VOLATILE BUT CUE-LADEN: MEASURING AGENDA-SETTING IN THE ONLINE NEWSPAPER ENVIRONMENT

Lambe Kayode Mustapha
University of Ilorin
muslakay@yahoo.co.uk
klm@unilorin.edu.ng

Saodah Wok
International Islamic University Malaysia
wsaodah@iium.edu.ng

ABSTRACT

After more than four decades of charting a paradigmatic direction in media effects research, agenda-setting has witnessed and survived enormous challenges to its main thesis. Despite the unending efforts of scholars to explicate the theoretical and logical mechanisms of the theory, the ever dynamic milieu in which agenda-setting effects is being explored, creates additional research problems necessitates further exploration. The arrival of new media and the subsequent migration of legacy media into the virtual realm, is another instance of the challenges of agenda-setting as a theory that is capable of unpacking media effects. While some scholars believe in the efficacy of agenda-setting in the new media environments, others argue along an attenuation perspective. Although a number of empirical approaches have been deployed to establish the continual heuristic value of agenda-setting in the age of new media, little, if any, attempt has been made to synthesise the findings into a coherent body. This review provides clues on the salient-directing cues in online newspapers on the one hand, and the challenges of measuring agenda-setting effects of online newspapers on the other hand.

Keywords: Agenda-setting, media effect, new media, online newspaper, salient cues
INTRODUCTION
Agenda-setting has not only rendered colossal impacts on communication research, it has been amenable to ever-evolving challenges posed on its efficacy. After four decades of charting a paradigmatic direction in the media effects research, agenda-setting has witnessed and survived enormous challenges of its main thesis. Despite the unending efforts of scholars to explicate the theoretical and logical mechanisms of the theory, the ever-dynamic milieu in which agenda-setting effects is being explored, creating additional research problems necessitating further exploration.

The arrival of new media and the subsequent migration of the legacy media into the virtual realm was another instance of the challenges to agenda-setting as a theory that is capable of unpacking media effects. While some scholars believed in the efficacy of agenda-setting in the new media environments (Coleman, McCombs, Shaw & Weaver, 2009; Maier, 2010; McCombs, 2004), others argue along an attenuation perspective (Althaus & Tewksbury, 2002; Chaffee & Metzger, 2001; Schoenbach, De Waal & Lauf, 2005). According to the protagonists of sustained effects, the migration of the traditional media to the virtual realm is no more than an innovation in journalistic practice. McCombs (2004: 147-148), for instance, argued that, “most of the news sites on the internet are subsidiaries of traditional media.” Other scholars also contended that the contents of the traditional media are usually shoveled into the online version (Barnhurst, 2002; Maier, 2010). Hence, agenda-setting cues, such as news redundancy and consistency in issue salience, are equally inherent in the online news version.

The thesis of scholars in effects attenuation, however, is based on the patterns of news presentation in the online platforms, which blurred the boundary between the significant and the trivial. The scrolling-down mode of reading online newspapers, as opposed to the paging-through patterns in the print version is, for example, deemed to reduce internalisation of important news story cues, that are essential for salience and recall of important issues in the news (Althaus & Tewksbury, 2002; De Waal, Scoenbach & Lauf, 2005). Interestingly, these scholars did not claim absolute absence of agenda-setting effects of online media.

Although a number of empirical approaches have been deployed to establish the continual heuristic value of agenda-setting in the age of new media (Jeon, 2004; Lee, 2007; Mustapha & Wok, 2013; Robert, Wanta & Dzwo, 2002; Yu & Aikat, 2005), little, if any, attempt has been made to synthesise the findings into a coherent body. This review provides clues on the salient directing cues of online newspapers on the one hand, and the challenges of measuring agenda-setting effects of online newspapers on the other.

