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**Integration v. Polarization amongst Social Media Users: Perspectives through Social  
Capital Theory on the Recent Egyptian Political Landscape**

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**Abstract**

There has been a growing debate about the extent to which social media has influenced the Arab World's recent revolutions described as the "Arab Spring". Despite difference in views concerning this issue, the role that social media played in enacting socio-political change is undeniable, a matter which attracted the interest of academia. Here, the power of social media in widening and strengthening relationships renovated and reinforced the concept of "social capital", which could lead to *integration or acculturation amongst affected societies*. Underpinned by a social capital theory and the acculturation process, this commentary article adopts a critical approach and draws on historical events from the 2011 Egyptian revolution and beyond. We claim that, social media lead to social capital creation and integration when some fundamental associated factors exist namely: the bonding, bridging and linking factors. Social media adoption lead to political integration when these factors existed during the Egyptian revolution and lead to polarisation when there was no contextual triggering factor before the revolution and no access to resources after the revolution. We provide some insightful perspectives on the role of social media in social-political change.

**Keywords**

Social media, acculturation, social capital, social change, social movement, revolution, Tahrir Square, Egypt

## **1. Introduction**

In recent years the rise of Social Media has attracted ever-increasing attention and booming interest from both academics and practitioners. Social media has become a particularly popular communication channel since the early 2000s (Boyd and Ellison 2007; Lenhart et al. 2010; Mintel 2012; Ofcom 2008). Indeed, social media websites now receive the highest web traffic worldwide (Alexa, 2016) and one third of online time is spent on social media (GlobalWebIndex, 2016).

Social media enables people from most part of the world to engage and interact with wider populace that often goes beyond their own communities, without the need for physically travelling abroad and/or meeting in person. Therefore, instead of focusing on ethnic minorities' acculturation experience, strategies and outcomes, as a result their physical movement (Peñaloza, 1994; Berry, 2008; Cleveland, et al., 2009), a newly emerged stream within the acculturation research tends to discuss how social media such as Twitter, Facebook and Instagram facilitate people to better connect to the "others", outside their existing group memberships (Forbuash and Foucault-Welles, 2016; Jafari and Goulding, 2013).

Phillips (2008) has claimed that there is a tendency that the convenience and connectedness provided by social media do not always promote more assimilation, or acculturation to the "others", but perpetuate further engagement with the same groups that share their own views and belief. Often the diffusion of messages on social media is not content neutral and the collective generation of content on social media reflects and reinforces existing group memberships in reality (Lipizzi et al. 2016; Cappellini and Yen, 2015).

Similarly, Mick and Fournier (1998) highlighted that technology paradoxes mostly stimulate negative emotions. However, do not adequately reflect behavioural coping strategies. This process particularly moderated by product, situation, and person factors. However, their research does not adequately reflect the specific content and pressures of the cultural

contradictions of technology. They proposed follow-up studies to expand the taxonomy of paradoxes to mitigate the framework by including the source satisfaction, quality of life as coping strategies.

Acknowledging the social media paradoxes in relation to acculturation and social integration, this paper encourages researchers to further discuss how, why and to what extent social media enable, facilitate and/or inhibit our acculturation to “others”.

This commentary paper sheds light on a critical perspective towards social media’s role in mobilising political movements in relation to the 2011 Egyptian revolution and beyond. The paper contributes to the literature in the following ways: We offer a critical account of an under recognised issue of why and how integration or polarisation could occur as a result of social media adoption as a tool for political change. Moreover, in doing so, we underpin an interpretative case study by an acculturation and a social capital lenses to understand the role of social media within the Egyptian political landscape before, during and after the 2011 Egyptian revolution. The theoretical framework is unique as it permits to look at the nuanced complexities of how social capital creation could be influenced by acculturation regarding the use of social media for political change. Finally, we offer a roadmap for future research to address further these important aspects.

The rest of this paper is structured as follows: section 2 discusses the theoretical framework utilised in the paper, social capital and acculturation theories and their applications in the social media literature, in this section we offer a brief critical review of the extant literature on social media, political change and integration v. polarisation perspectives. Section 3 presents the methodology. Next, section 4 discusses how and why social capital has been created in the case of the Egyptian revolution at three distinctive points: before, during and after 2011. In doing so, the section highlights whether this has led to an integration or a polarisation in relation to

social media adoption for political change. Finally, section 5 presents the conclusion, future research agenda and implications for policy and practice.

## **2. Literature review: an overview of social media, social capital and integration v. polarisation**

### **2.1 Social Capital**

The term social capital was introduced since 1890 and have been used occasionally until it became of particular interest worldwide in politics and social sciences disciplines starting the second half of 1990 (Adler and Kwon, 2002; Ferragina and Arrigoni, 2016), and gaining even more importance nowadays (Gudmundsson and Mikiewicz, 2012); almost the same epoch of the emergence of the Internet.

Social capital, as expressed by Fukuyama (2000), represents the shared norms or values that promote social cooperation, instantiated in actual social relationships. The World Bank (1999) elaborated this meaning further to point out to the value of social capital in linking the different institutions of the society (e.g., families, communities, businesses, etc.). Putnam (2001) describes it as the connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. These connections result in a common public good (Gil de Zúñiga et al., 2012). Social capital is also a concept that concerns the output of ‘diverse groups’ (Evans and Carson, 2005) and the evolution of communities (Ferragina, 2012). Furthermore, Coleman (1988) states that entities involved are characterized by two common traits: social structure, and enabling participants to interact within it.

## **2.2- Types of Social Capital**

A number of scholars classified social capital into three distinctive forms: bonding, bridging, and linking (Aldridge et al., 2002; Putnam, 2001; Field, 2003; Wynne, 1999; Schuller et al., 2000; Woolcock 2001).

Bonding capital -considered the strongest sort of social capital- reflects the relationships with friends, family, and people sharing the same ideology/situation. Bonding social capital strengthens the concept of homogeneity. Bridging capital, a less connection than bonding capital, represents the relationship between friends of friends. Shuller et al. (2000) describe its importance in "building of connections between heterogeneous groups, which are likely to be more fragile, but more likely also to foster social inclusion". The third kind of social capital, linking, concerns the relationship between a citizen and government representative(s)/elected leader(s). It ties persons with others in different situations; which fosters further resources outside a community.

## **2.3 Positive vs. Negative Social Capital**

“Social capital is not just a public good but is for the public good” (Putnam, 2001). Social capital promotes the concept of groups’ coalition, community empowerment, and civil society reinforcement (Panth,2010); therefore, a substantial prerequisite for realizing democracy and economic growth (Fukuyama, 2000; Putnam, 2001).

However, social capital is not always beneficial for the society; on the contrary, it can result in an unconstructive output (Lester et al., 2013) that could lead to society polarization rather than integration. Coleman (1988) sees social capital as a “neutral resource” that fosters action, but whether this action leads to a positive impact on the society depends on how it is used and in which context (Coleman, 1988; Panth, 2010).

Examining the nature and effects of the different types of social capital helps in pinpointing positive and negative social capital's outcome. Having a clear understanding of both sides of social capital (positive and negative) serves in shaping institutional programs and policies (Panth, 2010).

*Bonding* social capital provides a strong support for unprivileged segments of the society (such as, women, poor/indigenous groups, etc.) in fulfilling their common demands. Such cooperative spirit constitutes a protection to such communities from external threats. This form of social capital based on family and friends' ties compensates for the inability of a state to help these segments and the lack of trust in the support of the system or the political parties (Fukuyama, 2000; Putnam, 2001).

