

## Online news creation and consumption

### Implications for modern democracies

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*This chapter examines how citizens acquire political information using the internet. For some time, researchers have been looking at the form of news online and how news audiences find (or at least encounter), consume, and retain political content there. The available literature suggests that major news outlets rarely create content exclusively for the online audience. In fact, news online is often similar to what one finds in print newspapers. Internet audiences are increasingly likely to seek news online, but there is little evidence thus far that this has resulted in replacement of print newspapers and television news. Online audiences tend to limit their reading to topics of special interest to them, though not to the extent that some observers expected. There is some evidence that learning from the news is different online than off. The reviewed research on learning from online news suggests that the national news audiences may become fragmented if they rely on the internet for their news consumption. This finding has implications for understanding the distribution of political knowledge and issue agendas within nations today and in the future.*

Contemporary versions of democratic theory tend to hold citizens to a relatively high standard. As the keystone of democracies, citizens are expected to pay attention to local, regional, national, and international public affairs and to acquire information they can use to formulate opinion (Berelson, 1952; cf., Schudson, 1998). The strongest version of this requirement suggests that citizens should be ever-vigilant; responsibility for acquiring information primarily rests with them. A more moderate expectation acknowledges that news is selectively presented by media sources and that public affairs information vies with other information for public attention (Lippmann, 1922). This contest is most visible in newscasts, front pages, and other news venues. A reasonable set of expectations of citizens

recognizes that their selection of public affairs news is a partial function of what is available and how it is presented.

Recent normative and research treatments of news audiences have focused on how people respond to expanding content options, particularly those options that have multiplied with the introduction of high-bandwidth media. If audiences were to choose content at random, heedless of cues and enticements offered by media producers, the large number of content options online would decrease the probability of any one option being selected. Of course, few audience members choose entirely at random; content producers (e.g., news editors) exercise substantial influence over what people choose to read in print and online (Graber, 1988; Eveland and Dunwoody,

1998). Basic processes of media development suggest that online content providers will develop focused sites containing content of interest to a small segment of the news audience (Merrill and Lowenstein, 1979). This segmentation strategy could result in audience members consuming only a fraction of the range of possible current affairs information. The internet provides opportunities for users to pre-select their news preferences such that they are able to avoid entire categories of news online. The ultimate version of this process is what Negroponte (1995: 153) dubbed “*The Daily Me*.” Some researchers have suggested that specialized news sites and delivery options will fracture the national news audience into internally homogeneous groups (Sunstein, 2001). The result will be a polarized nation, with divisions in knowledge and opinions becoming increasingly prevalent.

Writing about the segmentation of audiences through cable television and other high-bandwidth media, Katz (1996) put a decidedly normative spin on changes in audience knowledge. He suggested that segmentation of the audience in modern democracies was part of larger patterns of increasing social segmentation in these countries. He decried this development, suggesting that common public spaces where ideas and issues are discussed for a general audience can be highly functional for democratic nations. As a result of audience fragmentation, common public perceptions and agendas are less likely to emerge (Chaffee and Metzger, 2001). Thus, any development toward segmentation (and, therefore, fragmentation) could ultimately weaken modern democracies (Katz, 1996).

At the same time, some observers have suggested that online news media may give audiences more independence in choosing what news to view and more power over processes of news production and presentation (Corrado, 1996; Havick,

2000). The wealth of news content online available on traditional and internet-only outlets and the high levels of selectivity and interactivity these sites provide are often thought to free citizens, at least partially, from the hierarchical power of news editors and to increase citizen’s involvement with political information and the public sphere.

This chapter provides a review of both the recent literature on news on the internet and the concepts researchers use to define the potential effects of the medium. Our goal is to identify a set of findings and ideas that researchers, critics, and policy-makers can use to think about certain effects of the internet. The review begins with some background on how media effects researchers have thought about comparing the effects of exposure to news in different media. We turn from there to the growing literature on the presentation of news online. Our goal here is to identify whether and how news on the internet is different from what audiences may find in the traditional media (for a discussion of the structure medium comparisons, see Eveland, 2003). The focus then turns to how people are using the internet for news consumption and whether that consumption has an effect on what and how people learn about public affairs. Finally, we will draw on the literature dealing with online news reading to discuss a set of concepts that we hope will help readers of this handbook consider and study how online news consumption operates in contemporary society.

## **The content and form of online news**

The internet is clearly technologically distinct from the traditional news media (Eveland, 2003). Even online news sites differ significantly from each other (Deuze,

2003). Our review focuses on the mainstream news sites, which have the most traffic of news content providers (Alexa Web Service, 2007). Research differentiating online news from traditional news has emphasized three facets: creation, content, and design; we adopt that approach.

