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DIGITAL TRANSFORMATION, COOPERATION AND GLOBAL INTEGRATION IN THE NEW NORMAL

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NAVIGATING THE EVOLVING LANDSCAPE OF SOCIAL MEDIA DATA MINING AND PRIVACY

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Abstract

This article explores the concept of social media data mining, focusing on the collection methods and the purposes for which this information is used. While social media data mining can benefit corporations and institutions, it raises concerns about privacy implications for users. The essay argues that privacy in the online realm is increasingly unachievable due to the business models of social media platforms and users' passive involvement in data collection. Existing literature suggests that while users are considerably aware of their privacy on social media, current practices still limit their ability to control personal data shared on online environment. This article emphasizes the need for implementation of privacy protection measures to address the challenges posed by algorithms on social media platforms. By navigating these complexities, we can foster a social media landscape that respects privacy rights while harnessing the benefits offered by algorithmic systems.

Keywords: *algorithms; data mining; privacy; social media; surveillance*

The advent of social media has had a profound impact on the modern world. In the past two decades, there has been an explosion in the use of social media platforms. These platforms have enabled people to connect with each other in new and unprecedented ways, and have had a significant impact on the way we communicate, consume news, and participate in civic life. However, as they become an essential part of daily life, there are concerns about the problems that occur. Mining data, as a part of social media, is one of the biggest matters. Kennedy, Elgesem and Miguel (2015) explain social media data mining as the way that data is treated after being collected through various social media platforms, which is being analyzed to discover different aspects of information published and used for different purposes. This essay will first look at the concept of mining social media content and how data is being collected, then discover the purposes and uses of this kind of information. It is obvious that social media platforms employ a variety of measures to effectively mine data. While it can benefit corporations in some way, the data mining also has serious impacts on users' privacy. That is, the widespread practice of sharing and collecting data has made privacy a less viable concept in the era of social media.

Mining social media data in everyday context

In order to fully understand the data mining process, this section looks at the data tracking practices that are being commonly used. Kennedy (2012) stated that mining data is the result of different types of personal information that are made available on social media. Indeed, these are the key elements that lead to the growth of mining data: the number of social media, the vast amount of data and their lower-cost, easy accessibility (Kennedy, Elgesem & Miguel, 2015). In fact, social media are currently obtaining users' data in multiple ways and at different levels. The following methods will be put in two types: direct and indirect practices. Direct data collection includes activities performed by social media providers, such as search

engines, tracking tools. Third-party applications constitute an indirect approach to data. Although this type of categorization does not reflect the actual state of mining practices, it helps to concentrate on the most common data collection methods.

On the one hand, tools provided by media corporations are best used by both users and the providers themselves. Algorithms serve an important role in shaping social media experiences and have significant implications for privacy issues. Several studies have explored on the benefits and challenges associated with algorithms in social media activities. The uses of search engines in data mining were investigated by Zimmer (2008) and Leaver (2013). Because of the innovation of technology, these engines possess the ability to retrieve users' past search records in details, which Zimmer (2008) describes as the 'perfect recall'. By this, the providers of these tools are able to determine any individual's browsing behaviours and customize the results that not only match users' needs but also their partners' relevant offers. As a result, users are driven to their targeted advertisements as they planned. Correspondingly, Leaver (2013) conduct further examination on the data mining practices of Facebook and Google. Additionally, the tracking practice, which is now widely available in different forms, is another way to obtain information. Internet users are familiar with the location tracking, which can be easily accessed through a variety types of media. Location-based system integrated applications and platforms (like Google Maps, Facebook, Foursquare, Twitter and Swarm) allows us to detect our exact location, and is extremely useful in finding directions or certain places. Nonetheless, this feature is risky in other ways. Once activated, it will follow and record users' traces. Some apps even automatically broadcast users' location without them being actually active. Criminals can take advantage of this and investigate people's routines to commit thefts or fraud. Along with this form of tracking, activity tracking is even more heavily-manipulated. As noted in previous sections, social media companies own huge databases containing every information gathered from users, and these data are constantly being transmitted between platforms, analysed, compared with different sources in order to produce the best personalized results. On the other hand, as several social media platforms allow connection to other applications, third-parties are also actively participating in mining data (Debatin et al. 2009; Wang, Xu & Grossklags 2011). Facebook users are familiar with the additional applications and games that are available on Facebook. Despite the playfulness that they offer, these apps and games are also retrieving participants' data. Unfortunately, users seem to be unaware of this, and the number of these apps' users are still increasing.

