

# The affordances and constraints of information in crime prevention communities through social media

Ali Fauzi<sup>1\*</sup> and Shamshul Bahri<sup>2</sup>

Department of Library and Information Science, Faculty of Arts and Social Sciences,  
Universiti Malaya, Kuala Lumpur, MALAYSIA

Department of Decision Science, Faculty of Business and Economy,  
Universiti Malaya, Kuala Lumpur, MALAYSIA

e-mail: \*alifauzi@um.edu.my (corresponding author); esbi@um.edu.my

ORCID ID: A.Fauzi: 0000-0002-8093-0560

S.Bahri: 0000-0002-1571-5768

## ABSTRACT

*Social media can provide important and useful information to communities in their fight to prevent crime. However, this capability has its downside. For every affordance social media provides, the platform presents an equally important constraint, which researchers and the public often ignore. Using an in-depth case study of social media crime prevention communities in Malaysia, this paper intends to provide a rich understanding of the information provided by social media in crime prevention. The study adopts the technology affordances and constraints theory to make sense of and explain how the information provided by social media affords and constrains the communities' efforts to fight crime.*

**Keywords:** Social media; Information dynamics; Crime prevention; Affordances and constraints; Facebook.

## INTRODUCTION

Information dynamics is a function of information extraction, summarization, and visualization (Christel, 2002). In this respect, the source of information is one of the biggest influencers of information dynamics. Sources of information can influence people's engagement or avoidance of a particular action or movement. The technology that comes with each source brings different dynamics to information (Warner, 2005). Today's communication world provides various sources of information. They are conventional media such as newspapers and magazines, personal networks such as mobile instant messaging services, social media such as Facebook and X (formerly Twitter), and the Internet such as online newspapers and blogs. Some sources of information create excitement that entices people to its beliefs and ideology while others create anxiety and information overload, leading to people avoiding them (Soroya & Faiola, 2023).

Meanwhile, social media applications such as Facebook, X, and Instagram have been adopted by Malaysians for various reasons, including crime prevention. Anecdotal evidence suggests that the Malaysian public perceives crime has been increasing (Merdeka Centre, 2013). Statistics suggest that crime rates have risen steadily between 1 to 8 percent since the

1970s (Baharom & Habibullah, 2009). For crime prevention, social media provides access to relevant and timely information, such as the type and location of crime, and tips on preventing such occurrences. The information comes in the form of videos, written texts, and infographics (Ismail et al., 2022). Furthermore, social media communities and groups have been formed to share information and knowledge about how to best prevent crime.

While social media has been used extensively for many social purposes, including crime prevention, our understanding of the dynamics of information when this platform is utilized is still scarce. Existing studies focus more on the mechanisms and implications of social media applications to prevent crime (Junhee, 2020; Tim et al., 2017). Additionally, there is an implicit assumption that the information dynamics on social media are equivalent to other sources of information. This assumption may result in the misapplication of social media to disseminate important information. Thus, understanding social media's information dynamics is crucial to increase the effectiveness of information dissemination through that platform.

This study attempts to answer an important research question: what are the affordances and constraints of using social media to disseminate information on crime prevention? To answer this, the study adopts the technology affordances and constraints theory (TACT) by Majchrzak and Markus (2012). Using a case study research approach, this study collects data by interviewing the various communities, celebrities, and authorities that have employed social media to share and exchange information about crime and crime prevention. This study concludes by demonstrating the affordances and constraints of using social media to provide crime and crime-prevention information.

This paper is organized as follows. First, it reviews the relevant literature on social media, exploring its relationship with information dynamics, and its role in providing crime prevention information. Next, it examines the application of the TACT concept in previous studies, utilizing it as a theoretical framework for this research. The article outlines the research methodology used for data collection and data analysis before presenting the case description. Further, it elucidates how social media can enable certain behaviors while hindering others. By employing this theoretical lens, the article emphasizes that the impacts of social media are not universally positive (or negative) but paradoxical - it may be affording solutions but constraining solutions simultaneously. Finally, the theoretical contribution of this study is presented.

## **LITERATURE REVIEW**

### **Social Media**

The term 'social media' is often used interchangeably with social networks, social networking, Enterprise 2.0, and Web 2.0 despite a range of distinctions in the literature (Kaplan & Haenlein, 2010). The range of social media applications has grown since the introduction of arguably the first social media site, sixdegrees.com, in 1997; however, by 2020, the number of social media has stabilized, with only a few hugely popular platforms being used. Malaysia has also been reported to have one of the highest Facebook users worldwide (Statista, 2019). These applications offer users various features (such as sharing texts, videos, and pictures) and facilitate their ability to 'socialize' with others. Social media allows relationships between users from different backgrounds, resulting in abundant resources. Massive information generation is a notable output of social media use. However, a disadvantage of such overload of information is sometimes evident in the inability of users to find credible

information for them at times of need. Social media sites are so deeply integrated into our daily lives that people depend on them for almost everything from daily news and updates on critical events to entertainment, connecting with family and friends, reviews and product/service/place recommendations, meeting emotional needs, managing workplaces, and keeping up with the latest fashion, among others (Kapoor et al., 2018).