LITERATURE REVIEW
Agenda-Setting Theory
Agenda-setting presupposed the ability of the media to shape perceptions of reality among members of the public. Being a complex environment that could hardly be grappled via direct acquaintances, members of the public, in their efforts to comprehend reality, depended on second-hand information from the mass media to figure out a plethora of issues, events and problems collectively concerning the society. Issues considered as important, by way of their placement on the news platforms and the amount of attention devoted to reporting them, are equally deemed as salient in the public’s perceptions. The correspondence in the hierarchy of issues in the media and the public agenda are at the heart of agenda-setting research.
Hence, the mass media elevated the salience of certain issues in the public’s perceptions by giving much attention to the issues (Baran & Davis, 2009; DeFleur, 2010; McCombs, 2004; 2005; McCombs & Shaw, 1972; Severin & Tankard, 2010).

From the modest exploration of the role played by the news media on the perceptions of campaign issues among Chapel Hill’s voters during the 1968 U.S. presidential election, agenda-setting has resuscitated mass communication research from the gloomy prognosis of the limited effects theorists (Lowery & DeFleur, 1995; Sparks, 2006). Besides shifting the paradigm in communication research, agenda-setting has been found to be complementary to and compatible with, other communication concepts and theories (Dearing & Rogers, 1996; McCombs, 2004; McCombs, Llamas & Lopez-Escober, 1997, Mustapha, 2012). This undoubtedly explained the fruitful application of the theory to different areas and in many locales across the world (Coleman, McCombs, Shaw & Weaver, 2009, McCombs, Llamas & Lopez-Escober, 1997; McCombs & Valenzuela, 2007).

In Setting the Agenda, McCombs (2004) offered a panoramic view of agenda-setting research from its beginning to the contemporary era. According to him, agenda-setting research has yielded five interrelated but non-chronological phases. The initial influence of the mass media on public perceptions of salient news objects is termed issues or first-level of agenda-setting. Efforts to explain the psychological mechanism of effects followed suit, with scholars exploring how audience’s differential needs for orientation altered the magnitude of agenda-setting effects. Besides, attempts have equally been deployed to understanding the saliency of object attributes in the media and public agenda through the concept of attribute or second-level of agenda-setting.

Further explicating agenda-setting, the genesis of media agenda is being explored via the research question: who sets the media agenda? Research endeavours in this phase contributed the inter-media agenda and agenda building to the conceptual repertoires of agenda-setting research. Finally, agenda-setting has been explored along complex effects. The inherent cognitive effects of the first-level of agenda-setting and affective effects of the second-level of the agenda-setting are found to prime behavioural consequences such as forming opinion, buying a product or voting for a candidate (McCombs, 2004, 2005; Roberts, 1992; Shaw, 1979).

In addition to its continual evolution and adaptation as a theory of media effects, agenda-setting has been applied to a wide variety of areas besides its original focus on political communication. Its assumptions have been validated in issues such as crime, health communication, environmental issues, and corporate communications in many regions of the world (McCombs, 2004; McCombs, Llamas & Lopez-Escober, 1997; McCombs & Valenzuela, 2007). The theory has also been explored via different research designs and statistical analysis using a single medium and a plethora of media (McCombs, 2004; Wanta & Ghanem, 2007).

**Agenda-Setting across Media Platform**

Evidence in support of media agenda-setting influence has been documented in a single medium and a combination of media. While the original Chapel Hill’s study, for example, indexed media agenda using newspapers, television and magazines contents (McCombs & Shaw, 1972), a number of other studies have used a single medium to test media agenda-setting effects (Brosius & Kepplinger, 1990; Golan & Wanta, 2001; King, 1997; Mustapha & Woks, 2013; Wanta, Golan & Lee, 2004). Despite the assertion that different media and content characteristics influence the magnitude of effects (McCombs, 2004), these studies
found significant media-public agenda-setting influences.

In addition, comparative agenda-setting effects of the media have been explored to distinguish differential patterns and magnitudes of effects. Results from these comparative analyses are, however, far from conclusive. While a number of studies have documented the potency of newspapers over television (Lopez-Escober, Llamas & McCombs, 1998; Shaw & McCombs, 1977), others reversed the trend in favour of television (Weaver, Graber, McCombs & Eyal, 1981; William, Shapiro & Cutbirth, 1983). Yet, other studies found no significant difference in the agenda-setting influence of newspapers and television (Chaffee & Frank, 1996; Wanta & Hu, 1994).

