

HOW THE EMERGENCE OF SOCIAL NETWORKING SITES CHALLENGES AGENDA-SETTING THEORY

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Abstract: With the emergence of social networking sites (SNS), the way that information is being processed by media consumers has changed drastically. This has had a direct impact on one of the most established media theories: agenda-setting theory. Applying the framework presented in 2005 by McCombs, the authors of the article show how the main assumptions of the theory are being challenged in its five stages. SNS users decide what news is important by choosing what to share within their networks (basic agenda-setting effects); attributes regarding events are issued by SNS users under particular limitations (attribute agenda-setting); in conditions of high uncertainty and relevance, SNS users can directly impact public opinion (psychological effects of agenda-setting theory); SNS are becoming the source of traditional media agendas (sources of media agendas); SNS users are reaffirming their opinions as a result of SNS homophily (consequences of agenda-setting effects); and users influence public figures within SNS (reverse agenda-setting effects).

Keywords: agenda-setting theory, social networking sites, homophily, network effect, active audience.

In January 2014, Facebook announced its new feature called “trending”. It will be a part of every user’s news feed and present the top stories of the day based on individual preferences and Facebook-wide trends. This is a part of Facebook’s attempt to become “the best personalized newspaper” (Kim, 2014), according to Mark Zuckerberg. The change made by the biggest social networking site in the world came for a reason – with the emergence of social media, the way that information is being processed has changed drastically. According to the Pew Research Journalism Project (Holcomb, Gottfried, & Mitchell, 2013), 30% of Americans obtain their news from Facebook, 10% from YouTube, and 8% from Twitter. Stelter (2008) described this practice in *The New York Times*, stating that news consumers rely on friends and online connections for news to come to them, replacing the *professional filter* of institutionalized news media outlets

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with a *social* one. Another study conducted by the Pew Research Center (Mitchell, Kiley, Gottfried, & Guskin, 2013) confirmed this trend, with the caveat that the social filter might not be conscious, as 78% of users who received their news on Facebook did so while using the social networking site for different reasons.

Regardless of the consciousness associated with the choice of the social filter over a professional one, the consumption of news in the digital age has changed dramatically. As Clay Shirky said, “the audience is now being assembled not by the paper, but by other members of the audience” (Benton, 2009). This shift, reflected in academic studies and analysis, has had an impact on traditional media theories such as the agenda-setting concept developed by McCombs and Shaw in 1972. In his 2005 article entitled “A Look at Agenda-Setting: Past, Present and the Future”, McCombs, the author of agenda-setting theory, revisited the research on agenda setting from the 1970s to 2005. According to the scholar, agenda-setting theory has evolved along with an increasingly Internet-based media landscape. In order to review agenda-setting theory, McCombs used a theoretical framework based on five stages: basic agenda-setting effects, attribute agenda-setting, psychology of agenda-setting effects, sources of media agendas, and consequences of agenda-setting effects.

However, the Internet has changed radically during the last 10 years. Above all, social networking sites (SNS) have emerged and have become popular. Moreover, for many users, SNS have become the primary way to access the content on the web. Therefore, the main goal of this paper is to analyse how one of the most significant theories in media studies has evolved and is being challenged by the implications of the development of SNS. That kind of analysis could not have been conducted by McCombs 10 years ago, as it was before the emergence of SNS. However, the framework offered by the scholar as well as other claims made by agenda-setting theory authors will be subjected to analysis to challenge its assumptions answering the following research questions:

RQ1: How does the emergence of SNS challenge the assumptions of agenda-setting theory?

RQ2: What are the main challenges for future research on agenda setting in the digital age defined by SNS?

In the first part of the article, we briefly review the existing agenda-setting theory since its foundation in 1972 by McCombs and Shaw. In the second part, we present the main characteristics of SNS that are relevant for news production and distribution. In the last part, we present the main challenges that SNS pose for agenda-setting theory and associated concepts determined most fully by McCombs in his article “A Look at Agenda-Setting: Past, Present and the Future”.

