The Information Society, 28: 161–173, 2012
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ISSN: 0197-2243 print / 1087-6537 online
DOI: 10.1080/01972243.2012.669450

Routledge
Taylor & Francis Group

Taming the Information Tide: Perceptions of Information Overload in the American Home

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This study reports on new media adopters' perceptions of and reactions to the shift from push broadcasting and headlines to the pull dynamics of online search. From a series of focus groups with adults from around the United States we find three dominant themes: (1) Most feel empowered and enthusiastic, not overloaded; (2) evolving forms of social networking represent a new manifestation of the two-step flow of communication; and (3) although critical of partisan "yellers" in the media, individuals do not report cocooning with the like-minded or avoiding the voices of those with whom they disagree. We also find that skills in using digital media matter when it comes to people's attitudes and uses of the new opportunities afforded by them.

Keywords information overload, Internet, social media, sensationalism, web use skill

Received 23 May 2011; accepted 15 February 2012.

The authors are grateful to David Poltrack of CBS and Becky Mills of CBS Television City for assistance in this project. They thank the anonymous reviewers and Harmeet Sawhney for helpful feedback. The first author thanks the Northwestern School of Communication's Innovations Fund for assistance. The first and third authors are grateful to the Northwestern University Residential College Fellow Assistant Researcher Award program for its support.

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In the last few decades Americans have integrated cable television, the Internet, smart phones, blogging, and online social networking into their lives, engaging a much more diverse, interactive, always-on media environment. As was the case with most previous developments in media technology, a few proponents have trumpeted the virtues of these devices (Negroponte 1995), but most academics and authors in the popular media are moved to warn of dire, dystopic consequences (Wartella & Reeves 1985). There are concerns about sensory overload (Beaudoin 2008; Berghel 1997), media addiction (Byun et al. 2009; Young 1998), a weakening of social and communication skills (Bauerlein 2008; Richtel 2010), loss of the capacity for sustained concentration (Carr 2008), political polarization (Sunstein 2001), social fragmentation (Turow 1997), and possible further declines in the vitality of the public sphere (Neuman, Bimber, & Hindman 2011). Many of the experts appear to be convinced that the typical new media consumer is overwhelmed. We set out to explore whether the typical new media consumer actually feels that way.

THE INFORMATION OVERLOAD HYPOTHESIS

The subtitle of Todd Gitlin's *Media Unlimited* captures the spirit of the published literature on the new media environment particularly well—"How the Torrent of Images and Sounds Overwhelms Our Lives." The words "overwhelmed" and "overloaded" are frequently in evidence. Gitlin goes on to warn: "It is clear that the media flow into the home—not to mention outside—has swelled into a torrent of immense force and constancy, an accompaniment

to life that has become a central experience *of* life" (2002, 17, italics in original). To him, it is not just a quantitative trend of more media in more contexts, but a fundamental and disturbing qualitative shift in the character of public culture.

A 2010 article in the *New York Times* featured a family of technology users framed as if they were addicts, unable to live without the constant flow of information from cell phones and computers (Richtel 2010). The accompanying photo of the family sitting at the breakfast table independently looking at their respective iPads takes the idea of disengaged communities and neighbors down to the most intimate of societal units: the family. Not only is the flow overwhelming, it is addictive and increasingly precludes more traditional forms of human interaction. Although these discursive reviews are highly visible and much discussed, they are anecdotal. So we turned to a more scientific literature addressing these issues in the fields of psychology, organizational communication, marketing research, and management information systems.

In the scientific literature, dysfunctional information overload is a clearly identified problem, but is limited to specific structural conditions such as the need to make a critical decision in a short period of time (Maule 1998). A central source for our look at the scientific literature is a thoughtful review and informal meta-analysis of the overload scholarship by two Swiss management professors (Eppler & Mengis 2004). They searched journals' titles and abstracts for the keywords *information overload*, *information load*, *cognitive overload*, and *cognitive load*, which resulted in more than 500 retrieved articles. That struck them as a bit unwieldy, so they filtered by more recent publication and several other criteria to reduce the sample to just under 100. Then they proceeded to summarize the findings in terms of causes, symptoms, and countermeasures for overload problems.