Despite its benefits, bonding capital could lead to negative consequences strengthening illegal/unethical behaviour among its members (e.g., criminal gangs, terrorists), or promoting exclusiveness and concentration on the interest of a specific group on the account of others outside their circle. Such behaviour produces a negative social capital that could harm the entire society (Fukuyama, 2000; Llan, 2012). Furthermore, leveraging narrow ties could cause ethnic disenfranchisement or social isolation that could nurture ethnic cleansing in extreme situations (Bolin et al., 2004).

This line of thought drew the attention to the importance of *bridging* social capital. Bridging social capital serves in linking heterogeneous groups to share information and ideas; which reinforces common interests among diverse groups (Putnam, 2001), and extends the "radius of trust" creating an inclusive institutional ecosystem (Fukuyama, 2000). The connections of people from different background have the potential of building more powerful communities with wider networks opening further opportunities and strengthening social inclusion (Narayan and Cassidy, 2001; Frank and Yasumoto, 1998; Skinner, 2008).



Nonetheless, Bolin et al. (2004) argued that forming a bonding social capital is regarded as a foundation for building bridging social capital. Hence, it is important to maintain a kind of balance between bonding and bridging social capital to reap a productive output; otherwise both forms can work against each other. It can even drive people to drifting away from their closest communities, creating an atomized society rather than an integrated one (Marozzi, 2015). Globalization is perceived as a pillar in expanding bridging social capital by connecting more diverse individuals and groups on the expense of weakening traditional bonding social capital ties (Panth, 2010). Perkins et al. (2002) therefore concluded that “bonding vis-à-vis bridging” is one of the main reasons for negative social capital outcome.

In addition to bonding and bridging, a number of scholars stressed on the pivotal role of strong political institutions in building a positive social capital through promoting relationships with the society; known as linking: the third form of social capital (Fukuyama, 2000; Putnam, 2001; Ferragina, 2012; Costa and Kahn, 2003). Putnam (2001) confirms that linking social capital increases trust in government and civic participation, and cannot exist without a democratic environment. He supported his argument in the context of the fall of the Weimar Republic. The absence of a strong national government and political parties was the main reason for the collapse of the system driving people to belong to other bonding closed groups, and giving Hitler the power in unifying these different small fragmented communities under a common belief/goal.

To conclude, all three forms of social capital are important, each serving a different purpose. It is also pivotal to maintain an equilibrium among them depending on each context if one aims to produce the maximum possible positive social capital. Bonding social capital for example, reinforces harmony, collective strength, and mutual benefits between communities, whereas bridging social capital widens people’s networks mainly through information exchange and dissemination expanding the circle of trust among diverse groups resulting in leveraging

combined resources. Moreover, linking social capital provides people with more access to networks that possess resources, power, or authority through law enforcement and social support (Putnam, 2001; Panth, 2010).

## **2.4 Effect of Social Media on Social Capital**

A number of studies confirmed the Internet value in increasing social capital (Kavanaugh and Patterson, 2001; Hampton, 2003; Boase and Wellman, 2005; Wang and Wellman, 2010; Haythornthwaite and Kendall, 2010). On the contrary, others extended the “time displacement hypothesis” of Putnam (1995) -that claimed that time spent on television detaches people from their social communities and civic engagement- to online environments, claiming that virtual communities substitute strong bonds with online weak relationships, and compromise on the time allocated for face-to-face social activities (Cummings et al., 2002; Kraut et al., 1998; Nie, 2001).

With the second wave of the Internet, social media introduced additional features -that provide a broad spectrum of connections that attracted a wide audience worldwide- such as, creating a personal profile, updating status, accessing the profiles of a user’s network of friends (whether met earlier offline or not), communicating with them in different forms (e.g., chatting, private messages, comments, sharing photos and videos, etc.), or playing with or inviting them to online games (Boyd and Ellison, 2007; Ellison et al., 2011; Gil de Zúñiga et al., 2012). Therefore, the emergence and diffusion of social media instigated more research into the notion of social capital investigating their contribution and influence on this relatively old term (Lin, 2001). Based on Flap’s (1991) view, the value of social capital in a social network can be measured by: (i) the number of relationships; (ii) strength of those relationships; and (iii) resources controlled by participating in these relationships. To an extent, social media could link to each of these three components; and hence, its potential impact on social capital. Social

media platforms proved to generate all types of social capital: bonding, bridging, and linking (Ellison et al., 2007; Hawkins and Maurer, 2010).

These sites enable individuals to select their connections based on their privacy preferences. They facilitate the connection between people that cannot build strong and weak relationships physically (Seif, 2016). Zhao (2006) proved in his study that people using the Internet frequently possess broader networks than others not using it or even using it occasionally. Another study conducted by Boase et al. (2006) concluded that Internet users keep 20% more connections of less close friends than non-Internet ones. Evidently, social media is regarded as a cheap, fast, interactive, and a rich content medium that helps in fostering public participation in voluntary organizations and politics (Wellman et al., 2001; Gil de Zúñiga et al., 2012; Agostino et al., 2016), mobilizing societies (as in the case of the Arab Spring), strengthening social inclusion especially during serious incidents/disasters (Starbird et al., 2015; Fraustino et al., 2012), building ties that would not have been created, and maintaining connections with members of a previously inhabited community (Ellison et al., 2007). Moreover, Cuesta and Alda (2012) confirm in their study that social media use can combat crime through crowd engagement and collaboration.

On the other hand, social media can facilitate the communication and information exchange among criminals and terrorists forming a bonding negative social capital, but decreasing victims' trust, which results in a reduction in social capital (Dean et al., 2012; Taylor et al., 2014). Additional negative sides were also highlighted by critics of online networks. For example, many researchers pointed out to the effect of social media in creating polarized groups that share the same backgrounds or beliefs rather than supporting diversity and integration (Fernback, 1997; Guerra et al. 2013; Elanor et al. 2014). According to Madden et al. (2013), 74% of teenagers who use social media have deleted others in their network, and 58% have

blocked people. Such acts could send a strong message that could develop a marginalization environment.

Concerning online and offline communications, it is continuously argued whether they replace, complement, or facilitate one another. Turkle (2012) stated that people, in general, have sacrificed conversation for connection since most people keep shallow and short communication using their devices while staying physically with their friends and families. Hodgkinson (2008) viewed that social media can divert the attention of people from participation in public or political activities. These opinions were disapproved by other researchers as they ascertained that younger social media users perceive the Internet as an additional communication platform, rather than a tool that replaces face-to-face relationships (McPherson et al., 2006). Despite any drawbacks of social media use, Lin (2001) ascertains that “those not online are at an ever-greater disadvantage, cut off from this explosion in social networks and social capital”.

The majority of the literature that investigated the relationship between social media and social capital confirmed the positive relation between using social media and building social capital, pinpointing that the output reached from using online social networks depends to a large extent on the motivation and behaviour of the users on these platforms (see table 1). Some of them argue that social media can sometimes create strong ties (or bonding social capital) (e.g., Ellison et al., 2007; Valenzuela et al., 2009; Lee et al., 2016), but has a much higher possibility in the growing bridging social capital through building weak ties (Ellison et al., 2007; Burke et al., 2011; Steinfield et al., 2008; Gil de Zúñiga et al., 2012; Ellison et al, 2011; Burke et al., 2011; Valenzuela et al., 2009; Lee et al., 2016; Hampton et al., 2011).