TRADITIONAL AGENDA-SETTING THEORY AND RESEARCH

In his influential book from 1922, *Public Opinion*, Walter Lippmann set the stage for agenda-setting research by making a statement that news media affect the way people perceive the world (as cited in Wahl-Jorgensen & Hanitzsch, 2009, p. 147). However, it was not until 1972 that Lippmann’s hypothesis was tested by McCombs and Shaw – two scholars who later coined the term “agenda setting”. The initial study conducted by these academics found that there is a strong correlation between the issues considered important by the public and those ranked high by news media in their coverage (McCombs & Shaw, 1972). This finding oriented agenda-setting theory and research around “issue salience,” also known as first-level agenda setting (Wanta, 2012). Two other scholars, James Dearing and Everett M. Rogers, reviewed in 1996 over 350

empirical studies on first-level agenda setting, which itself shows the impossibility of examining even a representative sample of these studies. It is, however, possible to refer to two main conclusions coming from the extensive review made by Dearing and Rogers. Research based on statistical evaluations of the agenda-setting effect shows a causality focused on correlation between media and audience agendas (Scheufele, 2000). However, few studies address the issue of the explanation or temporal order of the first-level agenda-setting effect. Hypotheses like issue obtrusiveness or that the influence of real-world events rather than their description by media drive the public agendas are not sufficiently supported empirically.

Another important conclusion of McCombs and Shaw's (1972) research was the idea of inter-media agenda-setting. This refers to the high level of correspondence between news ranking and coverage in different media outlets that would point to conclusions that media are elite organizations and influence the "contagion effect" (Norris, Kern, & Just, 2003). Boczkowski (2010) pointed to the fact that in the digital era, news websites copy the news from each other, in a practice he called "news imitation", which results in their publishing the same stories at the same time. The media homogeneity hypothesis arose as the result of the phenomenon of different media outlets sharing the same news stories and considering them equally important. Scholars have found strong inter-media agenda-setting effects between traditional media outlets – for instance, newspaper coverage and TV broadcasts (Lopez-Escobar, Llamas, McCombs, & Lennon, 1998; Roberts & McCombs, 1994) or news transmitted by wire services and newspaper coverage (Lim, 2006). Such agendas are described as "convergent agendas" (Meraz, 2009).

Whereas early agenda-setting research was focused on priming, in the 90s the problem of second-level agenda setting was introduced. It proposes that media not only affect what the public thinks, but also how it thinks (McCombs, Llamas, Lopez-Escobar, & Rey, 1997). The process of influencing how people perceive certain issues takes place through attributes that media assign to certain events that can be either affective or cognitive (Ghanem, 1996). Second-level agenda setting is very often associated with the notion of framing. There are two types of frames that can be applied to agenda-setting research: the media frame set up on a particular issue by journalists and the audience frame seen as individual attitudes and stereotypes of people perceiving the issue (Scheufele, 2000). With regards to agenda-setting theory, Robert Entman argued that "to frame is to select some aspects of a perceived reality and make them more salient in a communicating text in such a way as to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation" for the presented issue (1993, p. 52). The common hypothesis on second-level agenda research is that the transmission of attribute salience comes from the media to the public. It was confirmed by empirical research conducted in various countries, such as Japan (Takeshita & Mikami, 1993), Spain (King, 1997) or the United States (Craft & Wanta, 2004; Ghanem & Evatt, 1995; Golan & Wanta, 2001). However, as Weaver (2007) points out, the focus of studies on second-level agenda setting depends on how scholars define framing in their studies – whether a scholar understands it more as a set of attributes or a broader argument on the issue.

For both first-level and second-level agenda setting, the idea of "time lag" is crucial. This indispensable component of agenda-setting theory can be operationalized as "the optimal time that the issue must be covered in the media before the public considers it as important" (Wahl-Jorgensen & Hanitzsch, 2009, p. 155). In terms of research, scholars would ask a question on how long a particular issue or its attributes will stay salient, which leads to describing the time frame used in a study (Wanta & Hu, 1994). Depending on the study, the "optimal effect span" varied from 4–6 weeks (Winter & Eyal, 1981) to 3–4 months (Shoemaker, Wanta, & Leggett, 1989) to a time lag of 3 weeks (Wanta & Hu, 1994). The proposed time lag in the studies was

dramatically reduced once scholars embarked on analysing online news media. For instance, Roberts, Wanta, and Dzwo (2002) demonstrated a time lag for online discussion groups from 1 day to 1 week.

SOCIAL NETWORKING SITES AND THEIR CHARACTERISTICS

The phenomenon of the rapid growth and increasing influence of SNS such as Facebook has become an important focus of academic research. As boyd (2010) points out, SNS are similar to many other genres of online communities that support computer-mediated communication, but they are differentiated by a set of specific features. They allow individuals to “(1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (boyd & Ellison, 2007).