Social media platforms like Facebook, WhatsApp, Twitter, YouTube, LinkedIn, Pinterest, and Instagram come to mind when it comes to social media. Social media is powered by user-generated content and is highly influential in various ways, from shopping/selling habits, entrepreneurship, and political issues to venture capitalism (Greenwood & Gopal, 2015). As of January 2020, Facebook holds the coveted position of market leader in social media, with more than 2 billion monthly users (Statista, 2019). In addition to tweets, social media sites are inundated with photo and video uploads, and about 1.3 billion photos are shared on Instagram every day (Omnicores, 2024), according to recent figures. Based on 2018 social media statistics, while 50 million companies maintain active business pages on Facebook, only two million utilize Facebook ads. Moreover, eighty-eight percent of businesses utilize Facebook for marketing purposes (Lister, 2023).

In recent years, academics and experts have been discussing and analyzing the many aspects of social media. Organizations mainly engage in social media with the goal of receiving stakeholder input (Phang et al., 2015). User reviews are another significant part of social media, bringing forward information content, reputation, and authenticity. Online communities have succeeded in bringing together people with similar interests and goals. While most messages shared on social media sites are personal statuses or updates on current affairs, some posts seek support and assistance. Ironically, these were identified as emotionally stressful posts that cause social stress, leading other participants to experience negative psychological and behavioral effects as they feel compelled to respond (Maier et al., 2015).

### **Social Media and Information Dynamics**

Information dynamics transpire differently in an organizational setting. In one study, there is a close relationship between information dynamics and communicational interactions (Pires & Albagli, 2012). Informational collaboration leads to blended value propositions in an organization that intends to implement an information system (Feldman & Horan, 2011). Additionally, the relationship between organizational culture and employees' sensemaking can affect information behavior (Li & Luo, 2021). Thus, providing the right information to workers in an organization is a challenging task as their needs change over time (Wu et al., 2009).

Meanwhile, one study suggests the importance of relevance criteria while searching for information. This study asserts that the user's background knowledge of a search topic will differ according to the search phase: problem recognition, system interaction, and document interaction (Kim et al., 2021). On a different note, the change in information environment changes the definition of Web usability. Here, the interface design and effectiveness attributes can alter the definition of Web usability (Chen et al., 2015).

Information dynamics work slightly differently in the social media realm (Xiang, 2011). In many situations, the propagation of information across social media depends on the subject importance, users' dynamics, and network structure. The information propagates fastest when the subject attracts huge attention, the users are actively promoting the topic, and there is a huge and highly interconnected network to enable the information to move fast

(Zhang et al., 2020). In other words, one piece of information that starts small can become viral in minutes on a social media platform when those factors are in play (Feng et al., 2018).

Algorithms used in social media significantly affect the speed and spread of information. In one study, the authors assert that large-scale algorithmic personalization has led to the detriment of the democratic sphere and pushed extremist ideologies to the core of the debate (Santos-d'Amorim & dos Santos, 2022). In other words, social media algorithms are powerful tools for uniting or dividing communities (Johnson et al., 2019).

### **Technology Affordance and Constraints Theory**

This study adopts the technology affordances and constraints lens (Majchrzak & Markus, 2012) to examine the roles of social media in providing information about crime and crime prevention. This theoretical perspective highlights technologies' action potentials and relational nature (Leonardi, 2011). Technology affordance refers to the opportunity for action (Hutchby, 2001; Volkoff & Strong, 2013), that is the potential uses and capabilities that an individual or organization can exploit when using a technology to achieve a specific purpose (Majchrzak & Markus, 2012). On the other hand, technology constraint refers to the limitations or obstacles that an individual or organization may encounter when using a technology to accomplish a particular goal (Majchrzak & Markus, 2012).

Affordances explore possibilities for democratic and self-organized digital platforms such as social media (Federici et al., 2015) or opportunities for collective movements to achieve organizational goals (Zheng & Yu, 2016). The affordances and constraints of social media are investigated in socialization, sharing of knowledge, power exercises, and change in the context of organizational phenomena (Treem & Leonardi, 2013) and produce conflicting results which have the unintentional positive (affordances) and negative (constraints) effects (Majchrzak, et al., 2013b). The literature revealed some already conceptualized social media affordances. Some of them focus on social media communication opportunities. Social media also allows users to share content targeted at other social media users (Karahanna et al., 2018) and to broaden the reach of content produced by other users through a meta-voicing opportunity (Majchrzak et al., 2013a). Content is shared directly by users and does not employ intermediaries, so information is democratized (Tim et al., 2018), as the social media information shared by other users is available. Users can view their content on social media (Treem & Leonardi, 2013) so that other users can access information about their content or users via the networks (Majchrzak et al., 2013a; Tim et al., 2018). Social media platforms put together people to develop relationships among two or more people (Mettler & Winter, 2016; Treem & Leonardi, 2013; Vaast & Kaganer, 2013; Van Osch & Steinfield, 2016), even those established in an organizational hierarchy with peers or superiors (Leidner et al., 2018). Defined as possibilities for collaboration include mass collaboration (Zammuto et al., 2007), collaborative ability (Stamati et al., 2015), or interactions between different subjects which work together in cooperation (Chen et al., 2016; Stamati et al., 2015). Association options available through social media are available through content and meta-voicing - between individuals and individuals and contents (Karahanna et al., 2018; Majchrzak et al., 2013a; Van Osch & Steinfield, 2016). Social media allows individuals to be informed about topics of interest. Users may also benefit from triggered attendance in discussions online, affording them to remain silent as long as the content shared is not of interest and only become active when alerted when the content of interest is shared (Majchrzak et al., 2013a; Van Osch & Steinfield, 2016). Social media, on the other hand, also offers the possibility to encourage the participation of other users by facilitating simple and effective processes in which participants can be enrolled in online discussions (Zheng & Yu, 2016). Social media enables users to circumvent geographic limits and decouple individual actions from their

geographical location. Such possibilities of action are described as mobility (Chatterjee et al., 2017), internet ubiquity (Deng & Joshi, 2016), and delocalization of work (Seidel et al., 2013).

