THE COMPETING-COMPLEMENTARITY OF SOCIAL MEDIA

Research-in-Progress

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Abstract

This study presents the unique benevolent and malevolent nature of social media, intertwined to its capabilities, which influences its role as a benefactor and a competitor. We conceptualize this phenomenon as the competing-complementarity of social media. We explain competing-complementarity using Teece’s (1986) concept of complementary assets and Porter’s (2001) work on competitive forces shaping strategy and business on the Internet. We observe this phenomenon of competing-complementarity of social media on news firms and offer its evidence through opinionated data analysis.

Keywords: Social media, competing-complementarity, news media, disruptive innovation
Introduction

The popularity of social media, built on the technological platform of Web 2.0 and user-generated-content as the sum of ways that people use it (Kaplan and Haenlein 2010) are profound developments in the communications and information systems domain (Zeng and Wei 2013). Social media can be defined as the convergence of computer devices and platforms (digital spaces on the Internet) that allow people to congregate on the Internet and create and share information through infinite ways of interactions (Gupta and Brooks 2013). This ubiquitous networking capability, immediacy of information, low cost and user-directness of social media is highly appealing to individuals because they invoke some of the most fundamental tendencies of human nature such as ‘fostering relationships, communicating, and sharing with others’ (Gupta and Brooks 2013). For businesses, social media aids the nature and context of communication exchanges, processes, strategy and decision-making and marketing plans (Glynn et al. 2012). However, despite its positive appeal, studies suggest that social media can also affect a firms’ functions and relationships (Kietzmann et al. 2011). For example, through social media, user-generated-content has gained such remarkable visibility, variety and quality that it is ‘rivaling content produced by professional agencies’ (Zeng and Wei 2013). A study by Kwak et al (2010) exploring the potential of Twitter finds that Twitter deviates from known social networking characteristics and shows prospects of becoming a strong medium for news. This motivates us in examining the unique nature of social media wherein, on the one hand we observe that it offers complementarity, yet on the other shows the potential to compete. We conceptualize this phenomenon as the competing-complementarity of social media.

The news industry presents an inimitable environment for understanding and evidencing competing-complementarity, as the industry has been flagged as ‘entirely disrupted’ by social media (Aral et al. 2013). While the Internet has provided greater accessibility, quantity and choice of news (Karagiannopoulos et al. 2005), social media through its interoperability and collaborative attributes has made news highly participatory, social and partisan (Gupta and Brooks 2013). For example, television newscasts routinely feature amateur videos from YouTube, which have “greater immediacy than professional footage” (Standage 2011). Likewise, messages posted on the social networking platform Twitter provide eyewitness accounts of newsworthy events (e.g. the killing of Osama bin-Laden), which in turn provide strong story leads to news providers. In addition to sourcing newsworthy information from social media, news firms also deliver news through social media given its low cost and instant connectivity to mass audiences. Therefore, we observe that by offering complementarity, social media has stimulated innovative ways of sourcing and delivering news. If complementarity is viewed as a disruption to the traditional ways of news sourcing and delivery, then it certainly benefits news organizations. On the other hand, social media has significantly changed the way news is consumed making it more hands-on, social and collaborative. We observe more people taking on the role of citizen-journalists and creating and contributing to news by posting comments, uploading photos and videos and blogging information, which in turn are republished, shared and rebroadcast. For news firms, one of the fastest-growing sources for generating audiences is referral provided by social media (Standage 2011). However, social media as a gateway for people entering the complex news environment as sources of information, creators of news reports and distributors of news content are contributing to the decline in traditional news readership. News consumption through social media is dynamic because people not only read and watch news but also create, develop and add news (Standage 2011), which traditional news mediums (e.g. newspapers) are unable to provide. One of the most compelling reasons for the decline in subscription, circulation, classified and display advertising in traditional newspapers (in the United States) (Worstall 2012) is the dramatic shift of news consumption (i.e. readership) to social media. This shift has also swayed advertisers to social media. Here, we posit that social media shows strong potential to compete with news firms by severely impacting the monopoly and control of news firms over news content, its distribution and consumption. This competing potential of social media highlights the more recognized side of an disruptive technology wherein a new dynamic technology (e.g. social media) severely impacts strong incumbents (e.g. traditional news firms) in a bid to make a niche innovation (e.g. news consumption) more mainstream (Christensen et al. 2004).