### **Creation**

Editors play a crucial role in the production of news for any medium (White, 1964). Research shows that web editors mostly reproduce stories from the print version of their papers (Singer, 2003), with additional content coming from wire services or interactive features (Boczkowski, 2004b). Comparatively small staffs (Singer, 2006) and the success of reproducing stories (Houston, 1999) contribute to this practice. However, surveys of editorial staffs suggest an ongoing interest among editors in providing additional perspective pieces online (Cassidy, 2005), which may encourage users to view the online version as a supplement to print. Research suggests web editors make content choices with such a goal in mind (Garrison, 2005). A study of Colorado newspapers found editors recognizing a disproportionately local audience by including proportionally more local news than the print version (Singer, 2001). Again, research thus far has identified few attempts to generate original content, even for local stories.

Theoretically, news sites should publish more stories and run them with more updates than would be the case in the offline media (Dessauer, 2004), and some studies have found evidence that audiences specifically go online for news when big events occur (Salaverria, 2005; Tewksbury, 2006). Cohen (2002) suggests that the haste to publish breaking news online may warrant a re-thinking of the concept of newsworthiness. Faster publication times appear to give websites an agenda-setting advantage, and ongoing

research is evaluating whether online papers are leading traditional media, or simply beating them to the punch. For example, a study of South Korean news agendas found an online paper influencing a wire service (Lim, 2006).

Agenda building can also occur through opportunities people have for requesting and generating content (Deuze, 1999). In a review of public journalism research, Witt (2004) notes that the public appears to exert some influence over news content, and Zhou and Moy (2007) demonstrate the ability of online public discussions to shape issue frames in the news. Weblogs (blogs) are perhaps the most discussed channels for this ground-up communication (Pavlik, 2001). Some researchers (for example, Shah *et al.*, 2005) suggest that user discussions should produce comparatively strong mobilizing effects, and American Presidential campaigns have used blogs to generate excitement among supporters (Lawson-Borders and Kirk, 2005). Lynch (2005) has reported a similar community forming around blogs and chat rooms in the Middle East, with the former being particularly used by violent political minorities.

Perhaps the image of the audience is different for mainstream and alternative sites, which has led to the mainstream's limited acceptance of new formats (for a discussion of alternative sources, see Davis, 2005). Some mainstream news sites encourage editorialists and reporters to maintain blogs and utilize discussion (Imfeld and Scott, 2005). However, research by Boczkowski (2002) suggests they have a limited impact on the creation of the news. Another reason for hesitancy is posited by Lowrey and Anderson (2005), who suggest that the increase in public journalism may undermine perceptions of mainstream news and even change what counts as news. However, successful community-building around news topics most likely has positive

implications for society, and the implications of public journalism and alternative news formats should be a subject of further research.

### **Content**

Predictably, content analyses of online newspapers have found few differences from print versions (Barnhurst, 2002). However, even subtle differences in content are worth noting; research by Eveland and Dunwoody (2001a) suggests learning occurs differently for online news. Early observers expected internet sources would eagerly provide mobilizing information (i.e., information that allows or encourages audiences to act on issues and events in the news), at least as a means of attracting an audience (Hume, 1996). Instead, studies have found few differences between the offerings of print and online papers (Hoffman, 2006), with the main variation coming in the form of additional community information (Singer, 2001). Print and web editors alike report valuing mobilizing information online (Cassidy, 2005), potentially explaining the limited variation. A more encouraging study suggests that online news fosters more discussion than print news (Shah *et al.*, 2005), which indicates increased public participation with the news.

### **Design**

The availability of space and opportunity for interactivity online suggests that the design of news sites should provide the biggest differences between traditional media and online news. The aesthetic design of news sites has received little attention from research. Li (1998) found major news sites emphasizing text and leaving most of the graphic space to advertisers, creating a product little different from a newspaper. Remediation theory (see Bolter and Gruisin, 1999) and

interface development (Manovich, 2001) predict visual convergence for all news media. In fact, a study of news presentation by Cooke (2005) found print papers increasingly using thumbnail-sized pictures during the 1990s, and both TV and online news adopting modular layouts.

The strongest diverging point for online news is the use of interactivity. This term has been applied loosely, despite attempts to explicate the concept (Kioussis, 2002). Interactivity is typically divided between categories such as control over content, customization, and participation (Dessauer, 2004). Alternatively, Deuze (2003) advocates discussing news in terms of connectivity, encompassing hypertext, multimedia, and interactivity as distinct components.