Finally, social media provides opportunities to coordinate individual actions and to transfer actions to individuals. Social media enable the grouping of individuals and managing groups of individuals (Baccarella et al., 2018; Karahanna et al., 2018). Such action possibilities also afford forms of emergent organizing (Tim et al., 2018), whereby users of social media take roles voluntarily and leave roles to facilitate online discussions (Majchrzak et al., 2013a) or shift roles of work if they realize that actions to be carried out should be taken by someone else's role (Strong et al., 2014).

## **METHOD**

The analysis is based on an interpretive case study of the efforts to prevent crime in Malaysia. In answering the 'how' research questions, an exploratory qualitative research approach is appropriate (Walsham, 1995). In this case, studying the use of social media in crime prevention requires an investigation of the interactions between people and technology. Interpretive case research offers deeper understanding, as it encourages openness to new findings without being influenced by predetermined hypotheses (Hale, 2005). The case selected was based on two criteria. First, the significant adoption of social media in battling against crimes offers valuable insights into the practical use of social media and its impact on citizen participation. Second, the crime prevention effort in Malaysia using social media captures the entanglement between the new media and communities at all levels in realizing a goal that serves as an excellent opportunity to unveil the affordances and constraints of social media in this context.

Data collection comprised an initial background review, onsite fieldwork, social media data gathering, and follow-up clarifications. In sum, 28 interviewees from several crime-fighting communities using social media were interviewed. Interviews were open-ended and exploratory in nature and occasionally guided by some rudimentary questions that were structured around the interviewee's role, involvement, and experiences in social media-enabled crime-fighting initiatives. Interviews were further customized along the way; new interview questions were devised based on the findings arising from previous interviews (Klein & Myers, 1999). Each onsite interview was digitally recorded (with permission) and transcribed for data analysis.

In summary, the interviews recorded around two hundred pages of textual data. After obtaining permission from the interviewees, relevant postings on the social media platform Facebook were reviewed. This rich set of data enabled the observation of affordances and constraints in practice by allowing in-depth analysis of everyday activities of the social media communities. Additionally, relevant documentation was requested from the communities, and related data from online news reports, infographics, statistics, and crime-related statements were published online as supporting evidence for triangulation. Table 1 outlines the details of the data collection efforts.

Data collection and analysis go hand in hand in interpretive research, representing the interplay of theoretical concepts and empirical data. Data were assessed and reassessed several times, categorized into emerging themes, first guided by preliminary, potentially relevant theoretical constructs that serve as the 'sensitizing device' (Klein & Myers, 1999a). More specific themes emerged in the research process as the researcher's understanding of

the phenomenon deepened. The unique interaction between social media and respondents led to what is afforded and constrained by social media. The attention to TACT emerged from observing the complex relationship in which communities residing at different levels of engagement enacted social media differently. After identifying this particular set of themes, the study moved back and forth between data and theories, interrogating the materials to verify whether the data supported the emerging claims and whether the theories helped deepen the study's understanding.

Table 1: Overview of Data Collection Methods and Sources in This Study

Online interviews	Six interviews were conducted on Facebook using Facebook's messaging or video call features. All interviewees were followers of the crime prevention communities, and interviews were conducted individually and asynchronously. Online interviews are particularly appropriate for participants concerned with the researcher's physical presence and make it easier for participants to discuss more sensitive topics (e.g., revealing their encounter with crime) (Busher & James, 2009). Moreover, given that the targeted respondents of the study are online communities, interviews on social media sites can easily be executed and allow closer reflection on the issues. For example, interviewees could easily enrich their responses by sharing the links of relevant posts they have just disclosed to the interviewer.
Semi-structured interviews onsite	<p>Average of 90 minutes, 28 onsite face-to-face interviews. The list of interviewees involved was:</p> <ul style="list-style-type: none"> <li>• The Royal Malaysia Police social media team (comprising four members from the national police force) who initiated a social media presence aimed at promoting civic engagement and gauging public sentiment.</li> <li>• A journalist from the crime desk, the largest circulating newspaper published in Malaysia, had a Facebook page that recorded more than 890,000 'likes'.</li> <li>• An influential community leader who founded a community policing association and used social media actively to fight crime.</li> <li>• Nine founders or administrators of social media crime-fighting communities, comprising social activists, active bloggers, and criminal lawyers.</li> <li>• A well-known Malaysian crime analyst frequently featured in the media and actively involved in various crime prevention committees.</li> <li>• Four developers of a mobile distress application.</li> <li>• Eight followers of crime-fighting communities, including specific users involved in or benefited from some widely known cases (e.g., stolen car owners who track down the car with the help of social media communities).</li> </ul> <p>Data was gathered from multiple levels to account for possible differences in interpretation among the participants (Klein &amp; Myers, 1999) and to ensure a comprehensive understanding of the context.</p>
Facebook postings	Data were also collected from the Facebook postings of several crime prevention pages. A page here could refer to a Facebook Page, a Facebook Group, or a personal Facebook Profile founded, administrated, participated in, or owned by the participants. The aim is to take advantage of the significant amount of social media data to understand better the interactions among the communities and the resulting actions. The data collection was also guided by input gathered from interviewees, which allowed screening and selection of influential postings such as stolen cars and murder cases that have attracted a large number of digital attention or have been successfully solved with the help of social media. Comments made by group members were carefully analyzed to investigate how social media affords and constraints.