For understanding the competing-complementarity of social media, we specifically investigate two research questions: (1) Does social media complement the news requirements of an individual? And, (2) Does social media compete against traditional news mediums for providing news? Our goal is to advance understanding of the dynamic nature of social media through more theory-guided explanations. Through
this paper, we contribute to the theoretical lens of disruptive innovation (Christensen et al. 2004) by proposing that complementarity can be an important element of a disruptive technology. We also progress the discussion on the evolution of news media (Palekar and Sedera 2012) by evidencing the changing patterns of news consumption. This has serious implications on how news providers can adapt and survive in a dynamic news environment. Through the insights provided by our research, we seek to develop a pragmatic theory to build understanding of its unique nature and innovativeness. This is also important to industry practitioners and businesses given the fact that currently one in four individuals worldwide use social media in some form or the other (eMarketer 2013) for diverse reasons such as communicating, networking, sharing information and shopping. This usage is predicted to hit 2.55 billion by 2017, which denotes that social media platforms would connect a third of the global population. So, it is imperative for businesses to understand the role and nature of social media to connect, persuade, sell and share services and products to their stakeholders.

This paper proceeds in the following way. In the next section, we explain the concepts of competing-complementarity. The conceptualization helps in understanding the definitive characteristics of what constitutes complementarity and competing. Then, we analyze opinionated data related to an individuals’ news consumption to evidence the competing-complementarity phenomenon and explain how on the one hand, people use both, social media and traditional news mediums to satiate their news consumption (social media complements) while on the other, people potentially abandon traditional news mediums and consume news only through social media (social media competes). We conclude by discussing future work, implications and limitations.

**Conceptualizing Competing-Complementarity**

We conceptualize competing-complementarity as the potential benevolent and malevolent nature of social media, intertwined to its capabilities and influencing its role as a benefactor and a competitor.

The proliferation of social media technologies has resulted in a large number of active social media platforms such as (i) social networking (e.g. Facebook, Twitter) (ii) media platforms (e.g. YouTube), location-based (Groupon) (iii) crowd-sourcing (e.g. Amara), and (iv) combination platforms that offer a range of functionalities (e.g. Facebook offer social networking, media, crowdsourcing and location-based functionalities) (Gupta and Brooks 2013). As our research is focused on the general nature of social media, we refer to the different social media platforms collectively as social media. As the context of our study is focused on evidencing the changes in news consumption, we are motivated to look at extremely popular combination platforms such as Facebook that offer a wide range of news consumption functions such as accessing, creating, sharing and collaborating newsworthy information. Such platforms are also ideal for news organizations for sourcing and delivering news (for consumption) given the high volume of users and content. We list the generic characteristics of social media in Table 1 to show their dynamic capabilities, which aid their competing-complementarity nature.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
<th>Literature</th>
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<tbody>
<tr>
<td>Collaborative</td>
<td>User-generated-content and sharing</td>
<td>(Hong 2012; Vuori 2012)</td>
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<tr>
<td>Convergent</td>
<td>Multimodal and voluminous content</td>
<td>(Sundar 2009)</td>
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<tr>
<td>Connectedness</td>
<td>Ubiquitous, direct interaction (e.g. likes)</td>
<td>(Glynn et al. 2012)</td>
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<td>Availability</td>
<td>Free, public, 24/7, omnipresent</td>
<td>(Kaplan and Haenlein 2010)</td>
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<td>Selectivity</td>
<td>Discrete selection of content (e.g. upload)</td>
<td>(Kietzmann et al. 2011)</td>
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<tr>
<td>Accessibility</td>
<td>Through multiple devices such as smartphones and tablet computers</td>
<td>(Weinberg and Pehlivan 2011)</td>
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Complementarity of Social Media

Using Teece’s (1986) notion of complementary assets, Rosemann et al (2011) conceptualize social media [Rosemann et al (2011) refer to Facebook, Twitter as large digital service providers] as digital complementary assets, further sub-dividing them as digital public goods (DPGs) and digital public assets based on their differing characteristics. Using Teece’s descriptions of how innovating firms engage with such assets, Rosemann et al (2011) describe four characteristics of DPGs, i.e. non-excludability, non-rivalry, versatility and positive network effects. Complementarity arises when two or more factors jointly support each other to produce more value than if each were operating independently (Caruso 2009). These factors can be physical (and portable) devices, actions, policies and practices. Milogram and Roberts (1995) define complementarity as ‘doing more of one thing increases the returns to doing more of another.’ Based on the above, we define the complementarity of social media as its functional worthiness that supplements and adds value to existing services, processes and functions. Leveraging the complementarity of social media is vital to firms for strengthening their functions, roles and values as business entities. We elucidate the characteristics of complementarity based on the attributes of DPGs put forth by Rosemann et al (2011). These characteristics are derived through the idea of public goods as defined in economics, the technology-acceptance model and network theory (Rosemann et al. 2011).

