of media and technologies throughout the last decade. Many emerging technologies, such as social media, depend on a huge data collection. They rely on their users to generate massive amounts of rich, unstructured data in many formats—location data, photographs, text, information about their emotions, music they listen to, movies they watch, things they buy, and so on (Kelly, 2017). Customers benefit from this extensive data by receiving improved services such as less crowded travel routes, restaurant recommendations, and movie recommendations. Many services would not be able to function without a constant influx of data from big groups of people. Simultaneously, the same data is exploited for political purposes, advertising, and behaviour engineering (Kramer, Guillory, and Hancock, 2014). Most services rely on real-world data generated by users in their daily activities and communications, which differ significantly from traditional research data collected through instruments such as interviews or questionnaires, and those services frequently fail to meet the “informed” part of informed consent (Tufekci, 2015).

Experiments show that social networks can spread emotional contagion on a large scale (Kramer, Guillory, & Hancock, 2014). While social media platforms were originally designed to allow people to communicate, they have evolved into essential avenues for the production and dissemination of information and news. In the United States, Spain, Italy, and the United Kingdom, for example, majority of adults today get their news through social media (Di Domenico, Sit, Ishizaka and Nunan, 2021).

False stories have existed for as long as humans have lived in communities (Burkhardt, 2017), evolving in tandem with writing and communication technologies. Unfortunately, there has been a rapid proliferation of misinformation through social media channels in recent years, which has been dubbed "fake news." Investing in information and media literacy is one way to combat the negative aspects of the new technologies' era.

The importance of information in the workplace

The global community witnessed amplified expansion of information

technology at the end of the twentieth century, and with the global spread of the internet exploding in the 1990s, information became increasingly easy to obtain and access to a vast portion of the world's population, including organisations (Pinto, Carvalho, Martins and Braga, 2020). At the time we were witnessing an abundance of information, a need to distinguish superfluous information from critical and relevant information had begun to arise. Herbert Simon in 1971 had already addressed the issue of information overload, arguing that computer systems were required to digest all of the information that was available at the time. Organizational investment in information and communication technology was fast increasing, and with it, individual investment in their own training in new information technologies. Managers quickly grasped the importance of developing strategies for information-based businesses as vital tool for competitive advantage in this highly competitive environment.

Lesca and Almeida (1994), cited in Pinto et al (2020), investigated the strategic management of information, expanding their research and uncovering compelling arguments that support the critical role of information in businesses, such as:

Decision making support – For organisations to be as sustainable and successful as possible, judgments must be made based on complete, current, accurate, contextualised, and appropriate information, and they must be made on time;

For Production – Where every organisation has a better likelihood of generating products and services with higher added value for consumers with appropriate information and proper management;

For Synergy - To achieve positive results for an organisation, information classification and distribution are critical. Each department and employee must have the necessary, correct, up-to-date, and timely information to carry out their activities and know the best path to assist the organisation with their works, otherwise, they will be unable to communicate effectively between themselves, which may result in doubts, fears, and poor performance;

For Determinant of behaviour - At the internal level of organisations, information is crucial for all human resources to be aligned with the mission and strategies to follow, performing their roles and tasks for the same purposes

while externally, the research and collection of information from the market, stakeholders and competitive environment, to information transmitted from customers, suppliers and competitors or even public opinion, thus information is one of the most important strategic factors.

From search to document production, processing, classification, update, archive, or retrieval, information management entails a tremendous deal of responsibilities for managers. Furthermore, some principles should be observed so that information organisation plans may be easily perceived or translated to various locations and contexts, such as different computer platforms, if necessary. Most organisations nowadays have an information system or multiple integrated subsystems that contain all of the organization's functions and activities, ranging from customer management, billing, procurement, and related documentation produced by each of these activities, to data received by the organisation, filed information, and so on. As a result of the amount of information they support and the simplicity with which information is distributed, most of the information systems are supported by computers. They cover all stakeholders, activities, documents, and their management, functions, and personnel assigned to them. Information management, information system planning, and implementation are all examples of informational functions in businesses. It is also critical to examine the maintenance of these systems, as well as the contribution to employee training, as users of information systems are the primary contributors to the design and maintenance of information systems throughout time.

Components of Information Management

Information management must contain all aspects of its life cycle, which include: (i) documentary production; (ii) organisation and archiving; (iii) dissemination; and (iv) information use.