New communication technologies that altered the ways news are being packaged, presented and consumed have opened a new agenda in agenda-setting research. Worried by the supposed fragmentation characteristics of new media, scholars have explored the new state of affairs. Like the results of the comparison made between newspapers and television, mixed findings have also marked the question of which is more efficacious in agenda-setting between traditional and new media. While there is a consensus that online news media equally set the public agenda, scholars are divided on the question - to what degree? This has thus made the examination of agenda-setting in the online media environment another worthwhile venture among the scholars.

The New Media Platform
New media is one of the most nebulous concepts in the contemporary media scholarship. According to Cambridge Dictionaries Online (2013), new media are “products and services that provide information or entertainment using the internet and not by traditional methods such as television and newspapers.” These computer-assisted electronic communications facilitate real time interactive access to multimedia content and come in many forms such as websites, emails, chat-rooms and other variants, assuming a new genre-social media. The new media have also radicalised every aspect of human interactions and exchanges, including the forms and roles of journalism in the society (Chaffee & Metzger, 2001; Towner & Dulio, 2008).

The presence by traditional media in the virtual space through the process of convergence introduced new features that affected news production, distribution and consumption. At the outset, these additional features are perceived to have implications for the sociology of mass communication. However, studies have found that media use and effects have not radically departed from every nuance mode in the traditional media environment. Rather than facing the challenge of displacement and marginalisation prophesied by some scholars (Althaus & Tewksbury, 2000; De Waal, Schoenbach & Lauf, 2005; Pregowski, 2005), traditional news outlets leverage on Web 2.0 to innovate and attract more audience (Lee, 2008; Maier, 2010; Stringer, 2009). In view of the complementary, rather than displacing the role of new media, scholars in communication and media studies have tested extant media theories on the new media and found similar effects as documented in the traditional media environment (Pregowski, 2005).

Besides ascertaining the roles of the online news media from the functionalist paradigm (Boczkowski, 1999; Skogerbo & Winsvold, 2011; Zhang, 2003), scholars have explored the applicability of specific mass communication theories in the online news media environment. Specifically, a study on uses and gratifications of online news media found that the time-honoured cognitive, personal integration, social integration, and entertainment gratifications
are sought by the audience (Curtain, Dougall & Mersey, 2007, Citing Lin, Salwen & Abdullah, 2005). Scholars also document the application of gatekeeping theory in the online news platform (Singer, 2006; Zmiłký & Tyree, 2007). They found that online journalism retained traditional gatekeeping role in addition to facilitating active interaction with the readers. Another theory that has been tremendously tested in the online news environment is agenda-setting theory (Althaus & Tewksbury, 2002; d’Haenens, Jankowski & Heuvelman, 2004; Jeon, 2004; Lim, 2006, Mustapha & Wok, 2013; Robert, Wanta & Dzwo, 2002).

**Online Newspaper Agenda-Setting**

Online newspapers, the digital version of traditional newspapers, have become parts of contemporary media diet across the globe. Online newspapers joined the league of products and services that migrated to the virtual realm in the 1990s when the Internet revolutionised virtually every aspect of social, economic, political and cultural interactions (Aikat, 1998; Bressers, 2006; Deuze, 2003; Maier, 2010). The arrival of online newspapers precipitated hails and fears among scholars and practitioners in a version common to alteration of any status quo. Apprehension about online newspapers concerned the role and format of news presentation. These concerns are germane to examination of agenda-setting role of the online newspapers.

One of the greatest debates associated with the arrival of online newspaper was the possibility of displacement or supplementary role to traditional newspapers, particularly given the decline in newspapers’ readership at the outset of online newspapers. Based on functional displacement hypothesis, some scholars believed that online newspapers would replace the print counterparts as primary sources of information (De Waal & Schoenbach, 2010, Norris, 2000, Tumber, 2001). Rivalries of other scholars, however, pitched their tents with supplementary and even complementary hypotheses, contending that new media seldom displace existing communication infrastructures (Lee, 2008; Skogerbo & Winsvold, 2011; Towner & Dulio, 2008; De Waal, Schonbach & Lauf, 2005).