But what caught our attention was that only a handful of the studies dealt even marginally with typical media consumption outside of the work environment. Iconic examples of information overload dynamics usually involve a fighter pilot or perhaps a battlefield commander. Somewhat less frequently, a surgeon in a high-tech operating room or a bond trader in front of multiple screens might be typified. Military and medical decisions are often matters of life and death and are typically made under time pressures often measured in seconds rather than hours or days. So the emphasis on the actual amount of information in the typical treatment of this concept may be a bit misleading—the key issues are time constraint and time-constrained decision making. Many studies in this tradition have focused on financial traders reviewing multiple streams of time-critical financial information, medical diagnosis, accounting data systems, and commercial data mining (Hunt & Newman 1997; Iselin 1993; Li & Zhong 2004; Snowball 1980). Our analysis of this literature leads us to conclude that there are, in summary, four underlying structural conditions of overload (for similar reviews see Klapp [1978] and Blumler [1980]):

1. Time sensitivity: A key element in the perception of "overload" is the limitation of time for reviewing available information.
2. Decision requirement: Related to time sensitivity are the time constraints on actual decision making, especially critical decisions.
3. Structure of information: The "amount" of information may be less critical than the extent to which the information is structured, permitting the observer to retrieve what is judged to be relevant.
4. Quality of information: Many grievances about "information overload" turn out actually to concern the quality of information or the information variant of the engineering concept of signal-to-noise ratio.

Reviewing each of these structural conditions and their possible relevance to the typical media environment, we conclude that most media exposure is in a context of relaxation and repose, precisely the opposite of the high-pressure, time-sensitive decision-making contexts of the scientific literature noted in the first two structural conditions. Clearly, audience members may be influenced by and may learn from typical media content, but it is characteristically casual and incidental, not typically a case of time-bound information retrieval (Comstock & Scharrer 1999). Research on the structuring of information in the third structural condition is characteristic of work in library science and technical communication and focuses on cataloging, indexing, labeling, and cross-referencing (Case 2002), again not typically relevant to search and choice behavior in media exposure (Hartmann 2009).

The fourth structural condition may represent a more complicated question of relevance to media behavior. Audience members routinely comment on the "quality" of content (Ang 1996; Gunter, Furnham & Lineton 1995; Radway 1991) (and that turned out to be the case in our interviews as well). But quality in this context typically refers straightforwardly to whether the audience member enjoyed the content—whether the comedy was funny or the drama engaging. The term *information quality* in the scientific literature has a much more specific meaning in the context of information retrieval—the relevance of the message received to the question asked—the signal-to-noise ratio. In the typical media-entertainment setting, few audience members approach the media with a specific question in mind. But in this case, a cautionary note: As online search increasingly replaces channel surfing and magazine browsing, we may need to rethink these issues in a rapidly changing media environment.

In order to focus on potential information overload in and around the typical American home as opposed to professional or organizational contexts, we turned to the literature on media effects and media exposure. We were surprised to find an absence of systematic assessments of information overload and/or the perception of information overload in the home, despite a very extensive literature on patterns of reading and viewing (for an overview: Webster & Phalen 1997). In the earliest media-effects studies following the Second World War, researchers theorized a passive audience member propagandized by political and commercial messages, but found instead an active audience that discussed and interpreted current events and with complex patterns of opinion leadership among friends and family (Katz & Lazarsfeld 1955; Levy & Windahl 1985; Livingstone 2006). It is commonplace now in the communication research literature to acknowledge that audiences actively construct meaning and interpret and filter complex media flows—a perspective sometimes identified as the constructionist in media effects research (Gamson 1988; Swanson 1981). Rather than overload, the literature emphasizes the audience's evolved skills in engaging a sophisticated mix of attention and inattention. The research tradition has been championed notably by Doris Graber, whose classic work *Processing the News: How People Tame the Information Tide* (1988) inspires our own title.