The initial analysis provided an overview of the phenomenon of interest (Pan & Tan, 2011). It allowed the breaking down of the affordances and constraints into two pairs, which are (a) Instantaneity and Verifiability, and (b) Actionability and Miscoordination (detailed in the Case Analysis section). Accordingly, the study re-visited the data to examine the use of social media on each occasion and the implications of its use, giving particular attention to the practice within which it was used and the functions it performed. In short, the data analysis process involved an ongoing dialogue with existing literature, the data collected, and the emerging interpretations while gradually shaping the theoretical conceptualization (Pan & Tan, 2011). The process continued until theoretical saturation was reached—that is, it was possible to explain the case research findings comprehensively using the derived conceptualization, and new data could neither dispute the conceptualization nor reveal new themes. The following section presents an overview of the case study, focusing on the crime-fighting communities and their use of social media in general. The findings of the analysis are on how social media functions in affording and constraining, and how its role transforms in various crime prevention practices.

## **FINDINGS**

In dealing with the strong negative perception and fear of crime, igniting and sustaining community-driven crime prevention became the focal concern among Malaysians. Given all the limitations and restrictions in implementing these initiatives, communities resort to social media, which could seemingly afford them several significant action potentials. Interestingly, the analysis reveals that social media drives a paradoxical effect – its action potentials were actualized into both affordances (intended consequences) and constraints (unintended consequences). The study identified three pairs of affordances and constraints, as discussed below.

### **Instantaneity and Verifiability**

In the analysis, using social media to disseminate and accumulate crime-related information brought about the affordance of instantaneity. This affordance enables social media users to share and exchange information on crime and its prevention quickly. Meanwhile, social media users are composed of direct and indirect users. Direct users include group creators and administrators who manage Facebook groups, such as the creator of the closed crime prevention group Malaysian Against Rape and Snatch Theft (MERAH). They may also include group members who post crime incidents and comment on other users' posts and individual social media users who are not necessarily members. On the other hand, non-users of social media are considered indirect participants as they would be in contact with the user and are made aware of the crime incidents. The quick dissemination of crime-related information enables communities to organize and respond very quickly to crime prevention issues such as theft and kidnappings.

One of the parties that benefitted tremendously from the instant dissemination of information was the Royal Malaysian Police or *Polis Diraja Malaysia* (PDRM). The police force, through its social media unit, had set up a Facebook page. A respondent noted:

*"We found out that we can do more than crime prevention. Like, let people know what PRDM has done. To channel our efforts out. We use this platform to communicate or create crime awareness and alerts to the people. At the same time, we also, to a certain extent, strategize it. We want to create awareness, and we have to think of creative ways or better ways to attract people's attention. For example, if you want to talk about a rape case, we will say, look*

*we are the police (police will urge), and these are the precautionary steps people can take then only people will read, and it will create impact."* - PDRM social media unit head.

This positive sentiment was echoed by a social media page administrator who expressed how these platforms afforded their organization the ability to effectively disseminate its message and raise awareness.

*"For us to start out on social media is like breaking the glass ceiling. Our Facebook was launched on 31 September 2011, during that time, it was a proposal for us to have a "fight crime online outlet" – Malaysian Crime Awareness Campaign (MCAC) Facebook page admin.*

Another party that has benefitted from this affordance is the Facebook of the Malaysian Crime Awareness Campaign (MCAC). It also chose social media to achieve its goals of disseminating information about crime in Malaysia to its 90,000 members and hopefully quickly relay useful information from members' comments and interactions.

*"Our role is to change, not to play the police. Our role is to assist in spreading information, and information by Facebook is one the fastest mode of disseminating information in today's era, today's society. Maybe in 2 or 3 years, there will be other better platforms people will hop on to. Because at present ... the platform is Twitter and Facebook. These are the most popular platforms which we are using to disseminate information. So, it is clear how important our role is to spread awareness, which is what we are doing. There is no better way of getting the message across through social media platforms. That is the first objective. The second objective is people's comments on our social media page. When we started the page, we encouraged them to give constructive comments and criticisms, so we are able to use or gather the information collectively, study and compile them to be presented to the Bar Council." - Admin and founder of the MCAC Facebook group page.*

Although instantaneity is a positive affordance, the quick spread of information raises another crucial issue: the verifiability of the information. There are instances when social media is used to distribute manipulative information, rumors, or irrelevant content. This torrent of contaminated information is caused by the drive for the personal satisfaction of keyboard warriors, massive forwarding of erroneous posts, and sometimes unintentional errors. The drive to participate negates the need for fact-checking or being objective. These actions can lead to an unintended loss of trust and inefficient use of time. Unfortunately, the existing technologies cannot automate verifying information shared through social media. Hence, overcoming the verifiability constraints requires the crime prevention communities, especially the administrators, to make additional efforts to manage and monitor information sharing on social media. According to one social media administrator:

*"Initially, we did not have experience in managing the Facebook group, and when these unwanted participants and posts began coming in, people started to leave the page. If we want the community to trust us, we have to do a better job of filtering the non-relevant stuff on the Facebook page. I have to keep delivering new content and keep an eye on the posts to delete whatever is not relevant." —The administrator of Crime Watch Malaysia (CWM).*

In short, verifiability constraints the community from fully enacting the fluidity of information instantaneity and necessitates a firm commitment to information verification.