Non-Excludability: Similar to the Internet, social media use is free for all and does not require any contractual pre-conditions for general-purpose use. Besides, there are no technical requirements or restrictions for accessing and using it (except Internet access. Usability is intuitive). These elements signify that anybody can access and consume the utilities without any constraints (Rosemann et al. 2011). News media practitioners (e.g. journalists) routinely use social media for (a) sourcing information by engaging with online communities and groups (e.g. Facebook), obtaining information (e.g. following Twitter feeds), sharing ideas (e.g. posting on LinkedIn), and (b) delivering information for attracting users to news websites (Hong 2012), disseminating news to large user bases (Dugan 2011), and influencing news audiences through personal tweets and Facebook accounts (e.g.). These activities illustrate the opportunity, freedom, choice and low cost of use that social media offers to all.

Non-Rivalry: Social media users do not compete against each other, as it is available 24/7 and accessible in any geographical location (subject to Internet access) through disparate devices such as smart phones and tablet computers (Weinberg and Pehlivan 2011). This signifies unlimited delivery, consumption and creation of information through social media. For example, a user tweeting does not constrict other users’ microblogging space nor reduces their tweeting time. Such non-competing aspect complements news firms, as any number of users can connect to, access information and interact with their news instantly (Glynn et al. 2012). News firms can also deliver news globally without having to worry about the scalability of social media for storing, processing and delivering the content. Such complementarity provides news firms more and faster ways for gathering and expressing information with the explicit aim of informing and shaping public beliefs and opinions (McCombs et al. 2011).

Versatility: Large social networking platforms like Facebook are generally branded successful due to their apparent ease of use (Rosemann et al. 2011). Moore and Benbasat (1991) define ease of use as the ‘degree to which an innovation is perceived as being difficult to use’. This is measured through user attitudes and behavioral intentions to use the innovation. However, the value derived through social media use based on its perceived usefulness is beyond the scope of this paper. Rosemann et al (2011) describes three principles of service-oriented design for achieving ease of service consumption that accentuates the versatility of DPGs, i.e. ‘abstraction, messaging and composability.’ Abstraction refers to the core design principle on which a social media application is based. For example, a first-time user of Twitter need not comprehend how tweets are delivered. Similarly, news firms do not have to grasp how information is uploaded to social media compared to traditional practices of news production and delivery where news firms require knowledge and control of processes such as printing a newspaper. Messaging denotes a well-defined model of interacting with users, which streamlines the manner of consumption. For example, Twitter only provides 140 characters for microblogging. Such controls help news firms in providing brief headlines or breaking news without having to worry about formatting content. Composability denotes

1 Tangible goods and/or services that have IP attributes and are perceived to be alike by all stakeholders
2 Anderson Cooper, anchor of AC360, CNN has 2+ million Twitter followers
simple and easy efforts in creating new properties by bundling multiple services of various social media applications (e.g., a news firm integrating YouTube videos on its Facebook page).

**Positive Network Effects**: Social media is based on Toffler's (1980) 'Prosumer' model cited by Rosemann et al. (2011) where users create value proposition by using it (e.g., uploading videos on YouTube). Network effect or network externality is the effect a user of a service or product has on the value of that product to other people. For example, high number of Facebook users project high value of Facebook. This associates the quality of Facebook positively with the number of users, reflecting positive network effects. According to Aral et al. (2013) network effects dramatically influence consumer demand. For example, videos on YouTube can be ranked based on the popularity ratings awarded by mass users. This triggers other users to use it as well as provide feedback, which in turn increases the value of YouTube. In comparison, the value of a traditional news medium (e.g., news website) is generally tied to the quality of its news content rather than the number of users. Therefore, positive network effects are extremely vital for news firms, as they help news providers in identifying and sourcing newsworthy information as well as delivering news to mass users that frequently use a specific social media platform.