According to the data collected by We Are Social, in 2014 the three most used world social media platforms were SNS: Facebook and two Chinese social networking sites, QQ and Qzone (2014). In the United States, as reported by the Pew Research Internet Project, 72% of adults use social media and 64% of adults use Facebook. At the end of 2013, Facebook exceeded 1.23 billion monthly active users, adding 170 million in one year. Data released by the company show that 757 million users log on to Facebook daily (Sedghi, 2014). According to the Pew Research Center, SNS also have the biggest potential in terms of news consumption and distribution (Holcomb, Gottfried, & Mitchell, 2013).

Based on the reviewed literature, the following key characteristics of SNS can be identified: creation of semi-public profiles; tools for public communication such as a commenting feature that displays the conversation on the person’s profile, both with SNS and outside (Facebook comments); status updates streamed to friends through a Wall; Likes – a tool of positive emotion and expression of accordance; and Shares – a tool for copying and distributing the information published by someone else (boyd, 2010).

Batorski (2011) adds that the users’ Facebook Walls are personalized – everyone receives different messages depending on what his or her personal network is posting. What also affects the Wall’s personalization is the algorithm that a particular SNS is using. It usually presents the user the content that he or she is most likely to click on based on his or her previous actions (Pariser, 2011).

Van Dijk (2012) noted that high interactivity that is 1) free from limitations of time and space (introducing the possibility of establishing bilateral and multilateral communication), 2) is defined by immediate synchronization – the possibility of immediate reaction, verbal or nonverbal; 3) the possibility of the creator of the message and its receiver switching roles at any moment as well as controlling the form and content of the message; and 4) the possibility of reaction within the whole context of the message. Almost like in a direct interaction, SNS provides the opportunity to know the author of the message, the way he or she is connected, what he or she does for a living, etc. Jenkins (2006) described new media as multimedia and convergent – where the world of the old and new media penetrate each other. This relationship applies to SNS as well.

An understanding of these characteristics of SNSs is essential to examining the main challenges that are being posed. We will now discuss the particular challenges based on the five stages of agenda-setting research presented by McCombs (2005).

NEW MEDIA ENVIRONMENT: AGENDA-SETTING THEORY REVISITED

The emergence of the Internet and the growing amount of research on new media and communication forced scholars investigating and developing agenda-setting theory to revisit McCombs' framework, first proposed during the 70s. In a 2005 article, McCombs presented the five stages of its development: basic agenda-setting effects, attribute agenda-setting, psychology of agenda-setting effects, sources of media agendas, and consequences of agenda-setting effects (2005). McCombs acknowledged that the Internet "dramatically changed the communication landscape with the introduction of myriad new channels" (2005, p. 543). Introducing five stages of agenda-setting research, McCombs posed questions and formulated hypotheses that corresponded to the new communication landscape. Given the time when the analysis was conducted, it did not include the challenges caused by the dynamic growth of SNS. We will now discuss each stage and apply each stage to the existing body of literature on SNS and their characteristics in order to point to new directions in agenda-setting research that have been precipitated by the emergence of this new type of media.

Basic agenda-setting effects

The first level of agenda-setting is dictated by the paradigm that news media set the agenda for the public, pointing to a small number of issues that people should consider important. In the age of SNS, the news and information that people receive are those that are posted or shared by their friends or the institutions that they follow.

Therefore, SNS users set the agenda for other users by becoming their primal sources of information (Holcomb, Gottfried, & Mitchell, 2013). News filtering and distribution are the most common interactions with news undertaken by SNS users – 50% of them share or repost news stories, images, and videos. In other words, they set the issues' salience by deciding what to share with other users. The impact on level-one agenda setting is caused by each user's personal network and SNS algorithm. These two factors impact the choice of messages users receive.

Data also show that SNS like Facebook are the biggest source of traffic on the web. They generate more clicks on links to other websites than does, for instance, Google, the biggest search engine (Dash, 2010). Another source of data, comScore, shows a similar relationship: 25% of visits on websites come from SNS, and the number of visits between 2008 and 2009 increased by 83%. For that reason, traditional media news outlets, including online ones, use SNS to distribute their content and attract users. Therefore, traditional media still remain the main providers of content, but their consumers can increasingly decide what is more and less important through possibilities of sharing the links on their walls (Batorski, 2015).