Concerns about the quality of the public sphere and popular culture, of course, are not a recent development. Gitlin acknowledges that people were condemning media for causing information overload over a century ago, when sensationalistic yellow press articles distracted the populace like modern tabloids, "not to mention the neon, the flamboyant designs and banner headlines" of the late 19th century (2002, 67). We suspect, however, that then, as now, the public itself might have a different view.

To explore these questions, we conducted focus-group interviews with Americans from across the country. In the next section, we explain our rationale for this methodology, describe how we conducted the sessions, and give some details about our participants. Then we proceed with describing the themes that emerged from the conversations, including frustrations with sensationalist television, enthusiasm about online social networking, and an interest in being informed about different sides of an issue. We also discuss how people's Internet skills may influence the way people perceive the information environment. We conclude by reflecting on why it may be that people are not overwhelmed by the new media environment and what research in this domain should focus on in the future.

DATA AND METHODS

For this preliminary research we chose to rely on the focus-group method, which is more flexible and open-ended than the typical survey study (Gamson 1992; Lunt & Livingstone 1996; Merton, Fiske, & Kendall 1990; Stewart, Shamdasani, & Rook 2006). The informality of the interchange among participants, and between participants and the moderator, helps to reveal the nature of people's perceptions and interpretations. The sessions are typically videotaped and transcribed (as was true in our case) to permit a careful review of the spontaneous language individuals use to describe their reactions and behaviors. Rather than responding by selecting from among a limited set of questionnaire item options, the natural language of the discussion permits the identification of ambivalence or ambiguity or, at times, emphatic responses among participants. Focus-group research is particularly useful in identifying unanticipated responses to the subject matter at hand and in sharpening hypotheses for more systematic experimental and survey research down the road.

Focus groups, however, are not designed to derive representative samples and project quantitative parameters to larger populations. Although the demographic characteristics of a participant may be indicated in the research report illustratively, the typically smaller focus-group samples are not appropriate for assessing differences in attitudes or behaviors by demographic categories. Because of the relatively public character of group participation, focus groups are not ideal for inquiring about socially sensitive or potentially embarrassing domains of human activity. So, for example, a study of the use of pornographic Web content or illegal online gambling might be better suited for one-on-one in-depth interviews. However, given our interest in strategies for finding news, entertainment, and gossip in public media and online social networks, the focus-group technique was particularly promising.

Data Collection

We conducted seven focus groups with 9 to 12 participants each (77 participants total) over a period of three days in October 2009, at CBS Television City, a state-of-the-art focus-group research facility in Las Vegas. The location was chosen because of its ability to draw together a diverse group of participants from across the country. Individuals with little or no experience online were excluded. The core questions we posed to focus group participants were:

(a) How do you keep up with what's going on in the world?
(b) How do you feel about the amount of information out there?

The sessions started with each participant filling out a short questionnaire that asked about the person's basic demographic information, as well as some systematic information about people's Internet uses and skills, news media consumption, and political knowledge. We began the

focus groups with the moderator asking everyone present to comment on how they keep up with what is going on in the world and what their strategy is for dealing with the information. The moderator collected answers from each respondent in a round robin for the first question, before letting the conversation flow from group interactions.

We tried to get both practical information, such as what resources people use for news consumption, and emotional information, such as how people feel about the plethora of choice available to them, out of participants in all groups. We guided the discussions by asking questions based on participants' responses or asking the same question of various individuals. Occasionally, we jumpstarted a new topic by doing another round robin in which every participant answered a question. Often, the moderator would pose a question to the group at large and wait for any participant to respond, such as, "Are you guys much smarter than you used to be because of all this information coming to you?"