**Competing Potential of Social Media**

The attributes of complementarity raise some interesting and pertinent questions such as (i) are social networking platforms like LinkedIn truly public as firms do require paying for its corporate use? And (ii) if social networks are not entirely free and open to the public, then does that make their non-rivalry disposition misleading, thereby exposing their competing potential? We address these issues by proposing that although social media provides complementarity to firms, it shows the potential to compete with the very firms that seek its complementarity. We draw on Porter's (2001) and (2008) work on competitive forces shaping strategy and businesses on the Internet and propose three characteristics depicting the competing nature of social media: (i) operational effectiveness (ii) strategic positioning, and (iii) complementing. Complementing as an attributing element to the competing potential of social media is rather paradoxical and unique. For example, we observe that the complementarity of social media quintessentially strengthens its prowess as a rival to firms producing informational products (e.g., newspapers). This is because the structural fixed costs of producing such products are high to news publishers but marginally low on social media for reproducing them (Karagiannopoulos et al. 2005). So, by offering complementarity in creating, sharing and delivering information, social media is able to provide, for example, newsworthy information faster and cheaper than traditional news providers.

Social media provides a faster, cheaper and convenient way for creating, sharing, consuming and collaborating information, which traditional businesses (e.g., publishing companies, news firms) cannot do. We define the competing potential of social media as its innate superior capability of (i) influencing and increasing its value to users (ii) offering an affordable low cost interactive medium for 'conveyance and convergence of information' (Dennis et al. 2008), and (iii) making information viral (i.e., the ability to diffuse information instantaneously across large user networks). According to Porter (2001), sustainable competitive advantage is achievable by either operating at a lower cost or imposing a premium service and price or both. Such an advantage is attainable by being operationally more effective than competitors and by doing things differently from those of rivals. We explain these in the context of social media potentially competing with news firms. However, we note that similar to the Internet, social media was not created to compete against any specific industries or businesses. Rather, its ubiquitous and pervasive characteristics and the congregation of mass users creating and sharing information are impacting traditional firms constrained by high costs of communications, information gathering, and processing business transactions (Porter 2001). Hard hit are the news and publishing industries (Aral et al. 2013).

**Operational Effectiveness**: Operational effectiveness implies doing things similar to those of competitors but doing them better (Porter 2001). Accruing competitive advantage can take numerous forms such as operating on better technologies or having a more effectual management structure. The operational effectiveness of social media can be observed, for example, through its strong capabilities of creating, exchanging and collaborating information instantaneously in real-time. Social media companies (e.g., Twitter Inc.) themselves operate in an highly nascent and embryonic industry where there is belligerent experimentation for attracting and retaining users (Santos and Eisenhardt 2009). Besides, there is chronic development of technology, products and services resulting in continuous creation, co-development and testing of new technologies, novel products and services unbounded by time and firm
boundaries (Gnyawali et al. 2010). In addition, there is aggressive value co-creation through partnerships and strategic alliances for building quality applications and services (Gnyawali et al. 2010). This speed and agility of technology, its application and product development makes it easier for social media companies to design and implement new applications and services, which play out as new innovations to traditional industries. Such a rapid pace of development is difficult to implicate in traditional firms where IT development, adoption and implementation have longer lifecycles and complex arduous processes (Gnyawali et al. 2010). Therefore, traditional firms cannot cope with, innovate or easily imitate what social media do. So they converge on their innovations for leveraging its advantages. However, in doing so, they make social media companies highly valuable and competitive. Product and service improvements in the newspaper industry have been rather nonexistent except migrating news to the Internet. Rather, the predictive outlook for the industry (in the United States) has been sluggish evidenced by its struggling circulation and declining revenue models (Mitchell and Rosensteil 2012). News firms are already sourcing, sharing, creating and delivering news through social media (e.g. Twitter) making it a repository for newsworthy information. Such operational effectiveness of social media is also attractive to advertisers who have shifted their business to social media (Mitchell and Rosensteil 2012).