The second premise of the basic agenda-setting effect is that the division between news producers and consumers is clear, which helps to differentiate who sets the agenda in what channels (McCombs, 2005). However due, to SNS being tools for public communication and lowering the barrier to access for users, the role of traditional gatekeepers has changed. Users sometimes become producers of information, but more importantly information producers lose the monopoly on their information. As pointed out by Bruns (2005), the news audience is changing from passive to active, with new abilities to filter information received from traditional and non-traditional media outlets ("gate watching").

The emergence of new gatekeepers has introduced a need for new theories. Therefore, Barzilai-Nahon (2008) proposed a theory of networked gatekeeping. The redistribution of online news via SNS such as Twitter or Facebook was also theorized by Shoemaker and Vos (2009), who called it "audience gatekeeping". The users use the tools for public communication to choose the news that is important to them and pass it to their audiences within their networks.

That phenomenon challenges as well the two-step flow communication theory (Katz & Lazarsfeld, 1955). Opinion leaders not only interpret the media messages but also select them due to increasing information overload.

The last basic agenda-setting effect is connected to the assumption that there is a given time length for the agenda to be transferred from the media to the public (Hanitzsch, 2009). It seems, however, that in the era of increasing social media usage the notion of time lag¹ is nearly nonexistent. Gane and Beer claimed that it is caused by the development of new form of interactive culture in which “users act at the same time as producers, for they participate in the construction of online spaces while at the same time consuming the content generated by others” (2008, p.6). Studies have found that agenda-setting effects can decline even during the course of a single day (Weeks & Southwell, 2010). More importantly, the importance of the message can be influenced by the number of shares and likes. The bigger number of shares and likes under the story, the bigger probability that its sharing will be continued, according to the mechanism of “cybercascades” or the “information cascades” (Sunstein, 2009).

The network effect in terms of information sharing is also connected to “information cascades” or the “information contagion” phenomenon, which refers to a situation when information spreads in the network from one connected user (fan or a friend) to another (Lerman & Ghosh, 2010). The information cascade effect challenges one of the primal assumptions of agenda-setting theory: that the news media set the agenda for the public and that the issues considered important by the media (issue salience) are also important for the public (McCombs & Shaw, 1972).

However, the information that spreads through the network might be completely different from what is considered important by traditional news outlets. What is more, different SNS may have different agendas. For instance, the Pew Research Center releases a weekly new media index with trending stories in different social media platforms in the United States, but the stories are different for Twitter and Facebook (Guskin & Tan, 2012), supporting the hypothesis of media fragmentation.

Attribute agenda-setting

Attribute agenda-setting refers to the premise that the media salience of attributes connected to the issues affect the way in which the public perceives a certain problem (Kim et al., 2002).

The tools for public communion offered by SNS give users the possibility of not only sharing the information but also commenting on it to give it a “frame” – dominant attributes connected to an issue (Entman, 1993). The users reshape the media agenda by commenting or adding information to the news served by traditional outlets (Shoemaker & Vos, 2011). Data provided by the Pew Research Center show that 46% of SNS users discuss news issues or events (2014). However, whether the frames applied by users via SNS are different than the ones attributed by traditional media requires further empirical research. The current evidence shows that attribute agenda-setting via SNS can be challenged by important limitations.

One limitation is that the power of issuing the attributes on SNS depends on several factors. The first one is the author’s reliability; research shows that his or her level of expertise in the field determines the level of impact (Vantomme, 2014). The second one is the type of recipient. It has been shown that younger users aged 18-24 are more likely to consider news received

¹ Time lag refers to how long an issue will remain salient in people’s minds (Roberts et al., 2002). Depending on the study, the proposed time lag varies between 4-6 weeks (Winter & Eyal, 1981), 2-6 months (Stone & McCombs, 1981), or, in the case of the news media, 3 weeks (Wanta & Hu, 1994). For online media, the time lag was established as 1-7 days (Roberts et al., 2002).

on SNS reliable than are older ones who would rather trust traditional media like newspapers (Kohut, Doherty, Dimock, & Keeter, 2011).