As is often the case with focus groups, the interactions among participants were often a factor in how conversations progressed. Occasionally, one participant would ask a question directly to another participant instead of waiting for the moderator to bring up a topic, which indicated strong and genuine interest in that issue. Sometimes participants would express agreement about certain topics, such as the annoyances of online social media or the sensationalism of TV news, and they would nod their heads, join in laughter, or indicate agreement in a verbal way. At other times, participants would disagree with each other and spark a debate. The conversational nature of these focus groups meant that the themes that emerged from the topics discussed most heavily were a result of the participants' interest in a subject and communication with one another, not of the forced direction of the moderator.

Not surprisingly, events that were occurring at the time of our interviews influenced the conversations. The study took place just as the Balloon Boy hoax had been revealed in mid-October 2009. A young boy from Colorado had been thought to be floating dangerously in a homemade air balloon made by his father, when really he had been hiding safely in his attic while the media and the police overreacted to the faux drama, with his parents supposedly angling for their own reality TV show. Another topic still on people's minds was Michael Jackson's sudden death on June 25, 2009. Both of these incidents were intensely covered by the national media. Other topics in the news at the time included worries about the economy during the recovery from a recession, the continuing wars in Iraq and Afghanistan, debates about national health care plans, protests in Iran following its contentious elections, and the H1N1 virus, which was still spreading "swine flu" fears.

The sessions lasted 58 minutes on average, yielding transcriptions totaling just under 90,000 words. We grouped the participants' responses into clusters by common themes, and identified the most representative quotes from each cluster. We then tabulated responses to the questionnaire to find each participant's relative Internet skill, Internet accessibility, interest in political matters, and knowledge of current events items. We use this information to give some general background about the people in the study and to offer some context about people whom we quote.

The Participants

We had about equal representation of women and men. Ages ranged from people in their twenties to over 60 years old, with the majority under 40. The group was relatively well educated, with almost half possessing a college degree and close to a fifth with a postgraduate degree, in contrast to just over one-quarter who had some college experience but no degree and just a handful of people with only a high school degree. The participants came from across the United States with almost one-third coming from the Northeast, a similar number from the South, just under one-quarter from the Midwest, and the rest from the West. Almost half of the participants lived in suburban areas and many others in urban areas, with just over 10 percent from rural areas.

Most of the participants had regular access to the Internet at home, many had access at work, and the majority also had access at a friend or family member's home. Additionally, just over half had Internet on a mobile device such as a smart phone. As a point of comparison, research from the Pew Internet & American Life Project has found (Smith 2010) that 40% of all Americans use the Internet, e-mail, or instant messaging on their phones, and 47% have wireless Internet connections on their laptops, suggesting that focus-group participants were slightly more wired than the average American. Our research subjects were recruited in a retail corridor connected to the MGM Grand Hotel and were offered financial compensation for participation in a one-hour interview, the common practice in commercial focus-group research. There may well be a personality profile that uniquely characterizes those who are drawn to Las Vegas, but the geographic and socioeconomic profiles of these travelers are impressively diverse.

The type of media participants reported using most each day was TV, closely followed by visiting Web sites. Except for one participant who only uses e-mail, all others usually use the Web daily, with many averaging nearly three hours a day. All of our participants reported using e-mail or instant messaging on most days. In contrast, participants reported lower levels of turning to newspapers and magazines.

RESULTS

Although there were members of each focus group who mentioned some unease with aspects of the new media environment and a few even felt overwhelmed, the overall tone of the discussions was largely positive and enthusiastic. Instead of feeling burdened by choice, many participants enjoyed the freedom it brought, especially the range of information available online. Respondents of all age ranges used a wide variety of technologies, and many of them owned smart phones and relished the accompanying mobility. The identifiably negative responses to the new media environment took three forms: (1) frustration with the sensationalistic and partisan pronouncements increasingly found on some cable news channels; (2) annoyance at the distracting trivialities associated with social network sites such as Twitter and Facebook; and (3) a general sense that with the diversity of professional and nonprofessional voices online, it is hard to know whom to trust. Next, we first present the relatively few instances of people reporting information overload and then discuss the more representative sentiments and attitudes that emerged from our conversations. The latter includes people's emotional responses to sensationalistic TV news and content spread on social network sites, their thoughts about the Internet as a news source in general and biased news reporting in particular, and how they think about search engines.