Strategic Positioning: Strategic positioning is doing things differently compared to competitors (Porter 2001). This is achieved by (i) delivering unique services (e.g. video calls through Skype) that add greater value to existing services (ii) offering different features (e.g. likes or timeline on Facebook), and (iii) offering an array of services (e.g. Facebook offers media, networking services). By strategically positioning applications and services, social media has acquired exponential growth in terms of users, which is then leveraged for attracting advertisers and other firms wishing to market their services. As a test example, a 2012 Dow Jones report states that Facebook is preparing to aggregate job postings from third parties. This makes Facebook a potential competitor with professional networks such as LinkedIn as well as online and offline job recruiters in an estimated $4.3 billion online job-recruitment industry. Similarly, the news industry can face a disastrous fate, if Facebook or Twitter begins to aggregate and provide a broad suite of news and newsworthy informational services on a subscription based model.

Complementing: Complementarity arises when the combined value of two products is greater than the sum of each ‘product’s value in isolation’ (Porter 2001). Complements can play a key role in triggering demand for a firm’s product and services (Porter 2001). Higher dependency on a complementing product or service can make that firm providing it highly competitive to its rivals. For example, social media complements news firms in sourcing and delivering news. So, greater reliance on Facebook and Twitter creates a greater demand for its usage. Other business entities and individual users also create, source, deliver and share news and information through social media. This complementing attribute of social media greatly boosts its competitive potential to generate, create and broadcast news (e.g. YouTube). Here, we posit that the non-excludability characteristic of social media complementarity limits free consumption to a specific threshold. Thereafter, it potentially imposes charges for increasing use of services (e.g. LinkedIn). Anderson (2010) investigating pricing models states that products and services offered free to customers are often strategies for attracting users and ‘upselling some of them to a premium level.’ His model widely referred as ‘freemium’ is applied to digital products and services. However, the tipping point of complementarity into competing mode is debatable requiring more empirical evidence. Likewise, Rosemann et al’s (2011) depiction of DPGs only make them public to a specific level. Beyond that, they constitute a price for usage, fragmenting their non-rivalry position into potential competition.

We observe social media’s cumulative merits of (i) supplementing traditional news mediums (e.g. breaking news first on Twitter) (ii) disintermediation (e.g. disengaging any mediating mechanism such as scheduled times for news) (iii) replacing communication intermediaries (e.g. Facebook as one-stop news medium), and (iv) interactivity (e.g. users create, share, news) extremely appeasing and cost effective to users, thereby epitomizing its competing potential.

Evidencing Competing-Complementarity

We build the understanding of competing-complementarity by analyzing opinionated data. As our

3 http://www.pcmag.com/article2/0,2817,2406920,00.asp
research is exploratory in nature, we adopt the focus group method, as this method helps in finding jointly constructed information from individuals that give meaning to phenomena (Munday 2006). This suits the context of our study where we attempt to evidence the competing-complementarity phenomenon based on the news consumption patterns of people. We also use commonsense reasoning to analyze opinions. Commonsense is information that individuals normally know but usually do not state in a conversation. This is because such communication is usually based on shared background knowledge of understanding the relationship of objects in the context of their environments, events or situations (Cambria et al. 2010).

**Example 1**: Opinion expressed by Rob Johnson, campaign manager for Governor Rick Perry in the 2012 U.S. presidential elections, “We no longer click refresh on websites or wait for the paper boy to throw the news on our porch. We go to Twitter and learn the facts before others read it” (Youngman 2012).4

**Analysis**: “We go to Twitter and learn the facts” - People use Twitter for free without requiring technical knowledge or contractual agreements. News firms can also use it for delivering newsworthy information. Many users can access the same information. This shows non-excludability and non-rivalry indicating complementarity. “No longer click refresh on websites or wait for the paper boy,” “Learn the facts before other read it” - Twitter is easy to use. It provides news faster than other mediums do. It is a preferred news medium. This shows Twitter's operational effectiveness signaling competing potential.

**Example 2**: Focus Group. Opinions expressed by seven individuals (Five higher degree research students and two staff) of a large academic institution on their generic use of news mediums (traditional and social media) and also related to two recent events (i) the death of Margaret Thatcher (Apr.8, 2013), and (ii) the Boston marathon bombings (Apr. 15, 2013). A summarized and edited version is presented below.

1. “I first found out that Margaret Thatcher died when a friend posted it on Facebook.” “Later I checked the news on T.V”

**Analysis**: Facebook offers news leads on major news events. People follow such leads and revert to traditional news mediums for further information and analysis. Characteristics of social media complementarity deduced: non-excludability, non-rivalry, positive network effect and versatility.