Furthermore, evidence shows that SNS are causing a more significant spiral of silence effect than are other communication environments. Users are much less likely to share their views publicly via SNS tools than at gatherings of friends, at work, or during a community meeting if they feel that their social audience might not agree with their statements (Holcomb, Gottfried, & Mitchell, 2013). That may lead to strengthening pre-existing frames – in particular, online issue communities that are also connected to the phenomenon of “echo chambers” on SNS (Sunstein, 2009). Research shows that users online would rather interact with people sharing their views, which results in online “chambers” of like-minded people (Himmelboim, McCreery, & Smith, 2013; Yardi & boyd, 2010).

Psychological effects of agenda-setting: need for orientation

Need for orientation is a theoretical assumption in agenda-setting research that relates to different individual responses to media agendas (McCombs, 2005). It is connected theoretically to two concepts: relevance and uncertainty. Low relevance defines a low need for orientation; high relevance and low uncertainty, a moderate need for orientation; and high relevance and uncertainty, a high need for orientation (McCombs & Shaw, 1972; Weaver 1977). This concept was recently enriched by a third component: effort required to attend to the message (Lee, 2005). More importantly, Lee (2005) added this variable as a necessary one to analyse the new media environment and increasing role of the Internet in news distribution. According to his research, those exerting more effort to get the message show greater agenda-setting effects.

These assumptions need to be investigated in the new media environment defined by SNS. The case studies of such events as the Boston Marathon bombing or Occupy Wall Street show that SNS might have a better capacity to meet the need for orientation in difficult, crisis situations such as catastrophes or large protests. With the possibility for every user with access to phone or computer to report on such events, the speed of the information flow exceeds the capacity of traditional media (Grzywinska & Borden, 2012). During crises, SNS like Twitter often become primary sources of information (Cassa, Chunara, Mantl, & Brownstein, 2013). This leads to a hypothesis that during extreme moments, when there is a high relevance and high uncertainty, SNS can directly impact public opinion, causing strong agenda-setting effects.

Previous studies conducted on online newspapers show strong agenda-setting effects connected to the effort that a user had to undertake to access the information (Lee, 2005) which was related to the interactive interfaces of such papers. The high interactivity of SNS might lead to a conclusion that accessing news online does involve a certain degree of an effort. However, studies show that users access news on SNS while using the websites for other reasons (Holcomb, Gottfried, & Mitchell, 2013). That might mean that even though people do access news on Facebook, it has weak agenda-setting effects due to the low effort of news acquisition. This hypothesis, however, requires empirical research.

Sources of the media agendas

This part of agenda-setting research focuses on who or what influences traditional media agendas. Some of the most common sources are other media, which is called “intermediary agenda-setting”; in this area, the impact of different media sources on each other’s agendas is being investigated (McCombs, 2005). What was proven by scholars was that intermediary agenda-setting effects lead to the homogeneity of media agendas and, therefore, public agendas.

The emergence of Internet-enhanced studies demonstrated how different online platforms could become the source of media agendas. The scholars were mostly analysing the relationships between blogs and traditional media agendas. Studies showed that bloggers have an impact on what journalists choose to write about (Messner & Distaso, 2008; Wallsten, 2007). However, some point to the fact that bloggers are part of the same elite group as journalists, and therefore the discovered effect is similar to the previously existing intermediary agenda-setting in traditional media (Meraz, 2009; Hindman, 2008).

Proving that SNS are becoming the source of media agendas would show a more significant twist in agenda-setting research – it would signify that the audience is telling the media what to write about instead of the other way around. The first empirical studies conducted in this field show that SNS can indeed become the source for media agendas (Jacobson, 2013; Maier, 2010). Some research also points to strong agenda-setting effects in traditional media that keep their online communities within SNS – one study shows the correlation between stories discussed by users on a journalist's Facebook page and the subsequent airing of similar stories on TV (Jacobson, 2013).

Consequences of agenda-setting effects

McCombs (2005) established three main consequences of agenda-setting effects: forming an opinion, priming opinions about public figures, and stressing particular issues and shaping an opinion through an emphasis on particular attributes.

This is a new area of research that has been partially investigated for SNS. For all of these three consequences, we can speak about the possibility for reverse agenda-setting effects, where through SNS the public is telling the press what to think and where users are taking the role of media in communicating the salience and the attributes of an issue to the public.