Hypertext plays a significant role in the interpretation of political information (see Sundar *et al.*, 2003). Tremayne (2004) finds that linked stories become both more episodic as related information is removed from the stories, but also more contextual as relevant materials are embedded as links within the text. The result is better information only if the user follows the links. Research has also identified increased presentation of other interactive elements. Photograph slide shows and user polls became more common with coverage of the 2000 presidential campaign (Singer and Gonzalez-Valez, 2003), while personalized information such as interactive maps or itemized candidate comparisons were popular during coverage in 2004 (Singer, 2006). Such additional content may make up for the lack of original news stories online (Palser, 2004). Massey and Luo (2005) find that sites use as much interactivity as their resources allow, but other research finds editorial perceptions of the target audience a strong predictor (Boczkowski, 2004b). Anticipating audience desires may be a rather complex determinant; however, as research suggests personality types predict enjoyment of interactive features (Chan and Leung, 2005).

Research results are mixed about the potential benefits of interactive news formats. Eveland and his coauthors have found mixed results for online learning. Similarly mixed results have been found for interactivity, which is capable of increasing return rates but also of decreasing recall (Sundar, 2000). Perloff (2003) does note that video games, which are highly interactive can increase message effectiveness, but this is not necessarily a benefit in the context of the news. A realistic, but optimistic, viewpoint suggests two implications of multimedia and interactive elements on news sites. First, there is a significant chance that these elements will provide better educated audiences with more information, potentially worsening knowledge gaps (Prior, 2005). Second, online news is perhaps akin to soft news as it is not especially informative but may do well in attracting otherwise disinterested audiences. More research is certainly required to assess the changing nature and subsequent implications of online news features.

Online news, at least as it is presented in the mainstream sites, is not yet significantly different from traditional news. This lack of distinction is particularly disappointing in the area of mobilizing information. On the positive side, interactivity has improved over time, and there are more (potentially) useful features now included with stories. The onus lies with the reader to make use of the available benefits of online news, because the additional content is not in a readily scannable format. It appears that in the near future the important question regarding online news is not "what?" but "how?"

### **Audience use of online news**

Recognizing the importance of user control as a primary characteristic of the internet, understanding public use of the

web for news requires answering several questions. First, why do people use the internet for obtaining political information? Second, how do people read the news online, including both site and content choices? Technological characteristics and individual factors play a role in each level of choice.

### **Getting news online**

The likelihood of using the internet for political information gain has increased over time. The internet audience was on the rise before 2000 (Norris, 2001a), but the events of September 11, 2001 seem to have been a catalyst for online news use. September 12 was a record day of internet news access, but other events during the following months drove traffic to news sites in similar patterns (Rappoport and Alleman, 2003). Horrigan and Rainie (2002) show that internet users turn to the medium first for most types of information. Although the news environment has changed drastically over the last decade, the internet is only part of the story. Cable news and talk radio have also risen, while print and broadcast news use have dropped (Norris, 2001a). These patterns suggest replacement of traditional sources (Dimmick *et al.*, 2004). Other research indicates that users follow complementary patterns (Dutta-Bergman, 2004), using online papers only to get updates or to use interactive features (Rathman, 2002).

Part of the decision to use online news is the belief that the internet is a credible source of information. Relatively early studies by Sundar (1999) suggest the complexity of online credibility, based on more considerations than merely evaluations of traditional media. A series of studies by Johnson and Kaye (see 2002) found that online news was viewed as more credible than the traditional media, although both were rated no better than

“somewhat” credible. Other studies have looked at credibility ratings of online news by particular groups of users. Choi *et al.* (2006) found opponents of the war in Iraq rating online news as more credible than traditional media. Johnson and Kaye (2004) found blog readers rating these sites as most credible, with other online news performing no better than the traditional media. The findings highlight the significance of site selection once the user is online.

### **Reading the news online**

As a medium that allows a high level of user control, the internet requires many more decisions from the user, including what source to select. Factors that play a role in source selection include browsing skill (Hargattai, 2002), site popularity (Webster and Lin, 2002), structure and information (Richard, 2004), in addition to personal choice. For example, Best *et al.* (2005) found that about 25 percent of all news users access foreign sites, with those most opposed to the Bush administration most likely to look abroad for information.