2. “I first found out when a friend posted it on Facebook”

**Analysis**: The news was consumed first on Facebook. Through Facebook, users create, share and consume news. With around a billion users, Facebook can make news viral in a short span of time. Traditional news mediums do not have such capabilities. Characteristics of social media competing deduced: operational effectiveness, and complementing.

3. “I have friends in Boston who put up a video (on Facebook) of the Boston bombings even as news channels (Television) were starting to show it”

**Analysis**: Through Facebook one is able to broadcast news similar to traditional news broadcasters. Frequent Facebook users are able to get news similar to news subscribers scheduling their news consumption habits. News firms can also source such videos through Facebook and use them in their newscasts. People read news posted on Facebook while also watching television broadcasts and pursuing other news media. Characteristics of social media complementarity deduced: non-excludability, non-rivalry, versatility and positive network effects.

4. “Friends put up a video even as news channels were starting to show it”

**Analysis**: Individuals use Facebook to broadcast news rather than send the video to an established news provider. The specific video posted on Facebook and related to a newsworthy event was able to satiate the news requirement when consumed. Frequent users of Facebook are able to access and consume newsworthy information quicker than traditional news mediums. Facebook allows users to contribute to news events while also allowing modality of information. Characteristics of social media competing deduced: operational effectiveness, strategic positioning and complementing.

5. “I get news leads from Twitter and Facebook.” “If only headlines on Twitter, then I go to traditional news channels.” “I typically do both - follow news leads on Twitter including tweets by news companies as well as traditional news media including news websites.”

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Analysis: People use Facebook and Twitter as well as traditional mediums for news. If Twitter is not able to provide detailed news, then people tend to use traditional news channels. Facebook and Twitter provide news coverage and enable news providers and users to create and deliver news unconditionally. Characteristics of social media complementarity deduced: non-excludability and non-rivalry.

6. “I prefer social media for news because traditional media and even news websites tend to be a bit periodic. I won’t wait for the next day to hear what the (news) update is.” “I may never go to traditional media as I get the news I want from social media.” “I get things on LinkedIn that I have never heard of such as information on (new) book releases as much as I would like to hear it as news on radio or television.”

Analysis: Social media offer greater frequency of news timeliness. They also offer a variety of news created by users. There is no generic pattern of offering similar news for all. This is more appealing to people that wish to consume different kinds of news at their own flexible pace and time, which, for example, a newspaper offering standardized news or a television channel offering scheduled news programs cannot provide. Characteristics of social media competing deduced: operational effectiveness, strategic positioning, and complementing.

Discussion

Social media has emerged as an important resource for news given its low operating costs, open access, instantaneous real-time broadcasting and ‘collective ability to act as leading indicator of future news coverage’ (Farrell and Drezner 2008). It has attracted millions of users including news firms that rely on its convenience, usefulness and interoperability for sourcing, delivering and consuming news. On the other hand, social media has posed a serious challenge to the monopoly of news firms over news content, its delivery and consumption. This is because any person can create, distribute, share and consume news through social media irrespective of the time and control mechanisms prevalent in the traditional business of producing and delivering news. We conceptualize this phenomenon as the competing-complementarity of social media. Analysis of the opinionated data on the news consumption of individuals show that (a) people consume a variety of news through social media such as breaking news, news headlines, non-descriptive quick and short news, in-depth reports and news blogs (analyses and commentaries). However, they also consume news through traditional news mediums such as newspapers and television to satiate their appetite for news, often referred by story leads through social media. This behavior, which evidences the complementarity of social media is consistent with the theory of selective exposure, which refers to the human tendency of aligning, orienting and favoring interest in information driven by an ‘enduring interest in a specific subject area’ (Dutta-Bergman 2004) that reinforces predating views while avoiding contradictory information. This means a person interested in a particular content area such as politics will seek various channels and mediums to acquire political news, and (b) people prefer to consume news only through social media because of its dynamic attributes. This depicts the superiority of social media over traditional news channels in providing news. The theoretical lens of disruptive innovation (Christensen et al. 2004) helps in understanding how the innovativeness of social media technologies radically impacts traditional incumbents (e.g. newspapers, television) and attempts to make a niche product (i.e. news) more mainstream. Traditional news firms find such pervasive technologies difficult to replicate leaving them two choices of either (i) exploring new opportunities by engaging with new technologies such as social media (complementarity) so that it may provide better prospects in the future or (ii) exploiting the existing technologies in a bid to survive (Lee et al. 2003). Therefore, the dichotomous influence posed by the competing-complementarity of social media is an elusive challenge and dilemma to traditional news firms to either innovate operational capabilities (for leveraging the complementarity) or invoke strategic structural changes (e.g. introduce new processes and functions) to combat its competing potential. Past studies on media evolution (Fidler 1997) adopt the Darwinian concept to explain how media evolve through incremental cumulative changes in response to a new media. However, changes in the news consumption patterns of individuals evidenced by this study show that media evolution is more abrupt than previously though. This aligns more with the theory of punctuated equilibrium (Gersick 1991) which explains how individuals, groups and organizations evolve in response to radical changes caused by disruptive and innovative technologies.