### **Actionability and Miscoordination**

Second, the information provided through social media triggers individuals who are concerned about crime to take necessary actions through the platform. They have established a presence of an actively alert online community that published results and information on crime prevention. As a result, other like-minded individuals were able to take necessary actions to prevent crime from happening in their communities. This study observed several examples where the information from social media leads to actions taken to prevent crime. First, it saw how social media enabled calls to action around communities with shared interests and promoted mobilization, , as exemplified by the following quote:

*"Once we the group was set up and people started connecting and began organizing crime prevention activities, comments of positive feedback regarding crime reduction on the targeted areas started coming in." — MARAH Facebook group founder.*

Second, communities could strategically establish new connections by browsing and viewing existing social networks. The actionable affordance enables communities to share information and best practices. Through the new connections, communities can share information and best practices, thus enhancing their efforts in combating and preventing crime in their areas. Several existing clusters of connections could be united for an immediate propagation of capabilities and capacities. This creates the possibility of rapidly widening community-guarded areas via the connection and collaboration of nearby neighborhoods/ communities. The credibility and effectiveness of these social media groups in sharing relevant information are evident in the testimonies of their followers:

*"Our newspaper in Malaysia sometimes practice selective reporting. Social media, however, exposes different angles of the same story. I started following it [CWM] not because of him [the founder] but because I thought the group was credible. We live in Bangsar, and it is quite a high crime area, one of the highest and a lot of cases that happened in PJ and Bangsar are on Crime Watch Malaysia" – Follower.*

Third, enforcement agencies, communities, and users initiated real-life actions. One impactful example was community policing initiatives run by the Community Oriented Policing Strategies (COPS) initiated by a former Royal Malaysian Police constable in 2007. The non-profit crime prevention movement is based on voluntary communities and cooperation with local police. The former policeman acknowledges that while their activities have provided an alternative avenue for the community to fight crime, criminal activities have also managed to adapt their mode of operation to react based on information available on the social media outlets run by COPS. An example would be if there were a community patrolling call for a particular area, the criminals would avoid the said area and target other areas.

The recovery of a stolen car from Mont Kiara, an affluent neighborhood of Kuala Lumpur, in 2014 illustrates the actionable affordance. From the first day, the victim and communities used social media to spread awareness, disseminate information and targeted content (e.g., pictures and usable posts), and establish and maintain a strong online presence of the incident. The scale of the effort multiplied rapidly every day, which led to the discovery of the stolen car within days of the initial Facebook post. The repeated exposure to the information on social media heightened the awareness and vigilance of the community members, as evidenced by the following quotes:

*"Initially, I did not pay specific attention to the news about the stolen car, but it kept appearing on my [Facebook] wall. After that, I was actively looking for a car that met the description everywhere I went." —Participant in the stolen car recovery effort.*

*"We did not know what to do, after exhausting all official channels we decided to post the incident on Facebook and asked for help. We did not expect it to go viral as it did" – Victim.*

Also, given that every individual will have the ability to locate and share information, the accumulation of responses further strengthened the online presence of the event. From the initial post, the instantaneity affordance has brought about 20,000 likes and responses on Facebook, which led to the recovery of the vehicle. Unfortunately, the carjacker was not apprehended.

While social media affords actionable affordance, it produces an unfavorable consequence – miscoordination. Although social media can provide actionable information to users, the actions are rarely coordinated. Often, the crime prevention information on social media lacks details on how actions should be taken. The users were expected to know by themselves what actions need to be taken, where they must be taken, and how those actions need to be deployed. Worse, the users have never received training or information on how to act if a crime happens. Crime news and information can elicit a wide range of reactions from different individuals, leading to a lack of direction in community response efforts. This lack of coherence can ultimately undermine the effectiveness of the actions taken.

Social media platforms have proven to be effective tools for providing real-time information that can help prevent crime. However, to fully leverage this potential, it is essential to have clear guidance on how to act on the information provided. Without this guidance, the effectiveness of social media in crime prevention may be limited.

## **DISCUSSION AND CONCLUSIONS**

Some social media such as Facebook and Instagram features enable users to navigate the platforms easily and share information among them (Chen et al., 2015). This feature allows users to search for information easily regardless of their technology's know-how (Kim et al., 2021). Consequently, the number of users increases rapidly, as do the type of discussion and the number of communities created. However, this presents an alternative problem to administrators of the social media pages and their followers: verification of the information. There is no standard culture to which the users belong that can enable common sensemaking of an information to occur (Li & Luo, 2021).