When looking at the studies listed in table 1, one can indicate several limitations that would instigate further research. First, most research was conducted one time (i.e. cross-sectional) except only two studies that undertook longitudinal analyses on the relationship between social

media and social capital over 2 periods (Burke et al., 2011 and Steinfield et al., 2008). Unlike cross-sectional research, longitudinal ones can better determine causal relations since they enable for further relationship observation over time (Burke et al. 2011). Second, the majority of the sample used was on undergraduate students and specifically on Facebook. Third, as the context of the studies is limited to the USA except for the study of Burke et al. (2011) and Lee et al. (2016). Even though the first considered only English-speaking Facebook users, and the later study –although investigated the cultural difference among SM users in Australia and Korea- it was limited to adolescents users of two developed countries. Lastly, the linking type of social capital was totally overlooked in the mentioned research. Therefore, further longitudinal generalized research is needed to encompass all forms of social capitals, more SM (given that features, characteristics, and target audience differ from a platform to another), wider demographics, and different cultures in both developed and developing countries.

Insert table 1 about here

**2.5 Acculturation Process: Integration v. Polarization** Culture is a nonrepresentational word to describe a group of people, on a national level, organizational level, or a sub group level, sharing a similar way of feeling, thinking and behaving (Thomas, 1997; Ali and Brooks, 2009). According to Luna and Gupta (2001), human behaviour is influenced significantly by culture; in addition, people’s behaviour usually reflects their culture values as well. For example, heritage culture influences people’s references, decision making, actions and world perception (McCort and Malhotra, 1993).

On the other hand, acculturation has been defined in many ways within different disciplines. One of the mostly cited definitions of acculturation is defined acculturation as culture change that is initiated by the conjunction of two or more autonomous cultural systems; when groups of different cultural backgrounds and their individual members engage each other, a process

of acculturation begins, leading to cultural and psychological changes in both parties (Berry, 1997; 2008).

There are several factors that can impact acculturation such as social norms, structure of a society, being in touch with people with different cultural backgrounds, overseas advertisement, travelling and life experience. Peñaloza's (1994) research identifies conflicting sets of acculturation agents (e.g., family, friends, media, social and religious institutions), each aligned with the heritage and host cultures, which have effects on acculturation outcomes.

According to Laroche and Cleveland (2007), there are differences of acculturation at a national level and individual level. At national level, acculturation can happen through the changing of social norms and the structure of a society. In addition, at an individual level, acculturation occurs and is reflected in changes of psychological characteristics of the individual. The change in psychological characteristics can lead to changes in personal attitudes, behaviours, values and identity (Berry, 1997; 2008; 2009).

Through looking at the previous literature of acculturation, two models were most widely proposed to investigate the manner of the acculturation process. The first model is named the unidimensional model; it explains a continual process of acculturation. In this model, either ethnic minority culture or the host culture is conclusion. Berry (1980; 1997; 2008; 2009) explained that the unidimensional model assumes that after a period of time, people would gradually lose their original cultural identity and move to the host culture. Finally, people from the ethnic group merge into the mainstream culture and as a separate cultural entity, the original ethnic group and its different norms, values and customs disappears (Berry, 1980; 1997; 2008; 2009).

Furthermore, Berry, (1980; 1997; 2008; 2009) has explained acculturation as ranging from separation, on one end to assimilation on the other end on the acculturation continuum. The

former point indicates ethnic culture is salient and the latter one shows that the original cultural pattern has disappeared, and the host culture prevails. Berry, (1980; 1997; 2008; 2009) has also pointed out that people from ethnic groups merge into the host society eventually and give up their traditional customs, values, beliefs, norms and behaviours and adapt to those of the mainstream culture. Jun et al. (1993) claimed that when immigrants fully abandon their original cultural heritage and adapt to their host culture, they can be described and classified as “assimilated”.

According to Jun et al. (1993) and Dey et al., (2017), in the middle of ethnic and host cultural extreme points, the unidimensional acculturation model demonstrates biculturalism.

However, the model has limitations, for example, unidimensional models cannot distinguish individuals who have both ethnic culture and host culture, and it is inconsistent with the “extreme point theory”.

Mendoza (1989) also stated that the acculturation process can be determined by evaluating the level of individual assimilating to the host culture and the level of retaining their heritage culture. Thus, unidimensional models primarily concentrate on determining the level of merging into a host culture, while the bi-dimensional models focus on the degree of both adapting into the host culture and maintaining the ethnic cultures, (Dey et al., 2017).

Mendoza (1989) has identified two states of societies either mono cultural or multicultural society. Multiculturalism is the state of a society not the individuals who acculturate. For example, Korzenny (2008) argues against multiculturalism of an individual as this suggests having several cultures in one’s cultural identity. Korzenny (2008), argues that multiculturalism is the society and not the individual, and therefore an individual cannot be multicultural. However, as Dey et al., (2017) have introduced the concept of bicultural/dual cultural identity where individual could adopt various cultural identities in various situations.

Although Berry's conceptual model has been criticised, this framework is widely cited in consumer acculturation research areas. Berry (1997) explained acculturation as a process in which the immigrant consumers adapt the host consumer culture from low level to high level (separation, marginalisation, integration and assimilation).

Separation is used to explain the way newly joint members maintain their original group culture and avoid involving themselves in other group cultures, (Berry, 1980; 1997; 2008; 2009). While marginalisation is used to explain the way newly joint members maintain their original group culture but in some specific component, they pick up the new host culture, (Berry, 1980; 1997; 2008; 2009).

The integration process of acculturation aims to describe the situation in which people not only maintain their original cultural values, but also accept the host group culture values. More specifically, it includes decreasing cultural barriers to associate with other group cultures, developing a diversity of cultural values and building an integrated values based on the newly joint individual's values/views and exiting members of the host group's values/views, rather than only bringing minority cultural values into the host group culture, (Berry, 1980, 1997, 2008, 2009).

Cultural assimilation aims to explain the process by which an individual or a group of people give up their original culture and adapt to another. In other words, assimilation mainly focuses on the maximum accepted extent of the mainstream host culture. Complete assimilation happens when the cultural value of new members in a certain group becomes the same as the others and they give up their original cultural values, (Berry, 1980, 1997, 2008, 2009).



Previous literature and studies of acculturation, ( ) are limited to concentrating on immigrants who came from other countries over one or more generations. Perhaps the findings of these studies are obvious and acculturation has more impact on participants who immigrated such a long time ago. However, other scholars (Dey et al., 2017; Forbush and Faucault-Welles, 2016; Jafari and Goulding, 2013), have claimed that recent research on acculturation has stressed the importance of social media led interactions within and across communities.

In addition, according to the definition of acculturation, which is the process of cultural adaptation and change that happens in any kind of new environment, everyone should be considered, it becomes a necessary part of acculturation. For example, people move from one country to another, study from one school to another, from school to work, from single to married, from a small town to a big city and so on.

In our paper, the main focus of our research study is on the individual's acculturation on social media and how digital culture is transforming from integration to polarization and vice versa. When certain social media user joins a new social media group, the host group's culture may dictate fresh views and norms automatically. Nevertheless, as these users join to a new group, the host group's cultural values and motivations may also be impacted by the other culture; this may cause the host culture group to change and provide opportunities for new ideas and norms.

Previous research has demonstrated that by creating, reinforcing and perpetuating interactions within the in-groups, rather than connecting the out-groups, social media leads to increasing social polarisation, (Phillips, 2008; Cappellini and Yen, 2015; Hussain et al., 2016).