Once on a site, selection can again determine news exposure (Eveland and Dunwoody, 1998). Part of the determination is the user’s goals for the browsing session (Sanchez-Franco and Roldan, 2005). For example, *New York Times* online traffic patterns suggest an audience with an atypical interest in international affairs (Wu and Bechtel, 2002). Structurally, sites can influence story selection by incorporating recommendation systems, which are most effective when “other users” choose stories (Sundar and Nass, 2001), and the “others” ratings are linearly related to selection (Knobloch-Westerwick *et al.*, 2005). In this way, features of contemporary new sites give users the ability to bypass or supplement the traditional gatekeeping power of editors.

The importance of selection suggests that uses and gratifications theories of media are appropriate for internet effects research (Chaffee, 2001), but the current glut of definitions is problematic. Tewksbury and Althaus (2000) found support for applying traditional news gratifications: entertainment, surveillance, and passing time. Kaye and Johnson (2004) studied entertainment and information-seeking, as well as guidance-seeking and convenience. Information-seeking, but not entertainment, was supported by Flavian and Gurra (2006). LaRose and Eastin (2004) found status-seeking a strong motivator of web use. Until consistent results are established, the best lesson from these studies is that people select websites at least partially based on personal motivations (Tewksbury, 2005a).

Specialization is another promising line of research for understanding of how people select news, particularly by exploring the choice to limit oneself to a few sources and topics. An analysis of naturally occurring online news reading patterns found that audiences of different news sites tend to be relatively distinct from one another (Tewksbury, 2005a). A parallel analysis of reader behavior at popular online news sites suggests the presence of reader clusters who limit their exposure to a small number of topics (Tewksbury, 2005b). Not all people specialize their reading, however. Some clusters sample broadly from the available news (Tewksbury, 2005b). Thus, the evidence gathered thus far suggests some element of site and audience specialization.

The research on internet use suggests the choice to get news online has been a function of time. The more exposure people have to the web, the more likely they are to get news there. There is debate over the nature of cross-media use in the public, but complementary uses seem well-supported by research. Once online, the user has the freedom to select

sites and stories based on personal goals and design cues, but the nature of these motivations remains unclear. Ultimately, it is the impact of these choices that most interests media effects scholars.

### **The effects of reading news online**

A number of effects of citizen use of online news services have been studied empirically. Much of the research has examined what people learn online and offline and how that learning influences issue agendas. This research typically examines the impact of users' online behavior and how the relationship between news content and citizens' normative roles may be changing over time.

### **Survey-based studies of learning effects**

Survey studies have produced mixed assessments of the potential for learning from online news. Measures of general internet use (Johnson *et al.*, 1999) and online news seeking (Scheufele and Nisbet, 2002) have failed to correlate with domestic U.S. political knowledge. However, online news seeking has been shown to predict international affairs knowledge (Kwak *et al.*, 2006). More developed measures of news content sought online may improve future research. After all, the most prominent attribute of the internet is that it can be all things to all people.

While much research has focused on intentional learning from news, some studies have suggested that people can accidentally receive information from traditional media (Zukin and Snyder, 1984) and the internet (Tewksbury *et al.*, 2001). The Pew Research Center for the People and the Press (2004) reports that as many as half of internet users report coming across news (at hub sites like Yahoo! and

America Online, presumably) when going online for other purposes. Tewksbury *et al.* (2001) report that these people, with other news exposure controlled, know a bit more about current affairs in the news than do other internet users.

Incidental contact with the political news at internet hubs cannot compensate for users' focused attention on content that fits their particular non-political information or entertainment preferences. Looking at diversification of content on cable television and on the internet, Prior (2005: 580) reports that surveyed people with a "relative entertainment preference"—the extent to which people will choose entertainment over news—take advantage of the diversity of content on newer media to focus on entertainment and, by extension, avoid news (however, the pattern was not consistent across a number of tests). Prior observes that because people with political knowledge are less likely to prefer entertainment to news, the diversity of content online may exacerbate existing knowledge gaps.

### **Experiment-based studies of learning effects**

Two experiment-based studies examined the connection between what news people choose online and their knowledge of current affairs. Tewksbury and Althaus (2000) found that online news readers select public affairs topics less frequently than their print newspaper counterparts. Looking at current affairs in terms of both national and international news (Althaus and Tewksbury, 2002) and the prominence of the news (Tewksbury and Althaus, 2000), the online readers acquired less of the political content in *The New York Times* than did the print readers of the paper.

A replication of this study failed to observe differences between readers of

print and online versions of two prominent Dutch newspapers (D'Haenens *et al.*, 2004; see also Eveland *et al.*, 2002). The striking feature of the outlets examined in the Dutch study is that the print versions of the papers contained more stories than did the online versions and some categories of news (international news) were better represented online than offline. Thus, it does not appear that online versions offered the diversity of content that researchers have identified as a key component of audience distraction from political information online. This result highlights the difficulties inherent in predicting the effects of internet use when the medium does not have the constraints and traditions that define and limit the structure of news on television and in print newspapers. One online news source can be very different in its inclusion and presentation of public affairs news from another. As a result, it can be difficult for one to know, on average, how the stories will be presented when people look at news online.