This case study undoubtedly demonstrates the speed in which information through social media propagates when there is a huge attention to the subject, users actively promote the topic and the size of the network is relatively large (Zhang et al., 2020). In this respect, crime has become an important issue among social media users, and the topic is actively shared and discussed among users. Moreover, the members who are passionate about this topic happen to have large networks of "friends" on their social media pages (Feng et al., 2018). As a result, information shared on their social media pages propagates quickly. For example, in a matter of hours, a piece of information, such as a stolen car, became viral, enabling the

eventual identification and recovery of the car.

Unfortunately, the most potent strength of social media can also become its worst enemy in providing information on crime prevention. Translating actionable information into coordinated action is still a huge challenge. True, social media can enable the management of groups of individuals (Baccarella et al., 2018; Karahanna et al., 2018), thus opening the possibility of 'emergent organizing' (Tim et al., 2018). However, it is still a messy affair in real life. There is no clear framework for how the communities should organize themselves. As a result, many of the efforts by these social media warriors eventually fizzled out.

Overall, TACT allowed the study to unveil two preliminary insights about the paradoxical implications of social media. First, while the features of social media could potentially offer certain functionalities (just as how a chair was designed for 'sitting'), the affordances and constraints that were eventually actualized from the use of social media might not always be expected and desirable (just as a chair could be eventually used for 'standing on' or 'as a weapon'). It is thus a fruitful endeavor to explore the unintended consequences of technology in different contexts. Second, the affordances and constraints of technology might interrelate with each other. Constraints may force actors to embrace further actions, eventually realizing a new affordance. For example, the constraint of crowding has prompted the communities to set off some offline movements. New affordances, such as collaboration, may emerge when social media facilitates real-time coordination among offline participants. In other words, future research must consider the bundle of affordances and constraints and account for how they interact.

This study provides several important and interesting insights. First, the study built on rich empirical evidence to develop nuanced insights demonstrating social media's power in advancing community-driven crime prevention. The study asserts that the active role of social media as the change agent for societal improvement and innovation, as well as its positive and negative impacts, should be studied concurrently. Second, it contributes an important understanding of the paradoxical impacts of social media.

Overall, the study uncovered two pairs of actualized affordances and constraints of social media in providing information on crime prevention. Although these preliminary findings are not intended to be exhaustive, they unveil essential insights regarding both the intended and unintended consequences of social media. Moving forward, future studies can continue to develop an understanding of opportunities and pitfalls that emerge when leveraging social media to complete social missions and facilitate social change in the bigger picture.

## **ACKNOWLEDGEMENT**

This research did not receive any specific grant from funding agencies in the public, commercial, or non-for-profit sectors.

## **AUTHORS DECLARATION**

The authors declare no conflicts of interest regarding the publication of this paper.

## AUTHORS CONTRIBUTION

Conceptualization: [both authors], Methodology: [both authors], Formal analysis and investigation: [A.Fauzi], Writing - original draft preparation: [A.Fauzi]; Writing - review and editing: [both authors]

## REFERENCES

- Baccarella, C. V., Wagner, T. F., Kietzmann, J. H., & McCarthy, I. P. (2018). Social media? It's serious! Understanding the dark side of social media. *European Management Journal*, 36(4), 431–438. <https://doi.org/10.1016/j.emj.2018.07.002>.
- Baharom, A. . H., & Habibullah, M. . M. S. (2009). Crime and Income Inequality : The case of Malaysia. *Journal of Politics and Law*, 2(1), 55–70. <http://www.ccsenet.org/journal/index.php/jpl/article/view/387/346>
- Busher, H., & James, N. (2009). Epistemological dimensions in qualitative research: the construction of knowledge online. *Online Interviewing*, 5–18. <https://doi.org/10.4135/9780857024503.n2>.
- Chatterjee, S., Sarker, S., & Siponen, M. (2017). How do mobile ICTs enable organizational fluidity: toward a theoretical framework. *Information and Management*, 54(1), 1–13. <https://doi.org/10.1016/j.im.2016.03.007>.
- Chen, Y. H., Rorissa, A., & Germain, C. A. (2015). Usability definitions in a dynamically changing information environment. *Portal-Libraries and the Academy*, 15(4), 601-621.
- Chen, Q., Xu, X., Cao, B., & Zhang, W. (2016). Social media policies as responses for social media affordances: The case of China. *Government Information Quarterly*, 33(2), 313–324. <https://doi.org/10.1016/j.giq.2016.04.008>.
- Christel, M. G. (2002). Accessing news video libraries through dynamic information extraction, summarization, and visualization. In K. Borner & C. Chen (Eds.), *Visual interfaces to digital libraries* (pp. 98-115). Lecture Notes in Computer Science.
- Deng, X. N., & Joshi, K. D. (2016). Why individuals participate in micro-task crowdsourcing work environment: Revealing crowdworkers' perceptions. *Journal of the Association for Information Systems*, 17(10), 648–673.
- Federici, T., Braccini, A. M., & Sæbø, Ø. (2015). "Gentlemen, all aboard!" ICT and party politics: Reflections from a Mass-eParticipation experience. *Government Information Quarterly*, 32(3), 287–298. <https://doi.org/10.1016/j.giq.2015.04.009>.
- Feldman, S. S., & Horan, T. A. (2011). The dynamics of information collaboration: a case study of blended it value propositions for health information exchange in disability determination. *Journal of the Association for Information Systems*, 12(2), 189-207.
- Feng, S. H., Hossain, L., Crawford, J. W., & Bossomaier, T. (2018). Quantifying network dynamics and information flow across Chinese social media during the African Ebola outbreak. *Disaster Medicine and Public Health Preparedness*, 12(1), 26-37.
- Fuller, T. (2013, October 18). Wave of high-profile crimes has put Malaysians on the Defensive. *New York Times*. [http://www.nytimes.com/2013/10/20/world/asia/soaring-crime-rate-takes-a-growing-malaysia-by-surprise.html?\\_r=0](http://www.nytimes.com/2013/10/20/world/asia/soaring-crime-rate-takes-a-growing-malaysia-by-surprise.html?_r=0).
- Greenwood, B. N., & Gopal, A. (2015). Tigerblood: Newspapers, blogs, and the founding of information technology firms. *Information Systems Research*, 26(4), 812–828. <https://doi.org/10.1287/isre.2015.0603>.
- Hale, J. E. (2005). Crisis response communication challenges: Building theory from qualitative data. *Journal of Business Communication*, 42(2), 112–134. <https://doi.org/10.1177/0021943605274751>.
- Hutchby, I. (2001). Technologies, texts and affordances. *Sociology*, 35(2), 441–456.