Therefore, it can be claimed, in this paper, that acculturation on social media could facilitate the integration and the pursuit and adaption of newly joint members to the host group culture and hinder the polarization.

### **3.Methodology**

This paper adopts an interpretative case study methodology (Stake, 1995) to address the following research questions: did social media lead to cultural social change in the Egyptian revolution case? If so, did this change promote integration or aggravate polarisation? Case studies entail “intensive analyses and descriptions of a single unit or system bounded by space and time” (Algozzine and Hancock, 2006: 11). The paper investigates the role of social media in relation to the space bound phenomenon of the Egyptian revolution. Whilst, in terms of the time horizon covered, the paper covers the role of social media before, during and after the 2011 revolution. This allows for investigating the phenomenon over a reasonable length of time, as to capture the relationship dynamics of the online and the offline worlds, which materialise over time (Fukuyama, 2001).

This interpretive case study is based on understanding historical events related to the Egyptian revolution (2011), as reflected in secondary sources such as news articles and social media pages, namely Facebook and Twitter platforms. This is in addition to revisiting relevant extant literature on the Egyptian revolution and the Arab spring. Using public documents such as newspaper is adequate in qualitative research (Creswell, 2009) and has been utilised before in studies on the topic as in Sorour and Dey (2014). Sampling in case studies is naturally purposeful (Patton, 1990) so researchers decide regarding the individual sources of relevant data. According to Morse (1991), theoretical sampling is synonymous to purposeful sampling, where the aim of sampling is “not to achieve representative sample: cases are chosen as it becomes clear that they can contribute to theory generation” (Harding, 2012:132). In this article, we have sampled based on key events and theoretical relevance. More specifically,

extant literature, news and social media pages before January 2011, during 2011 and after 2011, until 2017. As Willis et al. (2007:439) indicated that “Theories provide structured interpretations or models for investigating and understanding a problem”. As such, with the sheer amount of data within the scope of the study, only theoretically relevant data were obtained, that is, data relevant to theoretical concepts of social capital, acculturation, integration and polarization in relation to social media role within the Egyptian political landscape over the period of (2010-2017). This has been guided by a dual theoretical framework i.e. social capital and acculturation theories to collect and interpret data from sources mentioned above, and as explained in the previous section. In effect, the theoretical framework utilised in this study has been mobilised to collect and interpret our secondary data, in an attempt to answer out research questions.

#### **4. Social Media, Social Capital and acculturation process: Before, During, and After the Egyptian Revolution**

This section discusses if social media has facilitated the creation of social capital and the acculturation process before, during and after the Egyptian revolution in 2011. Essentially, this section highlights if this led to political integration or polarisation.

##### *4.1 Social media, social capital and acculturation process before the revolution*

Evidently, social media contributed in building a social capital sufficient enough for mobilizing Egyptians to go out and protest in Tahrir Square on 25 January 2011. However, this social capital has been created and developed gradually several years before the revolution, and had increased significantly right before the revolution.

Numerous publications portrayed the use of the Internet for social and political change in Egypt before the revolution starting 2000. As stated by Hamdy (2009), Egyptian bloggers perceived

the Internet as a channel through which they can express their ideas since 2000. Blogs opposing Mubarak's regime were first written in English, then in Arabic due to the development of Arabic software. Activists used then other applications such as, Facebook, Flickr, and Twitter especially from their cell phones. The first social media movement that was translated into the ground occurred in 2008 when a Facebook page "6<sup>th</sup> of April Youth" was created by a group of youth protestors educating Egyptians and encouraging them for the concept of a peaceful protest to support a labour demonstration in Mahalla, a city situated at the Nile Delta outside Cairo (Azab, 2012). The page reached 800,000 members in just one week that represented 1/12 of the total Facebook users in Egypt (Pisch, 2010).

Eltantaway and Wiest (2011) highlighted the importance of the 2 features of social media - speed and interactivity- in building an inclusive ecosystem that introduced to this remarkable 2011 event. Few years prior to 2011, social media enabled Egyptian activists to get access to and disseminate information about call-for-change movements, to join virtual groups, and to exchange views with a wider network of connections. In the beginning, social media helped in creating a bonding social capital where a number of activists were engaged in small virtual groups. The 6<sup>th</sup> of April incident and numerous subsequent events -such as, Khaled Said Facebook page, call for change lead by El Baradei, Youtube videos of the activist Omar Affifi, communication with activists from Serbia, accessing information and inspired by the Iranian 'green revolution', and much more; (Azab, 2012; Abdellah and Blair, 2010; France24, 2010; Eltantaway and Wiest, 2011)- developed a wealth of bridging social capital through disseminating news/information/ideas and communicating with diverse groups locally, regionally, and internationally; a wide exposure for Egyptians that was not witnessed before. The most influencing effect before the 25<sup>th</sup> of January was the success of the Tunisian revolution on the 15<sup>th</sup> of January 2011; which intensified a "sense of collective identity" since Tunisia shared a number of common characteristics with Egypt (e.g., Geographic location,

culture, religion, language, similar oppressing conditions, etc.) (Eltantaway and Wiest, 2011). This positive social capital spread an inspiring ideology that paved the way for possibilities for change. This case is supported by the social cognitive theory developed by Bandura (1986) that emphasized that people could replicate a behaviour based on their learning from observing others (through shared social interactions and experiences) committing the same behaviour; evidently, social media contributed to a large extent in exposing Egyptians to the past attempts and experiences of others. During that time, Mubarak's 'stable' regime could not anticipate the risk posed by the growing bonding and bridging social capital generated by these new online platforms, and ironically embraced traditional reactive approaches to this unique situation. Ryder (1965) interpreted this conduct in describing a state's philosophy "Perhaps stability is a more likely institutional goal than innovation because it is simpler and safer, at least in the short run, but any fixed set of solutions to problems posed by a threatening environment becomes a liability whenever such problems change".

An interesting insight that is worth examining about this unprecedented incident is that youth were the main champion in creating and strengthening the social capital needed for social change through the use of technology. Numerous scholars confirmed that most calls for political and social change are initiated by young adults (Sorokin, 1947; Baldwin, 1960; Levy, 1949; Taeuber, 1964; Inglehart, 1971), as youth are more likely than older generations to criticize and refuse existing realities (Hyman and Sheatsley, 1964). Ryder (1965) discussed the relationship between three dimensions: youth, social change, and technology and concluded that technology advancement is one of the main pillars of change, and that they are more accepted by new generations rather than old ones. Moreover, Ryder (1965) sees that technology gives privilege to the youth on the expense of a somehow obsolete past. The above argument interprets how youth were able to commit change through the use of technology. It is worth mentioning that around half of the number of Egyptian Facebook subscribers were below 25

years old in August 2010 (Radwan, 2010), and who acknowledge the value of the Internet in mobilization and in reinforcing a social and political change offering them a convenient communication mean beyond the control of the government or their parents (Shousha, 2010). We claim that, there was a common feel within the Egyptian public for the need to change (contextual triggering factor, which has created bonding between the various social-political groups); there was one common aim to change the regime (one clear goal, which has created bridging between the various social-political groups), and they leverage on social media ability (access to resources, which allow linking between the various social political groups) to create a positive social capital that lead to integration, just in the very short period before the 2011 Egyptian revolution, as an acculturation strategy of different political groups within Egyptian society, that lead to go out for demonstrations.