Information management encompasses very similar and common activities to those of libraries. Therefore, information management, regardless of the organisation in which it is implemented, starting with information acquisition or production, naming the produced documents, information distribution phase, the enterprise architecture, the information systems and/or subsystems, the participants, the information flows, the roles responsible for the activities, the distribution of information, human resources' training, and

the information system's security should all be considered especially where institutionalised practises are important and for which there should be norms.

Lastly, in the use of information, which is the ultimate goal of information management, the manager must devote all of his efforts to achieving the organization's intended outcomes by enforcing previously established and stated objectives and assuring information system maintenance.

Actors in Information Management

Actors in information management are individuals who intervene in the organization's information management process (Pinto, et al (2020), citing Tarapanoff, Suaiden & Oliveira (2002) identified seven profiles of actors in information management. These are:

Information managers, who ensure that information, is available to those who require it;

Knowledge workers, who use the information to support organisational and production management, or who convert information into knowledge;

Knowledge managers - knowledge management professionals - Chief Knowledge Officers – who are in charge of the strategy and implementation of information assimilation methods within organisations, as well as updating, refreshing, and modernising employees' knowledge;

Knowledge engineers, who develop the means to carry out the processes' intended direction;

Specialists in knowledge management who are in charge of information transfer;

Specialists in information content who supply information services (content); and

Information technology specialists who are experts in the use of intelligent tools.

Given the volume of information that floods our devices daily, primarily via the internet, it is critical to distinguish what is relevant and true for the

organisation, making it critical for these information managers to effectively play their role in organisations in order to prevent data loss, underutilization of existing knowledge, and the spread of misinformation.

In the age of new technology, information, decontextualization, misinformation, and disinformation are all common terms. Considering information as a collection of data that has been properly processed and interpreted in the light of a specific context, body of knowledge, or situation, it is easy to conclude that disinformation and misinformation are the exact opposite of this process. Therefore, decontextualization changes parts or all of the meaning previously attributed to the same data.

In a more qualitative sense, information can be viewed as a human and social phenomenon, inextricably related to human behaviour and nature, as a living creature with emotions, feelings, and an inherent need to communicate. As a human phenomenon amenable to transmission through communication and after internal processing by the transmitter, thus imbued with subjectivity, the contextualization of information plays a major role in its classification and sharing. Simply put, it is always necessary to consider the context in which the information is produced.

What distinguishes disinformation from misinformation is whether the error and the likelihood of others' deception are purposeful, intended, and spread for economic gain or to purposely mislead, and therefore we are dealing with a "creation" of disinformation (European Commission, 2018). On the contrary, if there was no intention to deceive but rather a misinterpretation inherent in the receivers, or if the search took place in untrustworthy sources of information and then the unverified data was shared, incomplete or inconsistent with the course of events, we are dealing with misinformation (Szpitalak and Polczyk, 2019). Implicitly, misinformation has to do with error of omission or commission while disinformation relates with intention to deceive.

At present, according to Foresti, Varvakis and Viera (2018), interactions are primarily mediated by technology in contemporary society, which is surrounded by information overload on the internet and other media. This has led to a shift away from the physical world and a strengthening of the virtual realm (Pinto et al, 2020). People are glued to smartphones and tablets at all

times, and at every minute, and the willingness to acquire and share information quickly, decontextualized and without careful attention to the sources and how information is disseminated, makes people vulnerable and conducive to the acquisition and dissemination of misinformation, disinformation, and fake news.

With constant floods of information, too much information is consumed every minute of society's daily routine, whether it is in individuals' lives, at work or in the classroom, travelling or doing various tasks simultaneously; people are often unable to confirm all sources and facts, hence do not know the context, due to lack of time, or even due to technologies and digital illiteracy. "Technology symbolises a type of evolution, but it does not necessarily make the man more ethical and wiser, nor is it synonymous with the proper use of information" (Foresti, Varvakis & Viera, 2018). However, people are also creators of information or contents, and use social media as a vehicle to disseminate the information to be shared. Misinformation and disinformation dissemination has never been easy than it is now.

Factors that contribute most to disinformation and misinformation in organisations

The situation is practically the same at the professional level, and in organisations; that is, despite the institutionalised policies and practices of searching, processing, and archiving information, as well as cyber security, which should exist in every organisation, access to information and its spread is as easy as it is in the private life domain. Much of the information-seeking is done in the professional field since it seeks to address one or more knowledge gaps to improve performance on professional activities. There is also the growing trend of working from home, with approved access to an organisation's databases and computer systems, thanks to the advancements in technology.