### **The psychology of learning online**

From a theoretical perspective, there is some reason to expect people will learn more from web-based news presentation than from traditional print news. Web-based news gives users more control over the flow and presentation of news, and the hyperlinked nature of news online may mimic the associative network structure of human memory (Eveland and Dunwoody, 2001a). Perhaps surprisingly, empirical research has not supported these expectations. Indeed, research in this area suggests that the online environment may not be particularly conducive to acquiring information. For example, Sundar (2000) observed that the addition of audio and video downloads to print stories online lowered news recall and recognition.

Eveland and Dunwoody's work on news processing online provides some explanations for studies showing lower recall of online news. Eveland and Dunwoody (2002) suggest that separating the extent to which people cognitively elaborate on the news they read online from the amount of selective scanning of online content they do ("picking and choosing among information" 2002: 38) should isolate the factors that can encourage and discourage learning from online news. They find that people reading news on a website engage in both more elaboration of the news and selective scanning of the presented information. The former process leads to greater learning of information and the latter tends to suppress it. These tendencies partially counteract each other, leading to a net effect of reduced learning online (see also, Tremayne and Dunwoody, 2001).

Eveland and colleagues have subsequently suggested that exposure to online news may have benefits beyond the recall of factual news information. Eveland *et al.* (2004) suggest that news sites' use of hyperlinks in stories may encourage readers to consider the connections between bits of information. The result is that online readers may develop structures of knowledge more dense than their linear (i.e., non-hyperlinked) news reading counterparts. Indeed, Eveland *et al.* (2004) find that linear online news readers learn more from a story than readers of hyperlinked stories, but the latter exhibit more dense knowledge structures regarding the news topics. Thus, there are suggestions that researchers looking at citizen acquisition of information from online news sources should be conscious of the way they conceptualize information. The density of knowledge structures may carry very different normative weight in terms of what and how people learn about public affairs.

### **Agenda building and agenda setting**

If mainstream news sites are largely replicating their traditional media versions, then clearly these sites are not uniquely involved in setting the public agenda, at least not in a meaningful way. One area of note is the influence of alternative sites, particularly blogs, on public and media agendas. Anecdotal evidence offers several notable examples, particularly blog activity regarding U.S. Senator Trent Lott's comments about Strom Thurmond in 2002 (Lawson-Borders and Kirk, 2005). Blogs are relatively good at maintaining and developing interest in under-served stories (Pew Research Center, 2005), particularly when those stories are partisan, previously discussed, or from non-elite sources (Lowrey, 2006). The practice of posting snippets and linking leaves many stories fragmented but still able to offer worthwhile material (Wall, 2005). In fact, an analysis of external linking practices suggest that blogs are well suited to complement mainstream media, by both building stories and by channeling readers back to mainstream sites (Reese *et al.*, 2007).

Related to the impact of the new media on the traditional media agenda is the question of whether readers of online news may develop issue agendas that differ from those of audiences of the traditional media. One expectation researchers have suggested is that readers of online news outlets may be exposed to a smaller variety of issues by virtue of their ability to focus their news selection (Schoenbach *et al.*, 2005). Using a survey approach, Schoenbach *et al.* find that online newspaper use *increases* the number of social topics readers consider important, but only for the most educated members of the sample. Thus, an overall agenda shrinking effect was not observed. Althaus and Tewksbury (2002) tested a weaker

version of the effect in their experiment with *New York Times* readers. They found that online readers care less about the sorts of topics that show up in the public affairs sections of the paper.

The overall normative tone of this research is mixed. Some studies of the learning effects of news media are decidedly pessimistic. Online news readers may learn less about public affairs than do their offline counterparts, and a similarly dystopian view is advanced in the research on audience agenda acquisition. However, an expanded view of online learning suggests that, to the extent that online news readers choose public affairs news, they may acquire more densely structured knowledge than if they had read a print newspaper. At the same time, a number of studies have shown that frequent use of the internet (e.g., news reading, e-mail, etc.) is positively associated with online and offline political participation (Hardy and Scheufele, 2005; Tolbert and McNeal, 2003). What is more, there is mounting evidence that citizen online political activity (e.g., blogging) may influence mainstream and online news agendas and so indirectly influence the political process.