Having the necessary information is crucial in almost any area, especially for research and development. The purpose of collecting data is primarily for knowledge discovery, then for further consideration. In other words, all websites gather people's information and base on them to explore their behaviours and trends. From there, they will shape the browsing experience that matches each person's preference in the future. As mentioned above, social media platforms actively track all users' activities online. All the information is stored in their database and remains in there for later use. In a similar manner, most institutions collect statistics about their consumers' behaviours and habits by investigating social media data. Therefore, they can gain better insights about their customers and other implications of their business. From these data, they can retrieve customer feedback, develop strategies to improve customer experience and promote their products or services as well.

Data collectors can deploy the needed information once it is obtained. There have been studies that investigate the purposes of utilizing social media data. The findings highlight several main purposes, including business (Zimmer 2008; Oboler, Welsh & Cruz 2012) and management (Oboler, Welsh & Cruz 2012; Kennedy & Moss 2015). The first use of these data is for advertising. It is clear that most companies mine data for financial incentives. Researches have shown that the majority of the revenues of giant

corporates like Google and Facebook comes from advertisements, which matches Leaver's statement 'data mining is clearly a core element in the operation of Facebook and Google' (2013, para. 9). In other words, data are 'traded' between social media companies and other institutions. The advancement of technology makes it easier for these businesses to reach their targeted clients through advertisements placed on social media. Based on their browsing logs, each user's social media interface is tailored to match their taste. Advertisements that match their interests and needs are shown. For instance, when people do the online shopping, the system will automatically generate suggestions that are related to their purchasing histories.

Data collection is also used for managerial purposes. From government to organizations, there is a tendency of using social media for more effective management. On professional social media such as LinkedIn, users are encouraged to provide as much information as possible to increase their employability. Companies can rely on the data collected that match their requirements to seek for potential employees. In some cases, employers can inspect applicants' social media profiles before making employment decisions. Similarly, corporations usually adopt social media policies and tend to have access to their employees' online activities to supervise them. In addition, Oboler, Welsh & Cruz (2012, p.15) mention the role of governments 'as a user of data', with the right to access information for lawful reasons. Although there are still debatable and controversial issues regarding the governmental actions, it is noticeable that the data possessed by social media have considerable significance.

Possible negative effects of personal data collection

Given the easy access to a great number of social media, people are continually uploading their data on these sites. While people may enjoy the advantages that social media bring, they might have overlooked the consequences of being 'exposed' online. Collecting and mining data have certain influences on people's lives. Scholars have conducted studies on how the personal data collection can negatively impact social media users. Corporations might argue that mining data is to better understand customers' needs and to improve their services; however, when taken into consideration, the collection of personal information has caused considerable controversy. Users might get overwhelmed by the amounts of advertisements that are being shown to them. Consumers are likely to be drawn in the strategies of marketers and this can lead to false assumptions about the companies' products and services. In fact, bigger companies invest more in advertising to attract more clients, although there is no guarantee that the goods are completely as promoted.

Despite growing concerns over privacy, the data collection process still continues. Social media participants are facing different levels of risks when their data is being constantly gathered and shared. The invasion of users' privacy can negatively affect both their personal and social lives. For example, one feature of Facebook allows users to 'tag' their friends in posts and photos, whether they want to or not. The people who are tagged may be in unpleasant situations if the posts are undesirable. That is to say, people can get involved in adverse circumstances online, regardless of their usual contexts, whether intentionally or not. There have been incidents regarding privacy intrusion on social networking sites, leading to cyberbullying, dismissals, or even worse, suicides. Also, third-party partners are also criticized for 'phishing, and other malicious purposes' beside data mining, according to Debatin et al. (2009, p. 86). Cybercrime nowadays are often committed through means of social media, such as hacking, scams and frauds. This fact calls for higher concern in data privacy.

Users' perspectives of online privacy and data mining

It is hard to define 'privacy' on the Internet, as it depends on people's levels of perception. According to Boyd (2008, p. 18), 'privacy is a sense of control over information, the context where sharing takes place, and the audience who can gain access'. Some people may argue that privacy depends on how much

information that is revealed and can totally be controlled by users. However, studies have unveiled the underlying aspect of online privacy. Researchers identify two types of online privacy: the social privacy and the institutional privacy. Social privacy refers to the amount of information revealed to other connections on social media, while institutional privacy refers to the data being mined by institutions. The fact that users are not cautious enough about institutional privacy are either because they perceive inconsiderable understanding about the threats from social media providers and third-party apps (Kennedy & Moss 2015), or they consider data mining as an actual fact of using free social media services (Young & Quan-Haase 2013; Leaver 2013).