With regards to patterns of news presentation, scholars’ views are equally dichotomized. Premised on content difference and non-linear pattern of news presentation, a school of thought believed that agenda-setting in the online newspapers would be minimal, if not totally absent (Chaffee & Metzger, 2001; Maier, 2010; Schoenbach, De Waal & Lauf, 2005 Althaus & Tewksbury, 2002; Curtain, Dougall & Mersey, 2007; De Waal & Schoenbach, 2008; Trench & Quinn, 2003). Opposing views, however, debunked the attenuation thesis, arguing that online newspapers are not only structurally different from their print counterparts; they reported the same issues, in the same direction, for the same objective (Barnhurst, 2002; d’Haenens, Jankowski & Heuvelman, 2004). These positions are backed by empirical evidence across many locales.

In one of the earliest studies of agenda-setting in the online news domain, Althaus and Tewksbury (2002) compared story recall and perceived importance of issues among readers of print and online version of the New York Times. They found that the print newspaper contributed more to issues on learning and recall than their online versions. Using a representative sample of Dutch population, De Waal (2008) compared the perceived topics among readers of online and print newspapers. She concluded that the print edition is more effective in tandem with readers’ interest and reliance on print media.

Apart from these studies documenting supremacy of print newspapers over the online editions in setting agenda, other findings showed no significant differences. In a study
exploring differences in consumption and recall among Netherlands’ audience, d’Haenens, Jankowski and Heuvelman (2004: 363) found that “no consistent pattern differentiates readers of the print newspapers from the online versions.” To test news redundancy, which is a necessary condition for agenda-setting effects, studies have also explored content similarities and differences between print and online newspapers and found no significant difference in the agenda set for the public by both print and online newspapers (Lee, 2008; Maier, 2010, Mensing, 2004, Yu & Aikat, 2005). Eveland, Seo and Marton (2002), however, found superiority of online newspapers over and above print newspapers television news in an experiment testing how media contribute to internalisation of election-related knowledge during the 2000 U.S election.

Other innovative approaches have been used by researchers to evidence agenda-setting in the online newspapers. For example, Roberts, Wanta and Dzwo (2002) found support for agenda-setting thesis in the online domain. Using discussions on the online bulletin board (American Online) as a surrogate for the public agenda, their results showed that three of the four main campaign issues in the online version of traditional media corresponded to dominant discussions on American Online during the 2000 U.S. presidential election. Jeon (2004) built on the findings of Roberts and her colleagues during the 2002 Korean election. Using comments attached to each news story as indicators of public agenda, he found significant effects for stories with length, placement and hyperlink. Other scholars have used audience information seeking behaviours online to tap salience of issues in the online news environment and found significant difference between salient and non-salient objects in the news (Granka, 2010; Scharkow & Vogelgesang, 2009). A recent study found significant relationship between issues agenda of homeland online newspapers and perceived public agenda of diasporic audience during the 2011 Nigerian presidential election (Mustapha & Woks, 2013). These pictures support scholars’ assertions that agenda-setting remained a viable scholastic enterprise in the changing media environment (Coleman, McCombs, Shaw & Weaver, 2009; McCombs, 2004).

OPERATIONALIZING SALIENCE IN THE ONLINE NEWSPAPERS

Media agenda, “the key independent variable in agenda-setting research” (Kiousis, 2004: 78), have been operationalised in the traditional news environment using content analysis that considered certain characteristics of the media as salience-directing cues. These cues included placement of news, length of the story, size of the headline, use of photographs, and video, among others. Kiousis (2004) explicated media salience, the latent variable of media agenda, as a multidimensional construct consisting of attention, prominence and valence. Two dimensions - visibility and valence - however, emerged from a factor analysis of his data. These dimensions are found suitable in testing both first - and second-level of agenda-setting effects. While visibility and valence are holistically compatible with many designs in agenda-setting research, the digital format of the online newspapers presents with additional distinguishing cues, that marked certain stories as more important than others.