This seeming normative paradox is illustrative of a basic feature of advanced media, of which the internet is perhaps the most extreme case. The internet, broadcast radio, magazines, and cable television, to varying degrees, allow their users to focus their exposure on topics and activities that interest them. For the bulk of Americans, the internet offers the opportunity to choose their own news, as it were, to the exclusion of political information (Tewksbury, 2003). Thus, these advanced media at the end of their natural evolution as media forms (Merrill and Lowenstein, 1979) give perhaps too much freedom, some researchers seem to assert. At the same time, the politically interested can take the reins of the

abundance of political information online to build their engagement with politics and become more efficacious than may have been possible some 20 years ago.

### **Online news audiences: united, divided, and empowered**

Our review of the literature suggests that developing an understanding of how online news distribution may influence individuals and society can be profitably undertaken by looking separately at how news is organized online (on its own and in contrast to how it is organized offline), how people use the internet, select sites, and choose individual news stories, and what they learn from the news they consume. This multi-part analysis nicely parallels what researchers and other observers have said about the potential effects of the internet on American society. There is a fair number of terms used in the literature to describe how the internet today and in the future may be affecting political knowledge, agendas, and, possibly, opinion. What follows is a review and integration of these normatively based concerns. The resolution and integration of the terms should provide researchers with some tools to apply to ongoing research regarding the political effects of internet news consumption.

#### **Specialization**

Content selection and specialization figured prominently in this review. *Specialization is what people do*. It is their tendency to focus their reading on specific topics. It can take many forms relevant for the development of segmentation, fragmentation, and polarization. Specialization in online selection can take the most direct form of audiences failing to read news content at all. Indeed, relative to what

one finds on television or in a newspaper, news online represents a substantially smaller portion of the total content the medium offers. It may be easier than ever before for citizens to omit news reading and not be reminded of that fact (this assumes low levels of the incidental online news learning online described above). Even when users seek the news, their site choices can be based on selecting sources known for specific categories of news. Thus, selection at the level of websites could result in an overall reduction in political knowledge in specialized audiences.

Specialization can also take the form of audiences selecting specific news topics when they go online, a phenomenon for which researchers have found some evidence (Tewksbury, 2005b). Specialization of news selection may be conceptualized on three dimensions. The first is the consistency of topic selection. For example, someone who occasionally selects international news is less specialized than someone who selects international news each time he or she gets news online. The second dimension is the depth of exposure. This is essentially the quantity of reading a person does on a selected topic. The amount of focused learning that comes from specialization should be different for a reader who selects one story on a favored topic than for one who reads all available stories on a topic. This difference is all the more relevant in the happy chance (from a normative view) that the selected topic concerns public affairs. The final dimension of specialization is the exclusivity of exposure. The issue here is whether specialized internet users are focused on one, two, or more topics when they choose news stories. It is easy to think of the one- or two-topic reader as specialized, as most readers do not specialize on a large number of topics (Krosnick, 1990). One could still consider a citizen who focuses on a half-dozen topics or more as specialized, but the

meaning of the term begins to collapse. Specialization at that point does not carry the same implications for the distribution of political knowledge as it does were we to imagine that all news readers focused exclusively on one topic. Thus, it may be necessary to set some a priori standard for when specialization by news readers becomes normatively relevant.

### **Segmentation**

If specialization is what users do, *segmentation is what content producers do*—inasmuch as these are separate roles online. Segmentation is the tendency for sites to tailor their content to specific groups (typically defined by demographic characteristics) of interest to advertisers or others willing to provide sites with revenue (cf., Katz, 1996). Theories of media history argue that systems progress from a stage in which most media outlets serve large, heterogeneous audiences to one in which most outlets serve smaller, internally homogenous audiences (Merrill and Lowenstein, 1979). To the extent that specific demographic groups are drawn to separate sites, one can talk about the range of online content being segmented (of course, a website can segment users within subdivisions of the site, as well).

### **Fragmentation**

Fragmentation is the outcome of people specializing their news exposure and/or site producers segmenting the audience. Fragmentation is the lack of widespread public exposure to some content of interest. When fragmentation in a group or society is advanced, information is distributed over the population but is not widely shared by its members. It is what occurs when fewer people than before or desired receive a given piece of information. Thus, fragmentation may be best considered a social-level term that refers to the

likelihood that any one person knows any one piece of information. By definition, fragmentation is assessed relative to some past, desired, or optimal level of uniformity of political information holding.