The first effect – forming an opinion – is challenged by SNS in several ways. Firstly, as users increasingly find out about the news on SNS, it will be less possible for them to form an opinion rather than strengthen the ones they already have. This is connected to the homophily effect existing in SNS. The principle of homophily assumes that similarity implies connection. It results in homogenous networks of connections with regard to various sociodemographic, intrapersonal, or behavioural characteristics. What is more important is that “homophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form and the interactions they experience” (McPherson et al., 2001, p. 415). Homophily causes the users of SNS to create likeminded communities. Scholars discovered that people who interact with each other more often are more likely to be similar to each other in some regards and therefore are more likely to have increasingly similar information sources (Bakshy et al., 2012). The architecture of SNS allows people to quickly find other users and communities that have similar views and opinions. By joining groups, these users join agendas, which allow them to remove social dissonance (agenda-melding) but also strengthen pre-existing opinions and form group identity. Further empirical research is required, however, to determine whether particular opinions of social media users are affected by the online versions of established traditional media to which people within their network link.

The second effect refers to priming opinions about public figures such as politicians. First of all, SNS allow for politicians to engage in direct dialogue with citizens and omit the traditional media as a mean of communication (Cogburn & Espinoza-Vasquez, 2011). Secondly, again we can differentiate the reverse agenda-setting effect where users use SNS to influence public figures about the issues. This problem is analysed in the vast body of literature on digital activism (Castells, 2013; Harlow, 2012; Lim, 2012; Tufekci & Wilson, 2012). However, the exact role of SNS in this regard still requires further empirical investigation.

The third effect refers to shaping public opinion through emphasis on particular attributes. As discussed before, SNS do have the potential to influence the public on how to think about the issues, especially in crisis situations like catastrophes or political protests. What is more, SNS might increase the effect of fragmented and individualized agenda-setting due to its homophily. It may even lead to polarization of the public agenda and partisan information exposure among social media users.

CONCLUSION

This paper has been constructed upon the assumption that the growing usage of SNS among media consumers worldwide changes the patterns in news acquisition and distribution and therefore questions the theory of agenda-setting that was developed in the mass media environment of the 1970s to the 1990s. It shows that certain characteristics of SNS such as the possibility of publishing and sharing content with a network of friends, content personalization, or high interactivity cause different phenomena like homophily, the network effect, or the speed of information diffusion that challenge the main ideas of agenda-setting theory in the five stages of its research proposed by McCombs (2005).

Perhaps the emergence of SNS could mark a sixth stage in agenda-setting research and theory. As McCombs argued, “these are not stages in the historical sense that the opening of a new stage marks the closing of an earlier one. All five stages remain active arenas for research and offer rich opportunities” (2005, p. 544). Continuing this line of reasoning, SNS did not shake the agenda-setting theory but modified the nature of traditional media’s central role in it rather than eliminating it entirely. And traditional media setting the agenda for blogs, social networking sites and other social media platforms which than transmits the news to the public is nothing else than a version of the well-established communication theory of the two-step flow developed by Katz and Lazarsfeld in 1955. As Sayre et al. point out, “if new media are following the cues of traditional media, than agenda-setting power has not diminished but has instead gained another channel” (2010, p.13).

At the same time, we call for more empirical research that would verify the proposed hypothesis and identify the actual influence and role of SNS compared to traditional media, in all five stages of agenda-setting research. The main areas of research, connected to applied theoretical framework, are:

- To what extent do traditional online media influence what is being shared by SNS users within their networks? Is there a correlation between the exposition of the news, its category, or the way the headline is prepared and the number of shares?
- Do SNS users set the frame on how to discuss certain issues (level-two agenda-setting), or, due to an increased phenomenon of the spiral of silence in SNS and homophily, is this influence insignificant?
- What is the relationship between the effort of news acquisition in SNS and the agenda-setting effects?
- To what extent is the power to directly influence public opinion and build the agenda by unnamed users circumstantial - for example, when there is high relevance and high uncertainty? Is it enforced by the level of digitization of society, such as access to smartphones?
- How will the increasing penetration of markets by smartphones change the role of grassroots agenda-setting?

With the call for more empirical research, it is important to remember that the emergence of SNS challenges not only the theory of agenda setting but also its research methods. The typical methods used by scholars to examine agenda-setting effects were interviews, questionnaires, and content analysis. The SNS environment introduces new methods and tools that can be helpful for agenda-setting research such as social network analysis (Guo, 2012), discourse analysis, or qualitative content analysis (Firdaus, 2012).

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