"Overwhelmed and Under-Informed"-A Rare Sentiment

A public affairs analyst in her fifties from the suburban West expressed the kind of sentiments Gitlin would find unsurprising:

> "There are way too many sources. I feel sometimes just stressed out like Robin Williams in the movie *Moscow on the Hudson*. He has to go pick up a can of coffee at the supermarket and he hyperventilates because there are so many choices. That's how I feel with all these sources of information."

Another participant in this group, a woman in her forties with a post-graduate degree who works in safety and environmental compliance in the suburban Midwest, nodded when asked whether she felt overwhelmed.

Three people from another group specifically stated that they felt "overwhelmed." A preschool teacher in his thirties from the urban Northeast used the word "overload," a term that has appeared in many of the articles criticizing the new media environment (e.g., Berghel 1997; Gitlin 2002). This participant also referenced the phrase "too much stimulus." A field project coordinator in his fifties from the suburban South felt "overwhelmed and amazed that there's that much out there, and kind of feeling, you know, under-informed." He dealt with these feelings by trying "to avoid news as often as possible." There were four people in the remaining group who expressed sentiments about feeling overwhelmed by the media. Two female college students noted that their overload came from not knowing which sources of information are accurate—the first said she felt "overwhelmed" and, after hearing about research on the limitless amounts of information entering the American home today, went on to explain her sentiments as follows:

> "[I am] not really sure where to turn for the most accurate information. But I guess I have more of a negative association with it because I tend to more shut down and not really know where to turn, so I don't really turn anywhere."

The other student, this one from the urban South, explained her feelings this way: "I do find it overwhelming. I don't like it. When I try to find something or research something, I never know what is the accurate information, like she said," referencing the other student. When the moderator asked her to put this sense of being overwhelmed into emotional terms, she replied: "It's frustrating." This participant also made one of the only allusions to technology addiction. She said of her husband, half-jokingly and half-seriously:

> "When you lack the social aspect of actually being able to talk to your spouse [glares at her husband and then smiles] face-to-face, it's just ridiculous I think. [. . .] That's just the one aspect of technology that I just really don't like."

Her husband, another student in his twenties who also worked in software testing, was an avid gadget user, and he admitted to his "lazy" habit of sometimes texting his wife in the living room from his bedroom. This admission prompted outrage from some of the other young women in the group, and one woman's comical declaration that "I would throw the cell phone at his head, that's what I would do. Sorry." However, except for this particular case, technology addiction was barely discussed in the focus groups.

The already-discussed 11 people—a distinct minority —from among 77 participants were the only ones who, in any explicit way, communicated feeling overwhelmed by the volume of information available in the new media environment, even though we probed this question repeatedly in all groups. Others tended to express nothing less than delight when discussing the ways in which they used media to find information, and many more simply seemed neutral on the subject or had mixed feelings that balanced out in the end. Many participants acknowledged the high volume of information, but did not find it problematic. A banker in his twenties from the urban South was unsurprised by the enormous volume of information disseminated in the current media environment, and said, "I think there's media everywhere, and you can't really get away from it." However, instead of finding this overwhelming,

he replied: "No, I think it's good. I think it exposes people to different ideas and attitudes." A counselor in his thirties from the urban South said: "There's so much information, it's very helpful at times. You just have to decipher what is a good source and what's not, and I think once you get that down, it's fine." A woman in her thirties from the suburban South who worked as an information technology (IT) department database manager, said: "I love it. You know, I have the Internet on my phone. I have Internet at the house, at work. We have satellite television. I love being able to access any information whenever I want."

This woman was not the only one to gather satisfaction from the mobility of her Internet access. Many participants owned smart phones, and they all seemed to enjoy the control their smart phones provided them. Mobility was clearly an important factor in many people's information-seeking behavior. The IT department database manager just quoted, who is also in school, mentioned:

> "It's good for me, because I don't have to carry a big laptop around to do [. . .] an assignment that was due last night. I was able to go online and meet with people in my class and able to get my homework done while I'm away."