While in the past, Internet users seem to be unconcerned about the risks they may encounter when their personal information are gathered; recent studies have found that people are becoming more aware of their informational privacy nowadays (Burkell et al. 2014). As a result, they apply different methods to protect their own personal information. Nevertheless, Kennedy, Elgesem and Miguel (2015) mention the 'privacy paradox' that exists in social media, which was also well-addressed by other scholars. That is, although Internet users have developed a growing awareness of the privacy risks when participating in the virtual world, their online behaviours reflect the opposite. First, although people are much aware of the privacy threats, they tend to continue disclosing their information. Second, despite knowing that their data are being mined by institutions, they seem to be unconcerned, or knowingly allow it to happen. Young and Quan-Haase's study (2013) suggests that users incline towards the social privacy and express little concern over institutional privacy. These findings consolidate Wang, Xu and Grossklags' statements (2011), that people are less likely to limit their information from third-parties.

In light of users' perspectives on social media privacy, researchers have provided important viewpoints in past studies. In their research to examine social media users' points of views about data mining, Kennedy, Elgesem and Miguel (2015) coin the terms 'known publics' to emphasize the power of leading organizations over social media data and the acceptance of publics on this dominance. The scholars also suggest a movement into 'knowing publics', 'as more active and reflexive agents'. That is, users should not only be the subjects of data mining, but also the ones that have real consent and control over their own information.

How privacy is no longer achievable

In the cyber world nowadays, privacy seems no longer viable. This view is drawn from the findings of previous studies that reflect the current state of online privacy (Viseu, Clement & Aspinall 2007; Boyd 2008; Kennedy & Moss 2015; Kennedy, Elgesem and Miguel 2015), to name only a few. There are multiple reasons for this claim. First, most social media take data mining as part of their business model. They collect data through the services they provide with the permission of users, which is usually called the *informed consent*. When visiting a website or registering to become users, people are usually asked to agree with the terms and conditions of service. The problem is most users either seem to be unconcerned about the consequences or they have no other option rather than agree with them. This means users are giving up their privacy to the social media providers in order to experience the 'free' services (Viseu, Clement & Aspinall 2007; Nissenbaum 2011; Custers 2016). Or, as Debatin et al. (2009, p. 100) suggest, 'perceived benefits of online social networking outweighed risks of disclosing personal information'. Obar & Oeldorf-Hirsch (2018) reinforced this statement in their study, discovering that the majority of users tend to quickly skip terms of service agreements as offered by social media platforms in order to engage with online activities. However, this action raises various issues. Previously, Oboler, Welsh & Cruz (2012) address the problems with the consent people provide social media operators, including how to remove the data when

they do not want to participate in their services anymore, the validity of unintended or false information uploaded. Similarly, Custers (2016) examines different issues with the given consent, stating that users lack serious consideration of privacy policies and suggests 'expiry dates for consent'. Second, people are almost passive in the process of mining data. The data collection has started since they agree to use the services, and it keeps going whether they are actually active or not. Even if they do not wish to continue, their information still remains in the database and in total control of the service providers. Previous literature proves this, as Wang, Xu and Grossklags (2011) state that it is impossible for users to restrict the access of the applications to their personal data. Kennedy & Moss (2015, p.2) reach the same conclusion, which is 'publics are not able to intervene or interact in this process'. That said, since personal data no longer belongs to users, how can they call it 'privacy'? Additionally, while users have the choice to withdraw their personal data from the online realm, given consent in previous online activities also limits users' level of control over them. In fact, due to the persistence and repurposing of data generated by algorithms, more concerns are raised over privacy rights of users (Tucker 2018; Trepte 2020).

The expansion of social media platforms enables the widespread information gathering and sharing on the Internet. This essay has discussed the practice of mining data, which consists of different activities that aim to extract meaningful and useful information from social media. As this kind of data is considered a rich and valuable resource of information and can bring lots of benefits, social media providers and other institutions are employing different methods to collect information from users. Their reasons for data gathering are varied, from user personalization to customer feedback, to further development. While there are undeniable advantages of this type of data collection, the concerns about its impact on privacy cannot be ignored, as privacy has always been one of the key issues on the Internet. In fact, privacy manipulation can have serious consequences on people's lives besides ethical and legal issues. Knowing that, users nowadays perceive a higher level of understandings about social media surveillance, as well as the impact that privacy invasion can have on them. However, the way people participate in social media activities contradict with their concerns. They tend to neglect the threats from privacy violations and keep on sharing information; or just mainly focus on their social privacy and neglect the importance of institutional privacy. These activities lead to the fact that, once personal information is vastly collected and shared, there is no 'privacy' left. Addressing the implications of social media data mining and privacy requires concerted efforts and considerations. Based on the discussions presented, this study suggests further research in the following areas: effective mechanisms for enhancing transparency and control over data collection and usage on social media platforms; practical initiatives to impact users' awareness and behaviors regarding privacy; and measures to enhance current data protection regulations. A more comprehensive study in these domains would contribute to the development of privacy practices for users when engaging in social media activities.

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