However, • before 2011, there were a mix of acculturation forms that each political group has been adopting to. (i.e. Salafism as one of the political groups that adopt the Islamism ideology, has adopted the separation form of acculturation, as they clearly identified that they won't participate in any political form unless a reform of the political regulations takes place; as they have their views/values/references that they believe is not allowing them to be involved within the Egyptian political system unless a reform happened. Other political groups like Muslim Brotherhoods also hold Islamism ideology, has adopted a marginalisation form of acculturation process where they maintain their original values/views on the solution of the political system in Egypt but still they were involved in the political system and participate in the parliament elections and has been representing the opposition minority in the parliament. On the other hand, Wafd Party as a representative of Nationalism, has adopted an integration form of acculturation, as they have adopted different political ideology, but they were involved in the political environment completely. • So, before 2011, there were various acculturation forms by various political groups. Yet, only few of these groups were active on SM such as 6th

of April Youth, Muslim Brotherhoods, Liberals, etc., while, the leading political party i.e. the National Democratic party and other key political institutions such as the Parliament and MPs were not that active on social media.

Table 2 summarises the key social media milestones, the impact on social capital and the acculturation process before the revolution.

Insert table 2 about here

#### *4.2 Social media, social capital and acculturation process During the revolution*

The degree of social capital built before the revolution provided a strong driver for the youth to be the first movers in the first days of the revolution. Social media was definitely a support during these days. A survey conducted by Tufekci and Wilson (2012) in 24 February 2011 - few days after the outset of Mubarak in 11 February 2011- on people's protesting around Tahrir Square revealed that social media, being difficult to be controlled by the regime as traditional media, played a prominent role in building awareness about the protest through disseminating information about its aim and logistics, and in encouraging people to be part of this collective action. This increasing bonding and bridging social capital had a significant effect on many people to participate during the first days of the revolution. Moreover, social media was a main source of reporting on the demonstrations' news through posting rich media content. Tufekci and Wilson (2012) findings indicated also that Twitter was used extensively in communication during the demonstrations. As for Facebook, despite its availability in the Arabic language only in 2009, quarter of the respondents used it to share pictures and videos of the protest. Moreover, it was also found that there is a correlation between those who sought information and conducted discussions about the protest using blogs and Twitter, and their availability on the first day of the revolution. The growing bonding social capital that was produced on social media during the days of the revolution convinced more and more people to participate in it

since it is coming from the circle of trust. Furthermore, bridging social capital was clear in three main directions: (i) the harmony among diverse virtual communities being united on one specific goal; (ii) the high degree of virtual communication between Egyptian and Tunisian protestors that contained cheerful words as well as useful tips stemmed from their recent experience (Negm, 2011); and (iii) the fast international propagation of information related to the ideology and the on-ground events happening immediately at Tahrir square without relying only on biased broadcast media. The last dimension of bridging capital enabled the Egyptian revolution to gain a global support and solidarity (Eltantawy and Wiest, 2011).

Therefore, social capital developed during the revolution through social media had a prominent role in large-scale mobilization and in social movements coordination and execution. One cannot deny that this social capital strength stemmed also from its integration between physical and virtual words. Tufekci and Wilson (2012) confirmed that social media were “superimposed on existing social ties between friends, families, and neighbours”, and facilitated different sort of ties. This is attributed to the number of features offered by social media such as, speed, interactivity (Eltantawy and Wiest, 2011), uncontrolled environment compared to other traditional media (Tufekci and Wilson, 2012), a socially mediated media that is more influencing than direct media (Bandura, 2004), and a relatively low cost tool for arranging a notable collective action (Bimber et al., 2005). In particular, collective action was performed on a limited scale earlier due to the obstacles imposed by authoritarian regimes to prevent citizens’ engagement in mass participation through punishing oppositions, prohibiting freedom of speech (Olson, 1971), and exercising control on the communicative infrastructure (Tufekci and Wilson, 2012). Consequently, citizens are accustomed not to express their opinions, and to perceive themselves as marginalized communities (Kurzban, 2004). Social media hence are presenting an opportunity for people in repressive contexts to be active participants in the society and to be confident in their power to commit social change, which fosters their sense



of inclusion in the society. This phenomenon was termed by Bandura (2004) as “*collective efficacy*”; which is the capability of people to work together towards a common goal and their confidence in making a change for their good. Furthermore, the positive capital generated by social media during the 18 days of the revolution (through exchanging updated multimedia content about on-ground events, conducting discussions, and organizing virtual protests) lead to a collective identity for Egyptians that reached its maximum upon Mubarak’s resignation (Eltantawy and Wiest, 2011).

It is worth noting that social media was not solely the champion in the success of the Egyptian revolution. Based on the resource mobilization theory, the success of social movements depends on three important components: (i) resources; (ii) actors capability to use these resources; and (iii) the political/social environment. Social media technologies can be regarded as a crucial resource for collective action and social change (Eltantawy and Wiest, 2011).

We claim that, there was a common believe between Egyptians on the possibility to oust the regime (contextual triggering factor, which has created bonding within the social-political groups); there was one common aim to oust the regime (one clear goal, which has created bridging between the various social-political groups), and they leverage on demonstrations (access to resources, which allow linking between these social-political groups through interactions between them) to create a positive social capital that lead to integration as an acculturation strategy of different social-political groups within Egyptian society, that lead to ousted the Egyptian regime led by Mubarak.

During the 18 days of the 2011 Egyptian revolution, there was significant bonding and bridging activities between various political groups and the public in general on the SM and offline towards the need for a change, which substantiated the assimilation form of acculturation leading to demonstrations with others; who may not share the same views/culture.

Table 3 summarises the key social media milestones, and the impact on social capital and the acculturation process during the revolution.

Insert table 3 about here

#### *4.3 Social media, social capital and acculturation process After the revolution (2011 onwards)*

The widespread of social media in the Arab world had promised the enactment of social change by establishing the infrastructure for a more “more participatory governance, civic engagement, new social dynamics, a more inclusive society” (ASMR 2011: 1). Towards this end, and according to the social capital theory, one could argue that bridging and linking social capital should have materialized since the ignition of the Egyptian revolution in 2011. Here, social media use has exponentially grown and become used by a wider segment of the Egyptian society beyond activists and the English speaking and well-educated members of the public (ASMR 2012), with more than 14 million Egyptians “can't stop posting, chatting and Liking everything in sight” (CairoScene,2014). Statistics show that Facebook users in Egypt has grown from just 3.79 million in 2010 to about 33 million in 2017 (internetworldstats.com,2017; Dailynews,2016). However, the widespread of using social media is not necessarily detached from the offline world, but is a projection to what is happening on ground.