While it is true that technological advancements have resulted in increased comfort, longevity, ease of communication with remote locations, faster learning, and machine execution of various tasks, resulting in increased productivity, it is also true that we are obligated to ubiquity and connectivity almost 24 hours a day. The quick pace we set for ourselves, or that companies set for us, comes at a cost in terms of health and the quality of work. We work at the office and at home, but we also use our mobile devices and social media to

bring leisure to our jobs. There is no longer a distinct separation between personal and family life, and job and professional life.

The foregoing scenario poses a risk to individuals and organisations because the information that should not be accessed from outside the organisation, such as databases, emails can be accessed easily and illegally by anyone else by opening doors and various accesses to employees through the internet or stored on the cloud and on employees' devices. This way, protection barriers, such as firewalls against cyber-attacks, can be disregarded, exposing data to possible manipulation, which can vary from decontextualization, change, and violation of personal data stored in an organisation's databases to just disparaging a company (Tarafdar, D'Arcy, Turel and Gupta, 2015).

These flaws, if not addressed or remedied promptly, could result in misinformation to the organization's employees, decisions based on errors, and potentially deadly mistakes. It is up to information managers to resist this global trend by taking steps to preserve information, take care in searching for it, archive it, disseminate it internally and externally, and train their human resources to prevent or reduce disinformation and misinformation.

How to minimize the effects of disinformation/misinformation in organizations

Professionals with advanced and up-to-date information and digital abilities are key players in information management. They are the ones who put information systems in place, manage, maintain and take preventive and corrective actions. Therefore, the first facets to examine are information architecture, the computational systems that will assemble and operationalise it, and security.

Presumptuous that the aforementioned issues were taken into account and that security measures were implemented, maintained, and refreshed regularly, the information managers' daily attention should be on the organisation's personnel and how they use the systems and information. Employees of organisations must follow defined practises from the time they begin looking for information until they complete their tasks, so that the accuracy of the information they obtain, as well as the security and operations of the company, are not exposed.

The internet, as we all know, is currently one of the most important sources of information, if not the most important, and there are important measures to take when searching for information, namely, the websites where the information is sought. When we start looking for knowledge, the possibilities are endless. It is impossible to tell the difference between tens of thousands of websites. How can we choose accurate, up-to-date, and trustworthy information? The reliability, credibility, and up-to-datedness of a website can be determined by a number of metrics. Many information specialists have developed and listed these quality criteria over the years. Some features that stand out immediately when visiting a website include the indication of the website's ownership, visible contacts and location in case of emergency, the factual information they expose, its depth and authorship, sources from which the information is derived, degree of content updates, information objectivity, and writing free of errors (Dutra and Barbosa, 2017). On the contrary, websites that spread misinformation or provide incomplete, subjective, and prejudiced information are frequently outdated, lack sources of information, writers, and even ownership and contact information (Pinto, et al, 2020).

So, among the different factors for judging a website's dependability, authorship, authority, accuracy, objectivity, actuality, and depth of information stand out the most and are thus easier to notice. If these qualities are not present in an information source, it is best to look for other sources to confirm the information's accuracy, dependability, objectivity, and integrity. Accordingly, it is critical to foster and develop informational and media literacy in society for employees of organisations, and indeed, the entire society, including young people who have been using computers and smartphones since a young age, in order to use technologies to search for and find reliable information on for personal lives and on behalf of organisations.

How information skills and media literacy can help organisations counter misinformation

More people, particularly young people, are turning to social media as a source of information, posing risks such as sharing and believing in false information, subjectivity, and the rapid spread of fake news, resulting in the initiation and strengthening of real global disinformation and misinformation campaigns.

The potential problems associated with today's technology and media have created new educational expectations. In addition to media literacy education, much has been done since the 1960s to advance education in the digital age through initiatives such as computer literacy, ICT fluency, and coding literacy, which typically boil down to programming (Guzdial, 2015; Vee, 2017). The shift from rule-driven programmes, in which programme behaviours were explicitly hand-coded by hordes of programmers, to data-driven programmes, in which programme behaviours are automatically derived from massive amounts of data, was a major technological shift in the 2000s that had a significant impact on the media landscape (Pinto, et al, 2020).