### **Polarization**

When fragmentation takes hold, polarization is one potential consequence. The possible segmentation of the news audience suggests that political knowledge in the population will not be reduced or fragmented in a random fashion. Rather, “to the extent that one subset of the audience comes to use [a] class of content whereas others tend not to use it, the mass audience can be said to have polarized” (Webster and Phalen, 1997: 111). The polarization of the news audience may come as the result of specialization in news reading. People may spend quite a bit of time online reading news, but they may focus entirely on sports, business, or some other content (Tewksbury, 2005b). If so, they may rarely seek public affairs content. As a result, they will not know as much about public affairs as the news readers who choose current events content. An even more focused type of polarization may result from people choosing content from within the public affairs domain. In this case, a yet unstudied possible tendency for people to specialize their news selection within political topics means that people may come to know quite a bit about one area (for example, international affairs or environmental policy) but little about some other domain (for example, education policy or health care policy).

The presence of issue publics in America is one bit of evidence to suggest that some people come to specialize their political information exposure (Converse, 1964; Krosnick, 1990). A recent study supports this suggestion. A combined observation of online information seeking

and survey data collection showed that people concerned about a political issue are more likely to seek online information about the issue than are others (Kim, 2007). Similarly, a study of the personalization of internet portal sites found that when given a chance to select their own information pages, the selection of content and its placement on a page were determined, in part, by predispositions to seek certain kinds of content (Tewksbury and Maddex, 2001). In particular, that study showed that some people are quite willing to set up personalized news pages that omit such core public affairs content as international and political news.

### **Information democratization**

At the same time that the internet provides opportunities for fragmentation and polarization—normative concerns based, perhaps, on the desirability of the mass public—it makes possible new avenues for citizen independence from mainstream news media and larger social forces. The depth of information that can be found on online news sites and the variety of content in blogs and other interactive sources gives users access to substantially more information than is available in other media. Once online, any user has access to essentially the same range of content as any other (subscription sites aside). Few would argue that knowledge gaps are impossible online. However, in many ways, the information-access advantage of economic status common offline is practically erased once someone obtains internet access. In addition, many online news sites give users the ability to post content online and interact with journalists through blogs and other forums, encouraging involvement with the news and, ultimately, politics. Finally, there is some evidence that citizen activity online may affect the agenda of news in the offline and online media, thus weakening

the centralized gatekeeping role of mainstream news editors.

These elements of the internet suggest there is evolving a *democratization of the creation, dissemination, and consumption of news and information*. This information democratization comes from some of the forces that may also lead to fragmentation and polarization, but it suggests a very different normative perspective on internet news. As people seek and encounter a greater range and depth of information online, they are less likely to rely on centralized content producers. In effect, the marketplace of ideas, as an ideal and tool, is found more easily online than off. In that way the availability and structure of news online may be serving democratic ideals more effectively than are the features of the traditional media.

The bulk of the data suggests that online news readers have the ability to specialize their news reading to the point of both fragmenting and polarizing the news audience. There is less evidence to suggest that popular news sites are being designed to segment the audience, a pattern that appears to limit the likelihood of polarization occurring. Instead, polarization seems most likely to come from audiences taking advantage of personalization options on existing news services (e.g., internet hubs such as Yahoo! and AOL) and from actively focusing their reading on a select set of news topics. Sunstein (2001) has suggested that this pattern of use can result in a polarization of opinion. Were that to happen, divisions and conflicts over political parties, figures, and policies may become increasingly common. Accompanying processes of fragmentation and polarization is information democratization, a broadening of citizen control of, and access to, news and information. Thus, as people know less about what mainstream news editors think is important, they may know more about what other citizens think is

important. The effect of a marketplace of ideas that is both large and diverse may be citizens more engaged with current events and politics but perhaps not as uniformly informed.

## Conclusion

Almost all of the topics examined in this review require more investigation. The comments here are focused on areas with substantial normative weight and the greatest likelihood of future importance. More research is needed on the potential effects of online news presentation and selection on media and public issue agendas. The bulk of the findings on news content suggest few differences between online and offline outlets of the same organizations. Future research in this area might focus more attention on features of news presentation (for example, page placement, daily cycle and the movement of news on a site, or headline size) that might distinguish online news from offline and which might have some effect on audience agendas. The research reviewed here suggests the presence of some differences in the type of current affairs information people select online and off (Schoenbach *et al.*, 2005; cf., Dutta-Bergman, 2004), but there is much more we can do in this area. If future audiences devote more time to reading news online than they do today, what the field knows about news availability and organization online suggests that basic agenda setting processes are in for some changes. One area of developing interest is the extent to which online discussion (for example, chat or blogs) may influence news content and agendas (Hopkins and Matheson, 2005). Thus, processes of agenda building as well as setting are potentially undergoing change.