Besides the usefulness of constant access to others, respondents reported often using smart phones for information seeking. A payroll manager in her forties from the urban Northeast received e-mail news updates on her BlackBerry. An insurance agent in her forties from the urban Midwest checked the Weather Channel for updates on her iPhone. A self-described news junkie in his thirties working in sales in the urban South also reported using his smart phone for news:

> "You can pull [the news] up whenever you're ready, and you can look at it. So if you miss it at the hour block that it comes on, you can always go back, you know, any time, and pull it. So, I mean, for me, I love it. [pause] On the go."

The ability to choose where and when to get one's news seemed enticing to most participants, and certainly seemed like one of the aspects of the new media environment that elicited the most positive responses. None of the participants who already owned a smart phone reported disliking the ability to use the Internet at their leisure.

However, other aspects of the new media environment elicited more complex reactions. An office manager in her thirties from the suburban South whose husband was the aforementioned avid news consumer and technology user said that she was "wild about the advancement of media." Later, she mentioned some concerns about guarding her children against the darker side of the Internet and TV, however. Others, too, had mixed reactions that were generally positive, but not uniformly so. A man in his sixties who worked in resort property management in the rural Northeast said he was "excited at the opportunity, and overwhelmed by the magnitude, and guarded in terms of not being over-stimulated." A senior software architect in his twenties from the suburban West, when presented with an example of the enormous amount of current media choice, said: "I had mixed feelings but mostly good. Not overwhelmed at all."

Most participants did not feel generally overwhelmed by information and stimuli in the way the experts have speculated. For example, in one instance where we asked the group at large if they felt overwhelmed, many people nodded. But minutes later, most of the participants were enthusiastically discussing media choice. It seemed that a few specific facets of the new media environment irritated the participants, but these targeted frustrations were accompanied by enthusiasm and excitement on a more general level.

TV News Sensationalism: "The Fluff That's Coming In"

Although television news has been a staple of the American information diet since at least the 1950s (Comstock & Scharrer 1999), and cable television has been around for several decades, the television news environment of the 21st century is nonetheless unique. Twenty-four-hour news channels like CNN and MSNBC coupled with anytime, anywhere online coverage make it possible to follow the news constantly in ways not available in earlier times. Perhaps the biggest criticism from respondents concerned the level of sensationalism in which especially TV stations engage, presumably as a strategy to compete commercially (HendriksVettehen, Nuijten, & Beentjes 2007).

Many focus-group participants commented on this by specifically mentioning the cases of the Balloon Boy hoax and Michael Jackson's death as inflamed instances of sensational reporting, criticizing news channels for the excessive amounts of time they devoted to these topics. In one group, the following conversation—spurred by a discussion of the 24-hour news cycle—highlighted the widespread exasperation with these types of stories:

> Male 1: Michael Jackson's death.
>
> [collective groans and noises of exasperation from the others]
>
> Male 2: That was on every channel.
>
> Moderator: You guys have got to give me the more recent one that's come up.
>
> Male 1 and Female 1 [simultaneously]: Balloon Boy!

Indeed, these particular examples of media sensationalism were ridiculed in nearly every focus group, prompting one man in his thirties from the suburban Midwest to declare that Balloon Boy was "a shining example of what's

wrong with today's media." The participant in her forties working in safety and environmental compliance quoted earlier summed up her frustration with news quality versus quantity as follows:

> "I would argue that we're not necessarily more informed. [. . .] How many people saw the boy in the spaceship versus what's going on in wars and the bigger issues? How much time is spent on things that are interesting but not necessarily [pause] relevant?"

As she spoke, the other participants in the group reacted with agreement. There was knowing laughter when she mentioned Balloon Boy, as if they had all suffered the same annoyance from their TV screens, and several people said things like "right" or repeated her words as she said them to indicate their agreement.