During the early days of the 2011 Egyptian revolution and as discussed above, there was a kind of goal congruence in the offline world i.e. to remove Mubarak’s regime, as such social media was a tool that effectively contributed towards this end. Here, according to the social capital theory, social media created a bridging social capital that helped in integrating various heterogenous sects of the society, regardless of their level of education, social status or political opinion. Moving on, social media tone has gradually started to change especially after the first post revolution presidential elections in 2012. Specifically, in 2013, when the political division

aggravated between opponents and supporters of the ousted President Mohamed Morsi, with each group using social media to vie for power. As, Sorour and Dey (2014) explained, at that time, social media was swiftly established as a battleground between pro and anti-Morsi social media users, “this has included engagement in a verbal war, and the spreading of information and images that can often not be verified.” Similarly, Shearlaw (2016) adds “Social media quickly became a battlefield of misinformation, rumours and trolls ...the same tool that united [people] to topple dictators eventually tore [people] apart.” Of note that this political conflict was just a projection to the offline world. Despite that social media is sometimes is considered as “cheap talk” (Farrell & Rabin, 1996) or even dismissed as mere “slacktivism” or “clicktivism” (Morozov, 2011), social media is a powerful tool that can intensify a “worsening political and social polarization because of its ability to spread violent images and frightening rumours [sic] extremely quickly and intensely through relatively closed communities of the like-minded... social media seemed to unify Egyptians across disparate ideological trends around a limited, shared goal. That didn’t last. As time went on, social media encouraged political society to self-segregate into communities of the like-minded, intensifying connections among members of the same group while increasing the distance among different groups.” (Aday et. al., 2016).

Furthermore, Aday et al. (2016) analysis of the clustering dynamics of the Egyptian online population has shown “that ideologically similar but politically distant groups sorted themselves out over time: Multiple Islamist clusters became a single Islamist cluster, multiple activist clusters became a single activist cluster, and so forth”. Consequently, according to the social capital theory, the bridging social capital created before and during the 2011 revolution, was partially eradicated by a growing polarization rather than integration between the heterogenous groups representing different political views. While, bonding social capital has significantly increased between like-minded groups/individuals who are essentially sharing

same political stance, which became the differential here, as the condition of binding social capital, does not necessarily apply in the Egyptian revolution case. As it would be the case that same family members have opposing political opinions (Fadel, 2013).

Conversely, while, the relationship between the Egyptian government and social media users, did not exist before/ during the 2011 revolution, various members of the government, members of the Egyptian parliament, the military and the presidency have since 2011, started to use social media to interact with other users (Sorour and Dey, 2014). Thus, according to the social capital theory this has inaugurated the creation of a linking social capital, in the form of connection with high status members of the government or social institutions, who can help individuals have access to information, ideas or services (Woolcock, 2001; Gouda, 2016). However, soon after 2013, and with the increasing political polarisation, increasing national security challenges of extremism and terrorism, governmental officials started disliking social media, as a source of nurturing instability and possibly used in illicit activities. For example, Kingsley (2014) argues that "Egypt's interior ministry says it wants the ability to scan Facebook, Twitter, WhatsApp and Viber in real-time for usage that might harm public security or incite terrorism". Similarly, McKernan (2017) reports that "Two separate bills submitted to parliament last month include measures such as linking accounts to users' national identification numbers to create a user database, charging registration fees when signing up for accounts, and establishing an Egypt-only Facebook-style platform." According to McKernan (2017), Hasan (2017) and Al Emery (2017), these attempts aims protecting national security, combat attempts to entice chaos and mocking the symbols of the country. Of note, that one of members of the parliament introducing these bills, commented "People around the world have different cultures, and their freedom varies depending on their ability to bear responsibilities. A country like Egypt with a high illiteracy rate cannot be put on par with the US and Europe," Riyadh Abdul Sattar, one of the politicians who sponsored the bills, told al-Monitor."

(McKernan, 2017). Clearly, these proposals have been widely criticised by the public who voiced their concerns that the parliament should focus on more vital matters, yet, there were voices supporting this move, for example 60 members of the Egyptian parliament (Hasan,2017), further demonstrating the state of polarisation on social media. This polarisation, has manifested itself in many instances, where social media users were polarised into for and against moves by the Egyptian government, such as the transfer of the Red Sea islands Tiran and Sanafeer to Saudi Arabia (Black, 2016). As such, the linking social capital inaugurated after the revolution has faced eradication due to continuous state of political polarisation.

We claim that, the oust of Mubarak's regime was a surprise to the Egyptians and due to lack of leadership figures, there was common feel of success between the Egyptians (contextual triggering factor, which has created bonding within various social-political groups); there was many interpretations/conflicts of goals for various social-political groups (no one clear goal, which has circumvented bridging between various social-political groups), and there were barriers between social media and institutions (access to resources, which disallow linking between what was developed earlier on social media and the political institutions), which all lead to create a negative social capital that lead to polarization and separation of different social-political groups within Egyptian society. There was a mix of acculturation forms that each political group has been adopting (i.e. Muslim Brotherhood/6th of April political groups have taken the separation form of acculturation as they clearly identified that they won't participate in any political form unless the ousted president Morsi is back. Other political groups like Salafism/Liberals were adopting marginalisation form of acculturation process where they maintain their original values/views but still they were involved in the political system and participate in the parliament acting as the opposition minority. The other political groups that were pro Mubarak has adopted an assimilation form of acculturation process.

Table 4 summarises the key social media milestones, the impact on social capital and the acculturation process after the revolution.

Insert table 4 about here

## **5. Conclusion and Future research**

The objective of this paper was to discuss the effect of social media on social capital and on acculturation for social and political change, taking the Egyptian revolution as a case study. Our analysis revealed that social media contribution to social capital and acculturation depends to a great extent on the political/social/economic context in which technology operates, and on the readiness, and culture of the people adopting it (Denisova, 2017). Social media eventually is not the only mean to initiate or facilitate collective action; it just offers a new and effective resource that aids in its different activities such as, debating, organizing, and planning, and in boosting individual efficacy (Hsiao, 2018; Breuer and Groshek, 2013).

This communication tool proved to be effective in mobilizing large-scale protests (even for those not involved in political affairs) not only in case of the Egyptian revolution, but of also other protests as well that took place during the same period in different places such as, Berlin, New York, Boston, Spain, Italy, Greece, and Tunisia (Hsiao, 2018). In different incidents (e.g., the Egyptian and Tunisian revolutions, the #Occupy Wall Street movement and the Black Lives Matter movement in USA, Gezi Park protests in Turkey, etc.), the quick and easy spread of offensive content on social media triggered anger that fuelled the formation of new shapes of collective actions. As described by Juris (2012) -in his analysis of the #Occupy Everywhere

movements that took place in Boston in 2011- he argues that social media resulted to a “logic of aggregation” (characterized by gathering masses of individuals that share different backgrounds and physical spaces, where a large number of people were not necessarily politically active), rather than a “logic of networking” (forming horizontal ties between different movements or groups that possess common assumptions facilitated by earlier digital media such as, websites and listservs). The power of social media in these events lies in their ability to disseminate user generated content in different formats (text, audio, and video) that can be seen and responded to instantly through smartphones, especially during the initial stage of mobilization (Johannessen, 2012; Juris, 2012; Plascencia, 2016). However, the fragmented nature of protestors contributed to social media constituted a challenge towards reaching a consensus on a set of unified demands or objectives. Another challenge in similar situations concerns movements’ sustainability, as it was difficult for occupiers to stay and attend activities and meetings, and to keep updated of continuous events through a diversity of communication social media channels (Juris, 2012). In addition, combining offline and online activities is an issue that should be addressed (Azab, 2012b; Juris, 2012; Denisova, 2017). Moreover, the ecosystem formed through social media does not represent the whole population; it is still inclined towards upper socioeconomic segments of the society. Open discourses enabled by social media could also lead to misunderstandings causing public fragmentations (Morozov, 2011).

One could argue that social media has a transformative effect –to the extent of changing regimes in the case of Egypt and Tunisia- in firm controlled societies unlike well-established democracies where people did not go through a major shift from restricted environment to an open one fostered by social media use (Lynch, 2013; Tufekci, 2014). Furthermore, social media created individual political empowerment that gave people confidence on their ability to

change their political scene. This was witnessed clearly in the high rate of participation in the early elections post the Egyptian and Tunisian revolutions.