Scholars envisaging the attenuation of agenda-setting in the online news environment, based their arguments on the non-linear, scrolling-down pattern of news presentation and consumption (Althaus & Tewksbury, 2002, De Waal Schoenbach & Lauf, 2005; Tewksbury & Althaus, 2000). However, the innovative features such as multimedia, hyperlinks and other interactive elements have been used by proponents of potent agenda-setting effects online (Granka, 2010; Jeon, 2004; Roberts, Wanta & Dzwo, 2002; Scharkow & Vogelgesang, 2009).
This creative measurement of agenda-setting remained a great contribution to the field as it opened a new direction in the ever evolutionary news media environment.

**Story Placement**
One of the means of raising the salience of issues in the public agenda is to display prominently or communicate the issues in the print and broadcast media respectively. In comparison with the front page of the print newspapers, the homepage of the online newspapers has been hailed as a cue-laden portion that revealed the prominent issues of the day. Key stories of the day are not only housed in the homepage, but most important stories are also supported with other attention-grabbing cues such as multimedia elements. Stories in other sections are normally indexed in the homepage.

The hierarchy of the stories index may also provide clues as to the importance of each story in each section of the online newspapers. In addition, a comparison could be made between the salience of issues covered in the homepage stories and indexed stories. Mustapha and Wok (2013) found that issues in the homepage of Nigerian online newspapers corresponded better to a perceived public agenda among Nigerian students in Malaysia than issues covered by stories in the index portion during the 2011 Nigerian presidential election. Many studies supporting the plausibility of agenda-setting theory in the online news environment have equally used homepage stories to array the media agenda (Jeon, 2004; Maier, 2010; Yu & Aikat, 2005).

**Story Length**
One of the key elements that communicated the importance of the story is the amount of attention given to the story in terms of news hole in print and online newspapers, and time in the broadcast media (Dearing & Rogers, 1996; McCombs, 2004, 2005; McCombs & Shaw, 1972; Protess & McCombs, 1991). While the length of text-based news can be measured in terms of word count, column inch or in paragraph, length of broadcast news is usually measured in time-seconds or minutes. Kiousis (2004: 74) poignantly captured the importance of story length better by positing that, “…attention is externally based because issues are salient with respect to the total length of space allotted to them in the entire media or in the entire media text” (emphasis added).

Besides the fact that the story length intuitively communicated the story’s importance, lengthy stories provided contexts and supporting evidences that facilitated comprehension of the story and enhanced recall. A number of studies have thus found how story length moderated the magnitudes of agenda-setting effects of online newspapers (Jeon, 2004; Mustapha & Wok, 2013). In addition to the length of the story, number of time the story is displayed online has also been used to index issue salience. The product of story length (number of words) and the frequency of the story is displayed could equally be used to measure the salience of the issues (Miaer, 2010).

**Multimedia Features**
Multimedia features such as photographs, graphics, audios and videos also contributed to the salience of issues in the online news story. Graber (2001), for instance, posits that images communicate information better than text. In addition to showing importance of the story, photographs enhanced the likelihood of noticing, reading and processing of the story (Mensing, 2004). Hyperlink, which directs readers to other sources of information supporting
the current story, also contributes to comprehension and the salience of the issues covered (Jeon, 2004).

Active Audience Features
One of the reasons agenda-setting effects became polemical in the online news domain was the notion that online news media promotes interactive media consumption and an active audience via the availability of interactive features that prevent chance encounters of important news of the day. Besides, the ability of the audience to control content exposed online has been considered a reason for fragmentation of agenda (Althaus & Tewksbury, 2002). This “Daily Me” personalisation of news consumption, an antithesis of “Daily Us” exposure to generic community information, weakened the ability of the online media to set agenda and bring about consensus on community problems (Tewksbury, 2003; De Waal, Schoenbach & Lauf, 2005).