Competing-complementarity depicts the unique nature of social media platforms. However, the reflective
nature of competing-complementarity raises several questions of its homogeneity over all digital social platforms. Similar to the Internet, social media is not a monolithic concept but a collective of many platforms and applications that represent different technologies and capabilities (e.g. Twitter is not the same as YouTube) (Wattal et al. 2010). Therefore, it is unclear, which generic characteristics of social media would instigate competing-complementarity and whether all social media platforms would produce similar results. However, through the understanding of complementing (explained earlier as a characteristic of the competing potential of social media), we posit that complementarity potentially precedes competition. This implies that social media platforms can compete with firms if they provide the same firms complementarity first. Only by attracting users and creating mass demand for its services first can social media potentially compete. This indicates a phenomenal shift in the way competition occurs (in the social media space). Based on this understanding, we propose our future agenda for researching competing-complementarity. This is structured around investigating (i) whether the phenomenon is occurring across all social networking platforms. If so, why (explanation)? This paper provided some evidence of its occurrence. (ii) How does competing-complementarity evolve (prescription)? Our paper presented an egalitarian depiction of both intertwined and visible almost simultaneously. This needs further investigations of time and content boundaries (control variables) that potentially influence either or both elements; either setting them apart or exhibiting tipping points where for example, one becomes dominant while the other insignificant and whether that is cyclic or unique? (iii) What are the repercussions of the phenomenon on businesses (design)? And, how can firms leverage its value (tools)? This paper provided some explanation of how news firms use social media for sourcing and delivering news. However, more research is required in understanding how firms respond to a competing social media. The changes in the news consumption patterns of individuals also exposed the vulnerabilities news firms face by engaging with social media. This raises important questions such as (i) will social media allow traditional businesses to compete and survive (competition)? (ii) Which social media applications could diminish the role and value of traditional firms (evolving mechanisms)? (iii) Will social media radically change user interaction with traditional products given that underlying technologies offer ‘affordances of active participation’ (Wattal et al. 2010) (evolving relationships)?

Contributions and Implications

Our concept of competing-complementarity presents an excellent opportunity to IS researchers in better understanding the unrecognized role and dynamic capabilities of social media. Historically, the IS discipline has studied the use, impact and effects of media on communications within a bounded enterprise architecture. This study opens a new paradigm for studying external media (e.g. social media) capabilities and their deep impacts on organizational communications, functions, processes, products and users. It also contributes to research in the communications domain, which has concentrated largely on the displacement effects of a news medium (e.g. television) on another (e.g. newspaper) but never focused on whether the technology driving the medium provide complementarity to another mediums (e.g. do newspapers provide complementarity to television broadcasters?). Our study brings new understanding to the evolutionary nature of organizational change and progression in the news industry. Such radical transformations have powerful practical implications on the future of news firms such as formulating growth strategies and enhancing operational power through optimization of resources. Knowledge of the nature of technology can lead firms to better interpret technological innovations and their impacts on business processes and functions leading to better management of organizational change.

Limitations

Generalizations based on our findings are limited by our data, approach and the social networking platforms investigated. There may be a potential bias in selecting Facebook or Twitter (or major events) due to their inherent appeal, usage and coverage. Therefore, expanding the study to several other social media applications will allow a more systemic understanding and analysis of competing-complementarity. Opinions and focus groups can be suggestive. Therefore, more empirical studies are required to conclusively validate our findings. This study does not focus on why people ‘use’ or perceive using social media or traditional news media. Rather, it is scoped to only highlight and evidence the unique nature of social media.
References