Future research may profit from the application of the five concepts defined

here. Researchers can conceptualize specialization as what audiences do in response to (or as the ultimate origin of, to some extent) the structure and content of news online. Segmentation is what websites do. Some news producers may fashion their sites to serve specific news audiences rather than follow the mass public model of traditional newspapers and television news. If so, they are essentially choosing to serve only segments of the citizenry. If people specialize and/or if news producers segment audiences, the results may be fragmentation and polarization. Fragmentation is the distribution of information over smaller segments of the public than is normatively desirable. Once that information is fragmented, polarization—the separation of information and opinion in relatively homogenous, isolated groups—is a likely outcome. Filling in some of the gaps created by fragmentation is a trend toward information democratization. By permitting the decentralization of information control online, relative to the traditional media, and by increasing the opportunities for citizens to access a range of political content, the internet may be enhancing political involvement and debate.

Future research might profitably examine more dimensions of the mobilizing potential of online news. The main findings reviewed here (Shah *et al.*, 2005; Hoffman, 2006) suggest that there are not many differences in the amount of mobilizing information provided online and in print. Shah *et al.* (2005), however, suggest that interpersonal interaction options available online at news and other sites may have a larger impact on citizens than the presence of similar mobilizing information in print. Future research looking at online news might examine how news sites are continuing to integrate blogs and other means for citizens to interact among themselves and with news producers. It may be that the combination

of the presence of mobilizing information and these interpersonal interactions may be particularly likely to activate citizen participation in politics.

Finally, there appears to be a need for investigation of whether online news reading patterns have implications for the presence or development of opinion polarization. Sunstein's (2001) discussion of polarization focuses on the segmentation of opinion groups online. The question for researchers is whether news reading online may play a role in such a process. It is certainly possible that specialized news reading may result from pre-existing audience polarization. Kim (2007) shows that when members of an issue public (not identified by partisanship, to be sure) go online for campaign information, they go to sites that focus on their pet issues. If citizens limit their exposure to opinions and information supporting their side of the issue, the widespread availability of that information online may foster greater opinion polarization. The field could use more research that examines whether people engage in that sort of selective exposure online. Research suggests that people are very selective on some occasions for some topics (Knobloch *et al.*, 2003). The pivotal question is whether the online environment encourages and facilitates greater selectivity of this sort.

The evidence reviewed here suggests that audiences are willing to engage in some specialization of their news use online. Most internet news receivers appear to be using the medium to supplement their exposure to other news media, and this may leave them free to seek out their focused interests online. However, there is also evidence that many people use the internet as they use other media. If that is the case, there is little reason to expect that people will be particularly willing to specialize. At the same time, there is ample reason to suspect that

online news sites will increasingly be willing to engage in audience segmentation. Reviews of the history of media suggest that maturing media and outlets almost inevitably follow a path of increased segmentation. On the basis of these two considerations, there is reason to expect a substantial amount of fragmentation and—perhaps inevitably—polarization in the public. These trends are unlikely to be universal, of course, but they may noticeably affect the operation of democratic nations in the future. Fortunately, information democratization is also likely to expand in the near future. It is always threatened by seemingly inexorable forces of centralization and homogenization, but if any medium seems suited to the reduction of those threats, it is the internet. In sum, information democratization may be the more important long-term development facilitated by the internet.

### Guide to further reading

This review focused, in part, on how the particular attributes of online news presentations affect which stories people select. Researchers looking at what people learn once they select the news could profit from the research on learning from hypermedia text. Eveland and Dunwoody (2001b) provide an excellent review of that literature. Webster and Phalen's discussion of the fragmentation and polarization potential of online news consumption proved a significant resource for this chapter. For background on those topics, and for a detailed discussion of conceptions of the mass audience in twentieth century media research, see Webster and Phalen (1997). Opinion polarization has received less attention in the recent research looking at online news media than have specialization and fragmentation. For a good discussion of the normative implications of opinion polarization, see Sunstein

(2001). In order to remain succinct, this review has focused on studies of online mainstream news since 2000. For a review of research on the production, use of, and interactivity in earlier online newspapers, see Boczkowski (2002). Davis (2005) provides insight on the social and political uses of chat rooms and blogs. Finally, readers may have found the

discussion of technological characteristics of the internet (and the computer) limited. Please see Bolter and Grusin (1999) for a theoretical development of remediation and the strategies of immediacy and hypermediacy and Dessauer (2004) for a discussion of technology's implications for the development of online news.

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