On the contrary, other scholars have viewed that active audience features such as the ability of readers to comment on the news, recommending news to networks, rating the news and seeking further information through search engines, are important cues that typified the salient issues in the audience perceptions and increased the magnitude of agenda-setting effects (Granka, 2010; Scarkow & Vogelgesang, 2009). Studies have considered these behavioural responses as innovative measure of public agenda for they eliminated effects of individual desire for social desirability that might bias response to polls or survey questions (Curtain, Dougall & Mersey, 2007; Jeon, 2004; Roberts, Wanta & Dzwo, 2002).

THE CHALLENGE OF MEASURING AGENDA-SETTING ONLINE
Although the online news environment could accommodate the measurement of agenda-setting effects using both traditional as well as innovative designs, the dynamic nature of the medium posed considerable challenges. Mensing (2004:2), for example, argued that story placement, prominence and frequency, are much more fluid concepts online…” The volatile nature of news in the online newspapers, in response to ‘breaking news’ postings, made it difficult to measure salient issues in the online newspaper environment. The format of the homepage could also impinged on the ability of important news to stand out among other competing news. A crowded homepage, for instance, has the potential to blur the line between significant and mundane news stories.

Active audience features are equally not without disadvantage for scholars measuring agenda-setting effects in the online news environment. Bulletin boards that accommodated readers’ comments on stories are conceived as plausible means of tracking readers’ feedbacks. While this feature promotes journalist-audience interaction, it has equally been an avenue for negative comments, accusations and cyber bullying (Trench & Quinn, 2003). At times, it is also difficult to decipher whether those who commented are actually reading the news story or are responding to other comments on the bulletin board without reading the story. Indexing public agenda with the volume of comments could, therefore, offer spurious results or lead to ecologically fallacious findings. The addition of multimedia features to the online news has equally been found to attenuate news recall and recognition (Jeon, 2004; Tewksbury & Ruttenberg, 2009, citing Sundar, 2000).

In addition to feature-specific challenges, other contingencies are likely to moderate the intensity of agenda-setting effects in the online news environment. Being a social scientific enterprise, the entire gamut of media effects studies that is contingent upon multifactorial
influences and the effects of online newspapers cannot be excluded. Therefore, factors such as nature of the story, audience interest, demographic characteristics, etc. can pose challenges to scholars exploring agenda-setting effects online.

CONCLUSION
This paper offers a review of the state of affairs in agenda-setting research with special reference to the online news environment. It connects the time-honoured empiricisation of agenda-setting variables in the traditional media setting with the contemporary explication of the variables in the virtual domain. Significantly, the methods and forms of agenda-setting in the online news realm - the use of online news cues and the adaptation of traditional measures - are identified. The review also crystallises the common agenda-setting studies that are predominant in the online news environment.

It is apparent that agenda-setting remains a fruitful theory, responding to the dynamic media environment. This shows the possible applicability of the five phases of agenda-setting research, identified by McCombs (2004) in the online domain. Thus far, the existing body of studies on online media agenda-setting has yet to adequately address important issues such as psychological contingency of effects, second-level of agenda-setting, agenda-building and consequences of agenda-setting for audience behaviours. With increasing migration of audience to the online media environment and availability of miniaturized mobile hardware to monitor the news by the contemporary audience, there is a need for continuing exploration in this fertile research domain.

Worthy of note is that no study thus far, has pronounced the demise of agenda-setting in the online news environment. The extant worst scenario claimed is merely the reduction of agenda-setting effects, which have been matched by numerous other studies priming online newspapers above other media. Juxtaposed with the findings on traditional media, agenda-setting in online news media could be considered robust. The here and there differences in the potency of effects could be explained by the fact that agenda-setting, like any other theories and concepts in social sciences, is not an absolute law. Hence, scholars should take up the challenge to explore the opportunities offered by innovative media to further expand agenda-setting research into the new media environment.

ACKNOWLEDGEMENT
Earlier version of this paper was presented at Agenda-setting: What is New? Seminar at Universiti Kebangsaan Malaysia, December 26, 2013.

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Volatile but cue-laden: Measuring agenda-setting in the online newspaper environment


Volatile but Cue-laden: Measuring Agenda-setting in the Online Newspaper Environment