Another woman in her thirties from the urban Midwest working in advertising design expressed a nearly identical viewpoint, saying:

> "I think that there's way too much entertainment news compared to real news, world news. I think that the kid in the balloon wasn't really impacting [anything]. How many things are we not knowing or hearing about because of fluff that's coming in?"

Frustration with the domination of trivialities and sensationalism in the new media environment was more widespread than any feeling of being overwhelmed with the amount of information itself. A banking manager in his fifties from the urban South specifically stated that he was not overwhelmed by the Internet's range of choices, but followed up by declaring, "What's overwhelming is the sensationalism . . . that's what's overwhelming. If anything that comes out of all of this, it's how the media sensationalizes everything which affects us on our daily day."

Media critics have pointed toward the 24-hour cycle of cable TV news as a reason for the sensationalism—as the number of channels grows, competition increases, and channels sensationalize their news to draw in more viewers (Grabe, Zhou, & Barnett 2001; Hendriks Vettehen et al. 2007). This view was reiterated by the focus-group participants. An engineer in his fifties from the urban Northeast was wary of getting news on the Internet, but still liked that better than TV news, remarking:

> "I think television news is specifically the worst informed because it's all sensational. It's all about [. . .] getting the article or the news story that either meets their editorial needs or is going to be the one that is flashier that they think is going to get you to watch that. I think TV news has gone way downhill since this whole thing has happened."

"This whole thing" was a reference to the new media environment itself. A microbiologist in her twenties from the suburban Northeast referred to the problem of 24-hour news in the following commentary:

> "But then there's the point—why do you need twenty-four hours of news? And, at some point, how far is too far to cover a story? When you've finished covering a story and now you're just speculating, why are you still on that story? Can't you just go to another one? It doesn't need to be on for twenty-four hours."

The same woman felt that the sensationalism present in one channel tended to be contagious: "Because it leaks onto other channels. You can't get away from it if you wanted to." An entrepreneur in his forties from the suburban Midwest elicited laughter when he noted:

> "One of the things that I think we've lost with [. . .] the 24 hour news cycle was the notion that it [takes] a day to digest news [. . .] How many times have you tuned into headline news and they say 'we're showing you pictures and we don't know what's going on yet.'"

Online News

In comparison with TV news, the online news environment seemed to generate almost uniformly positive responses. A physician in his thirties from the urban South thinks we are better informed in the Internet age:

> "Nowadays you can jump on the Internet read in German, you know, French or whatever else you want. So you're definitely better informed with an extra sort of different point of view from that side. And also I would say faster informed, you know, something happens in Southeast Asia you find out about [it] right away."

A woman in her forties working in customer service in the suburban South agreed, saying, "There's certainly more tools and information out there available for everyone to have easier access to." Another woman in her thirties working in customer service in the suburban Midwest mentioned the Internet's ability to deliver international news:

> "[I'm] better informed especially on international issues. I mean we have BBC and BBC News that sometimes comes on our cable that I'll watch occasionally, but for the most part it's like an hour and that's it. You don't get anything else. On the Internet, if you want to know something that's happening anywhere in the world [. . .] you can research that on the Internet and find arguments for and against different things."

To this, another woman, in her forties working in customer service responded as follows:

> "I think since the Internet revolution, I think everyone that has access to this and utilizes the Internet is better informed. There's certainly more tools and information out there available for everyone to have easier access to. Whereas before the Internet revolution you were more closed, the opportunities for that information were [. . .] nowhere near [as] readily available. If you really wanted to make the effort to go and

find this information, it was a trip to the library, it was a periodical, it was a card catalog, microfiche. You know, you really had to put in, you had to be committed to put that effort in to [. . .] finding out all that information. Whereas with the Internet, it's just a matter of wherever your laptop or desktop is set up in your house. It's just a matter of, you know, walking a few feet and typing a few keystrokes."