According to Karpathy (2017), image identification, speech recognition, machine translation, self-driving cars, and many, if not most, other disruptive technologies are based on neural networks and machine learning rather than traditional programming in the “second machine age” (Brynjolfsson and McAfee, 2014). Valtonen, Tedre, Mákitalo and Vartiainen (2019) are of the view that instead of delivering the same news to everyone – that is news generated by editors, reporters, and fact checkers, media and news may now be tailored for specific groups of individuals for certain goals, thanks to today's technology. In terms of education, understanding how these media work is very crucial because it reveals the dynamics of the virtual places that individuals inhabit. Technology has made media literacy education more accessible, and more vital than ever.

Although much has been written about 21st-century skills, media literacy, coding literacy, and ICT literacy, none of them provides students with adequate knowledge and tools to understand or deal with the mechanisms behind today's media and how data-driven technology is used for a variety of purposes—such as curating and creating content, influencing people's behaviour, and creating echo chambers—none of them, on their own, provides students with adequate knowledge and tools to understand or deal with the mechanisms behind today's digital era (Valtonen et al, 2019). Whereas the invention and dissemination of disinformation are sometimes plainly planned, in other circumstances, the dissemination of misinformation is motivated by a basic desire to communicate information that is thought to be genuine or useful without prior verification. Thus, in a world where there is the ability to broadcast messages at a distance of a few "clicks," (Pinto, et al, 2020), it is necessary to know how to use technology, discern facts from disinformation

and misinformation, and cultivate critical thinking in order to battle the scourge of misinformation and disinformation.

Informational skills, as well as knowledge and awareness of how technologies work, are taught from the beginning of school age, if not earlier, in order to live a dignified, inclusive, and engaged life in today's society. However, because information and communication technology and social trends evolve at such a rapid speed, it is critical to encourage lifelong learning in schools and other institutions. The concept of media literacy emerges as a means of combating misinformation by teaching people to think critically about what they read and see in the media, whether it is news, advertising, or PR. Because the algorithms of social networks and search engines on the internet are designed to highlight what is convenient for their users and their interests, critical thinking, raising questions, and scepticism about what is seen, read, and heard are critical to uncovering what is hidden and disguised by concealed messages.

In a nutshell, one of the foundations of media literacy instruction is active and critical questioning of information, or "active inquiry and critical thinking about the messages we receive and generate" (Hobbs and Jensen, 2009). Media literacy not only helps to create information-minded, information-demanding professionals who are sceptical of the information they find and demanding of the sources of information, but it also helps to develop information verification and confirmation attitudes, resulting in a more informed society with citizens who are less susceptible to misinformation and fake news (Bulger and Davison, 2018).

Conclusion

Before drawing a conclusion, there is need to suggest that the first concerns that media literacy will need to address are the new dynamics of creating content that is widely shared on social media and frequently accepted as reality, as well as the types of behaviour engineering and attention engineering that are employed to influence social media users. Such approach should look at new types of media automation, misinformation, and how new technologies are being used to collect user data and target and adapt specific media material to individuals or groups.

Traditional media now has more options, thanks to modern technologies

which have also invented entirely new forms of media. Today's society has been labelled a "post-truth" era, in which "objective facts play a smaller role in moulding public opinion than appeals to emotion and personal belief" (Valtonen, et al, 2019). The phrase "post-truth" is not new, but it has gained more traction as a result of the British "Brexit" vote and the 2016 US presidential election (Modreanu, 2017). Technologies that turn media consumers into producers and distributors, that aggressively monitor and select content, and that enables anonymity and undercut responsibility, to name a few, have blurred the line between fact and fiction. Hence, misinformation and disinformation are now easier, cheaper, and more effective to produce, disseminate, and target thanks to new technology.

With the widespread use of social networks and the globalised world in which we live, where information and communication technologies allow us to obtain information at any time and to be not only receptors but also creators of information, both professionally and personally, it becomes imperative for information managers to protect organisations and their employees in the performance of their duties. It will be possible to minimise the effect of disinformation and misinformation in organisations by promoting and encouraging information and media literacy, as well as firmly investing in continuous training of employees over time, not least because, while information skills and media literacy are not capable of changing individual values and, thus, preventing the existence of disinformation, they are capable of preventing the existence of disinformation.

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