- <https://doi.org/10.1017/S0038038501000219>.
- Ismail, N., Md Noor, S., Ahmad, J., & Jamri, M. H. (2022). Understanding Factors Influencing Crime Prevention Information on Social Media. *Intellectual Discourse*, 30(2). <https://doi.org/10.31436/id.v30i2.1849>.
- Johnson, N. F., Manrique, P., Zheng, M., Cao, Z., Botero, J., Huang, S., Aden, N., Song, C., Leady, J., Velasquez, N., & Restrepo, E. M. (2019). Emergent dynamics of extremes in a population driven by common information sources and new social media algorithms. *Scientific Reports*, 9(1), 11895.
- Junhee, Park. (2020). Privacy concern and personal information for crime prevention system utilizing big data: Focusing on the effect of government trust. *The Korea Association for Policy Studies*, 29(3), 221-248. doi: 10.33900/kaps.2020.29.3.8.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>.
- Kapoor, K. K., Tamilmani, K., Rana, N. P., Patil, P., Dwivedi, Y. K., & Nerur, S. (2018). Advances in social media research: Past, present and future. *Information Systems Frontiers*, 20(3), 531–558. <https://doi.org/10.1007/s10796-017-9810-y>.
- Karahanna, E., Xin Xu, S., Xu, Y., & Zhang, N. (Andy). (2018). The needs–affordances–features perspective for the use of social media. *MIS Quarterly*, 42(3), 737–756. <https://doi.org/10.25300/MISQ/2018/11492>.
- Kim, S., Chung, E., & Kwon, N. (2021). Dynamics of relevance judgment during physicians' online information search process for patient treatment. *Malaysian Journal of Library & Information Science*, 26(1), 17-37.
- Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly*, 23(1), 67. <https://doi.org/10.2307/249410>.
- Leidner, D. E., Gonzalez, E., & Koch, H. (2018). An affordance perspective of enterprise social media and organizational socialization. *Journal of Strategic Information Systems*, 27(2), 117–138. <https://doi.org/10.1016/j.jsis.2018.03.003>.
- Leonardi, P. M. (2011). When flexible routines meet flexible technologies: Affordance, constraint, and the imbrication of human and material agencies. *MIS Quarterly*, 35(1), 147–168. <https://doi.org/1005>.
- Li, C. C., & Luo, X. (2021). Toward a unified view of dynamic information security behaviors: insights from organizational culture and sensemaking. *Data Base for Advances in Information Systems*, 52(1), 65-90.
- Lister, M. (2023). 40 essential social media marketing statistics in one cool infographic. WordStream. <https://www.wordstream.com/blog/ws/2017/01/05/social-media-marketing-statistics>.
- Maier, C., Laumer, S., Weinert, C., & Weitzel, T. (2015). The effects of technostress and switching stress on discontinued use of social networking services: A study of Facebook use. *Information Systems Journal*. <https://doi.org/10.1111/isj.12068>.
- Majchrzak, A., Faraj, S., Kane, G. C. G. C., & Azad, B. (2013a). The contradictory influence of social media affordances on online communal knowledge sharing. *Journal of Computer-Mediated Communication*, 19(1), 38–55. <https://doi.org/10.1111/jcc4.12030>.
- Majchrzak, A., & Markus, M. L. (2012). Technology affordances and constraints in management information systems (MIS). In *Encyclopedia of Management Theory* (p. 5). <https://doi.org/http://dx.doi.org/10.4135/9781452276090.n256>.
- Majchrzak, A., Wagner, C., & Yates, D. (2013b). The impact of shaping on knowledge reuse for organizational Improvement with Wikis. *MIS Quarterly*, 37(2), 455–469. <https://doi.org/10.25300/MISQ/2013/37.2.07>.
- Merdeka Centre. (2013). *Issues of voter concern*. <http://www.merdeka.org/v4/>