However, social media became even more beneficial for governments than for dissidents/protestors in different countries such as, Egypt, Russia, Turkey, and Indonesia. Recognizing their power after the number of uprisings and protests that happened in different parts of the world, governments joined this medium to spread their ideologies to the public (Tufekci, 2014; Denisova, 2017), and posed legal restrictions and censorship (Lukman, 2013). Citizens in Egypt as well as in Russia and many other countries still rely on state controlled traditional media in seeking news and opinions. Even when using social media they tend to opt into environments that share their same views leading to polarized societies (Tufekci, 2014; Denisova, 2017). Therefore assembling people in the cyber space does not guarantee their gathering under clear objectives; more structure and supervision are required to move beyond what Denisova (2017) described as “a crowd of disengaged individuals” to committing of any aspired political or social change (Juris, 2012; Morozov, 2011).

We can then conclude that change that results from technology use depends on how people perceive this technology (Mackay and Gillespie, 1992), and the meaning of technology for them expressed as “consumption of meanings” by Featherstone (1991). Unlike MacKenzie and Wajcman’s (1985) notion of technology determinism (that states that technology affects society but is not reciprocally influenced) or Turkle’s view (1984) (arguing that society defines and determines technology), Mackay and Gillespie (1992) see that besides meeting designers’ intention (either functional or symbolic encoding; political or social), technology could be rejected, redefined, or customized by society to reach outputs -based on the social appropriation of technology- that were never anticipated. Change happens then due to the social affordances generated by new technologies - usually integrated with existing ones-, and not only by themselves (William and Durrance, 2008; Gibson, 1977; Norman, 1988).



Hence, the output from technology adoption does not necessarily reflect what designers expected (Merton, 1976; Tenner, 1996). For example, the Internet was developed primarily for military activities. It was then used by scientists before widely adopted by the public; a phenomenon that was neither planned nor expected by Internet inventors. Evidently, the processes of individualisation and privatization had an impact on technology use (Williams, 1974). In addition, some technologies dictate a solitary rather than communal user behaviour (Goodall, 1983). These signs of individualisation and isolation are obviously seen in social media usage. However, social media are primarily linking people together, and enabling them to interact and generate content in a convenient manner that was never offered by earlier technologies. Therefore it is even challenging specifically of social media to expect its consequences as it concerns human's notions that differ from one to another depending not only on the content produced, but also on the meaning of this content for different cultures, ideologies, and spatial, social, and temporal contexts. Results could be even unforeseen especially in a conflicting setting (Kling, 1980) such as, revolutions or protests. Therefore, society and technology shape each other (Bijker et al., 1987).

The interaction between society and technology was evidently seen before, during, and after the Egyptian revolution. This era represents precious moments that should be captured. Prior publications on the relationship between collective action and social media urged for further conceptual and empirical work under this evolving media type. Most research on social movements and public mobilization target democratic countries and do not usually focus on the environment in which political communication occurs (Maher, 2010). We therefore claim that this analysis contributes to the knowledge concerning the utility of incorporating social media as an important resource in the success of contemporary social movements within a developing context. Examining social networks, social capital, and acculturation can lead to insights about the policy challenges surrounding the launching, diffusion, and development of

technology in communities. The role of strong and weak ties that could be generated through social media is still unexplored.

The study presented in this paper was based on secondary data collected from numerous publications that addressed not only the Egyptian revolution and other protests and uprisings during the same period, but also research that examined the relationship between technology and social/political change, and their effect on acculturation social capital generation. We decided to follow this approach first before gathering empirical data from citizens because earlier publications and research reviewed in this paper presented rich in-depth analysis of the relation between social media and collective action. Future research will target social media users in Egypt to see how they perceive the effect of social media throughout the spectrum of the Egyptian revolution.

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**Table 1: Previous research on the relationship between social media and social capital.**

| Author(s)                   | Purpose  | Sample  | Duration   | Findings  |
|-----------------------------|--|---|--|---|
| Gil de Zúñiga et al. (2012) | Relationship between Social Network Sites (SNS) use for seeking news and: social capital, civic engagement, and offline and online political participation.  | Survey on 475 respondents matching census data presenting the population.   | Cross-sectional                                  | Use of SNS for news is associated and a significant predictor of social capital, civic engagement, and offline and online political participation.  |
| Ellison et al. (2007)       | Relationship between Facebook use and bonding, bridging, and maintained (staying connected with people from past communities) social capital.  | Survey on 286 undergraduate students.   | Cross-sectional                                  | Facebook usage is associated with the 3 types of social capital, and the stronger relationship is between Facebook usage and bridging capital   |
| Ellison et al. (2011)       | Relationship between 3 types of connection strategies on Facebook (existing strong ties, latent ties, strangers) and social capital.   | Survey on 450 undergraduate students.   | Cross-sectional                                  | <ul style="list-style-type: none"> <li>- Social information seeking (latent ties) is a predictor of social capital to convert latent ties to weak ties.</li> <li>- Actual friends, not total friends predict social capital.</li> </ul>   |
| Burke et al. (2011)         | Effect of Facebook on social capital depends on: (1) site activity (one-to-one communication, broadcasts to wider audience, and passive consumption of news), and (2) individual differences (self-esteem & social communication skill). | <ul style="list-style-type: none"> <li>- Survey on 415 English-speaking adults worldwide at each time.</li> <li>- Survey responses were matched to server logs</li> </ul> | Longitudinal (2 times: July 2009 and March 2010) | <ul style="list-style-type: none"> <li>- Inbound messages from friends are associated with an increase in bridging social capital.</li> <li>- For low communication skill users, receiving messages and passive consuming of friends' news increase their bridging social capital.</li> </ul> |

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|                          |  | of Facebook activity of the respondents.  |   |   |
| Valenzuela et al. (2009) | Relationship between intensity of Facebook use and social capital (civic participation, political engagement, life satisfaction, and social trust).  | Survey on 2603 undergraduate students.  | Cross-sectional                                   | <ul style="list-style-type: none"> <li>- Intensity of Facebook use predicts civic participation, political engagement, life satisfaction, and social trust.</li> <li>- The effect of Facebook use on social capital is not high.</li> </ul>   |
| Steinfeld et al. (2008)  | Relationship between intensity of Facebook use and psychological wellbeing and bridging social capital.  | Survey on undergraduate students (first time: 286, and second time: 477 new respondents and 92 prior respondents from the first time)   | Longitudinal (2 times: April 2006 and April 2007) | <ul style="list-style-type: none"> <li>- More Facebook use leads to an increase in bridging social capital.</li> <li>- Low self-esteem persons can increase their bridging capital through Facebook use more than high self-esteem ones</li> </ul>  |
| Lee et al. (2016)        | <ul style="list-style-type: none"> <li>- Difference in relationship between Social Network Sites (SNS) use and online social capital among adolescents in Australia and Korea.</li> <li>- Impact of the different uses of SNS on online social capital among Australian and Korean adolescents.</li> </ul> | <ul style="list-style-type: none"> <li>- Face-to-face surveys of adolescents (12 to 15 years old).</li> <li>- 1045 respondents (644 Koreans, and 401 Australians).</li> </ul> | Cross-sectional                                   | <ul style="list-style-type: none"> <li>- Positive relationship between the use of online social networks and online social capital in both countries.</li> <li>- There is a strong correlation between SNS use and bonding social capital among Australian adolescents, and between SNS use and bridging social capital among Korean adolescents.</li> <li>- Interpersonal communication and group activities are strong of online social capital in both countries.</li> </ul> |
| Hampton et al. (2011)    | Relationship between Social Network Sites (SNS) use and network diversity (a measure of social capital).   | Phone interviews with 2512 respondents representing the national population (2007 on landlines, and   | Cross-sectional                                   | SNS afford high level of an overall network diversity but less diversity in the neighborhood setting.   |