- phocadownload/Researches/poll release Dec 2012 - voter issues.pdf.
- Mettler, T., & Winter, R. (2016). Are business users social? A design experiment exploring information sharing in enterprise social systems. *Journal of Information Technology*, 31(2), 101–114. <https://doi.org/10.1057/jit.2015.28>.
- Omnicores (2024). Instagram by the numbers: stats, demographics & fun facts. February 20, 2024. <https://www.omnicoreagency.com/instagram-statistics/>.
- Pan, S. L., & Tan, B. (2011). Demystifying case research : A structured – pragmatic – situational ( SPS ) approach to conducting case studies. *Information and Organization*, 21(3), 161–176. <https://doi.org/10.1016/j.infoandorg.2011.07.001>.
- Phang, C. W., Kankanhalli, A., & Tan, B. C. Y. (2015). What motivates contributors vs. lurkers? An investigation of online feedback forums. *Information Systems Research*, 26(4), 773–792. <https://doi.org/10.1287/isre.2015.0599>.
- Pires, V. S., & Albagli, S. (2012). Company strategies, informational dynamics and brand identity in the creative economy. *Perspectivas Em Ciencia Da Informacao*, 17(2), 109–122.
- Santos-d'Amorim, K., & dos Santos, R. N. M. (2022). From algorithmic personalization to informational wars: the dynamics of (dis)information bubbles around the September 7, 2021. *Encontros Bibli-Revista Eletronica De Biblioteconomia E Ciencia Da Informacao*, 27, 1-16.
- Seidel, S., Recker, J., & vom Brocke, J. (2013). Sensemaking and sustainable practicing: Functional affordances of information systems in green transformations. *MIS Quarterly*, 37(4), 1275–1299. <https://doi.org/10.25300/MISQ/2013/37.4.13>.
- Soroya, S. H., & Faiola, A. (2023). Why did people avoid information during the Covid-19 pandemic? Understanding information sources' dynamics among Pakistani Z generation. *Library Hi Tech*, 41(1), 229-247.
- Stamati, T., Papadopoulou, T., & Anagnostopoulou, D. (2015). Social media for openness and accountability in the public sector: Cases in the Greek context. *Government Information Quarterly*, 32(1), 12–29. <https://doi.org/10.1016/j.giq.2014.11.004>.
- Statista. (2019). Global social media ranking 2019. <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>.
- Strong, D. M., Volkoff, O., Johnson, S. A., Pelletier, L. R., Tulu, B., Bar-On, I., Trudel, J., & Garber, L. (2014). A theory of organization-EHR affordance actualization. *Journal of the Association for Information Systems*, 15(2), 53–85.
- Tim, Y., Pan, S. L., Bahri, S., & Fauzi, A. (2017). Digitally enabled affordances for community-driven environmental movement in rural Malaysia. *Information Systems Journal*, 28(1), 48–75. <https://doi.org/10.1111/isj.12140>.
- Treem, J. W., & Leonardi, P. M. (2013). Social media use in organizations: Exploring the affordances of visibility, editability, persistence, and association. *Annals of the International Communication Association*, 36(1), 143–189. <https://doi.org/10.1080/23808985.2013.11679130>.
- Vaast, E., & Kaganer, E. (2013). Social media affordances and governance in the workplace: An examination of organizational policies. *Journal of Computer-Mediated Communication*, 19(1), 78–101. <https://doi.org/10.1111/jcc4.12032>.
- Van Osch, W., & Steinfield, C. W. (2016). Team boundary spanning: Strategic implications for the implementation and use of enterprise social media. *Journal of Information Technology*, 31(2), 207–225. <https://doi.org/10.1057/jit.2016.12>.
- Volkoff, O., & Strong, D. M. (2013). Critical realism and affordances: Theorizing IT-associated organizational change processes. *MIS Quarterly*, 37(3), 819–834. <https://doi.org/10.25300/MISQ/2013/37.3.07>.
- Walsham, G. (1995). Interpretive case studies in IS research: nature and method. *European Journal of Information Systems*, 4, 74–81. <https://doi.org/10.1057/ejis.1995.9>.

- Warner, J. (2005). An information dynamic: technologies for the reproduction of written utterances. *Aslib Proceedings*, 57(5), 412-423.
- Wu, I. C., Liu, D. R., & Chang, P. C. (2009). Learning dynamic information needs: a collaborative topic variation inspection approach. *Journal of the American Society for Information Science and Technology*, 60(12), 2430-2451.
- Xiang, Z. (2011). Dynamic social media in online travel information search: a preliminary analysis. Paper presented at the *International Conference on Information and Communication Technologies in Tourism 2011*, Innsbruck, Austria, Jan 26-28, 2011.
- Zammuto, R. F., Griffith, T. L., Majchrzak, A., Dougherty, D. J., & Faraj, S. (2007). Information Technology and the changing fabric of organization. *Organization Science*, 18(5), 749–762. <https://doi.org/10.1287/orsc.1070.0307>.
- Zhang, Y. M., Liu, F., Koura, Y. H., & Wang, H. (2020). Dynamic of interactive model for information propagation across social networks media. *Advances in Difference Equations*, 2020(318). <https://doi.org/10.1186/s13662-020-02774-y>.
- Zheng, Y., & Yu, A. (2016). Affordances of social media in collective action: The case of Free Lunch for children in China. *Information Systems Journal*, 26(3), 289–313. <https://doi.org/10.1111/isj.12096>.