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|  |  | 505 on mobiles. Response rate of landline is 21% and of mobile phones 22%.) |  |  |
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Table 2: Social media, the impact on social capital and the acculturation process before the revolution

| Type of social capital built/ eradicated       | Key Social media milestones/impact  | Acculturation Process   |
|--|---|---|
| Bonding social capital/bridging social capital | <ul style="list-style-type: none"> <li>• SM Embraced by a critical mass of Youth able to commit change through the use of technology Educating Egyptians about the concept of a peaceful protest to support political change i.e. Inauguration of a Facebook page “6th of April Youth”</li> <li>• SM exposed Egyptians to the experiences of others i.e. Tunisian revolution</li> <li>• Failure of authorities to engage with SM led to an opposite effect</li> <li>• SM Intensified a general common feel within the Egyptian public for the need to political change</li> <li>• Facilitated access to resources i.e. linking various social political groups) to create a positive social capital that lead to integration form of acculturation process of different political groups’ views within Egyptian society, that lead to go out for demonstrations.</li> </ul> | <ul style="list-style-type: none"> <li>• There were growing views among various political groups, around the fact, that the political environment in Egypt is unfair and injustice, which could be pointed in so many aspects of the Egyptian life.</li> <li>• There were so many different views held by political groups regarding the ways to enhance the political environment in Egypt based on their ideology and references on the political spectrum (Liberalism, Socialism, Nationalism, Populism, Islamism, etc.)</li> <li>• Each various political group shares different values, norms, political views and principles on what is the solution for the Egyptian society.</li> <li>• Before 2011, there were a mix of acculturation forms that each political group has been adopting to. (i.e. Salafism as one of the political groups that adopt the Islamism ideology, has adopted the separation form of acculturation, as they clearly identified that they won’t participate in any political form unless a reform of the political regulations takes place; as they have their views/values/references that they believe is not allowing them to be involved within the Egyptian political system unless a reform happened. Other political groups like Muslim Brotherhoods also hold Islamism ideology, has adopted a marginalisation form of acculturation process where they maintain their original values/views on the solution of the political system in Egypt but still they were involved in the political system and</li> </ul> |

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|  |  | <p>participate in the parliament elections and has been representing the opposition minority in the parliament. On the other hand, Wafd Party as a representative of Nationalism, has adopted an integration form of acculturation, as they have adopted different political ideology, but they were involved in the political environment completely.</p> <ul style="list-style-type: none"> <li>• So, before 2011, there were various acculturation forms by various political groups. Yet, only few of these groups were active on SM such as 6<sup>th</sup> of April Youth, Muslim Brotherhoods, Liberals, etc., while, the leading political party i.e. the National Democratic party and other key political institutions such as the Parliament and MPs were not that active.</li> </ul> |
|--|--|---|

Source: Authors

Table 3: Social media, the impact on social capital and the acculturation process during the revolution

| Type of social capital built/ eradicated | Key Social media milestones/impact  | Acculturation Process  |
|--|---|--|
| Bridging & bonding social capital        | <ul style="list-style-type: none"> <li>• Social capital built before the revolution provided a strong driver for the youth to be the first movers in the first days of the revolution</li> <li>• Dissemination of information about revolution aim and logistics, and in encouraging people to be part of this collective action.</li> <li>• Social media was a main source of reporting on the demonstrations' news through posting rich media content Twitter and Facebook</li> <li>• Uniting of diverse virtual communities on one specific goal</li> <li>• High degree of virtual communication between Egyptian and Tunisian protestors</li> <li>• Fast international propagation of information related to the ideology and the on-ground events</li> <li>• Integration between physical and virtual worlds</li> <li>• Social media was "superimposed on existing social ties between friends, families, and neighbours"</li> </ul> | <ul style="list-style-type: none"> <li>• During the 18 days of revolution, 2011, most political groups and the public, except the political authorized institutions/organizations linked with the regime, were active on SM (The Youth, Khaled Said Group, 6th of April, Muslim Brotherhoods, Liberals, Salafism, Nationalism, Socialism, etc.).</li> <li>• During the 18 days of revolution, 2011, the shared political views were building up around the opportunity and possibility of a change, and the hope of better Egypt.</li> <li>• There were no clear leader of the Egyptian revolution and that was a key factor to get various political groups together, even with their different ideologies.</li> <li>• During the 18 days of revolution, 2011, there was significant bonding and bridging activities between various political groups and the public in general on the SM and offline towards the need</li> </ul> |



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|  | <ul style="list-style-type: none"> <li>• Creation of collective efficacy leading to positive capital generated by social media during the 18 days of the revolution</li> <li>• Crucial resource for collective action and social change</li> </ul> | <p>for a change, which substantiated the assimilation form of acculturation leading to demonstrations with others; who may not share the same views/culture.</p> |
|--|--|--|

Source: Authors

Table 4: Social media, impact on social capital and the acculturation process after the revolution

| Type of social capital built/eradicated | Key Social media milestones/impact  | Acculturation Process   |
|---|---|---|
| Bridging and linking social capital     | <ul style="list-style-type: none"> <li>• Social media tone has gradually started to change especially after the first post revolution presidential elections in 2012</li> <li>• Political division aggravated between opponents and supporters of the ousted President Mohamed Morsi</li> <li>• Ideologically similar but politically distant groups sorted themselves out over time leading to fewer but broad clusters</li> <li>• Bridging social capital created before and during the 2011 revolution, was partially eradicated by a growing polarization between different political views</li> <li>• Bonding social capital has significantly increased between like-minded groups/individuals who are essentially sharing same political stance</li> <li>• Linking social capital started to increase due to presence of the Egyptian government and social media users</li> </ul> | <ul style="list-style-type: none"> <li>• There was a growing tension and mistrust among various political groups, due to various events and especially with fake news and misuse of SM.</li> <li>• There were many different views of political groups on the ways to enhance political environment in Egypt based on their ideology, and references (Liberalism, Secularism, Islamism, Nationalism, Populism etc.)</li> <li>• After the 18 days of the revolution, and after the oust of Mubarak's regime, each political group start to go back and stick to their views and references especially after few incidents that got the Egyptian society divided (Mohamed Mahmoud 2012, oust of Morsi, 2013, Tiran and Sanafeer, 2017, etc.)</li> <li>• There was a mix of acculturation forms that each political group has been adopting (i.e. Muslim Brotherhood/6<sup>th</sup> of April political groups have taken the separation form of acculturation as they clearly identified that they won't participate in any political form unless the ousted president Morsi is back. Other political groups like Salafism/Liberals were adopting</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Polarisation of social media users into for and against moves by the Egyptian government, led to eradication of the linking social capital</li> </ul> | <p>marginalisation form of acculturation process where they maintain their original values/views but still they were involved in the political system and participate in the parliament acting as the opposition minority. The other political groups that were pro Mubarak have adopted an assimilation form of acculturation process.</p> |
|--|--|---|

Source: Authors