A few respondents referenced blogs as a useful way to gather more news about current events. The same woman who talked earlier about international coverage said she reads the *Daily Kos* for news, and thinks that news reporters online have fewer ulterior motives than their politicized TV counterparts: "They are most likely journalists by nature . . . that write on the Internet or communications people that just present the facts." This participant highlighted another trend of the focus groups—while many people were wary of the accuracy of online content, most people thought the Web was less purposefully biased than TV news. A print shop supervisor in his twenties from the suburban Northeast responded to the question of where he would go to find out what is going on by saying, "I have the Internet on here, too, [points to his smart phone] but there's so much on there, I wouldn't know how to file it down to one thing." An engineer in his fifties from the urban Northeast said of the Internet, "Well, I think that the Internet is amazing. But there's nothing to stop anyone from putting anything up." An accountant in his thirties from the suburban Northeast was similarly wary of online content accuracy, saying:

"So everyone's a blogger now and then one blogger is quoting another blogger. He got his source from another blogger and it's just, you don't know who to believe."

An employment agency manager in his thirties from the suburban Northeast noted:

"The Internet's wonderful at getting you news very fast. But there's no one answering for it. They're updating the article and making corrections all the time. You're getting it quicker but you're not getting a professional necessarily writing it out."

For all the doubts about the accuracy of online news, however, many participants still preferred it over TV news. A cocktail server in her twenties from the urban Midwest was an avid reader of political blogs and mentioned that there were different "levels" of bloggers in terms of accuracy. She noted: "It's all about filtering out what's a little bit more reputable and what isn't. Even with blogging you're going to have stuff that you trust more than others." By filtering and varying the Internet news she reads, she gathered a reliable body of knowledge.

The rationale for participants' relative enthusiasm about the Internet as a resource for news in comparison with traditional media appears to be the issue of personal control. A diversity of sources and a cacophony of video, audio, and textual streams online require audience members to "pull" what they want, rather than simply sit back and allow the media professionals to decide what is important and "push" the headlines out to passive audience recipients. Pulling involves occasional errors, and takes effort and some evolved skill at manipulating the digital environment. All but a few of our participants, it appears, were motivated to invest a bit of effort and get over the skill "hump" to locate and manipulate routinely the information they wanted and needed with some success. It is likely that the nature of our methodology and sampling underrepresent those who are financially or experientially marginalized from the digital domain. As a result, although we are not equipped from this study to estimate the size of the strata still marginalized by limited skills or limited technical access to online resources, it remains an important issue for analysis and public policy (see, e.g., Hargittai 2010).

Social Media: "I Let It Wash Over Me"

While most of the respondents seemed positive toward or at least accepting of the Internet as a good source of information, a much larger portion of participants disliked social network sites like Facebook and Twitter, sometimes vehemently. Once again, participants were not put off by the amount of information on the Web, but rather by the quality of what they saw—in this case, the annoying minutia of people reporting details about their personal lives. Interestingly, however, these comments often reflected assumptions about how certain services work, rather than people's personal experiences with them.

While several participants reported liking Facebook, few had tolerance for Twitter. One woman in her twenties working in systems support in the rural South said of the latter: "It's awful! It's awful. It's like, I don't care. Like five minutes I'm going to work now, oh I've been to work now. Oh, I'm getting out of my car now. I'm walking in the office door. Oh my God!" To her, Twitter was a service that allowed self-absorbed people to chronicle the details of their lives at the expense of others. A software architect in his twenties said that online social networking seemed "really immature" to him, and another participant agreed with him emphatically—"It is!" A student in his twenties from the urban South shed light on why Twitter is irritating: "Yeah, I can't stand it. It's annoying. It's basically a Facebook status update, and that's it." Perhaps more than any other topic in the focus groups, social network sites caused the most raised voices as participants were bolstered by others' emotional reactions.

An executive director of a nonprofit organization in her twenties discussing Twitter complained: "It's just a centralized source for people to annoy you with their

minute-by-minute activities." From examples like "I don't want to hear them feeding their baby an apple," to "Hey, I just had a hot dog, and it was bad!," the participants reiterated again and again the idea that they were not interested in hearing irrelevant details of people's lives on social network sites. The idea of these services as an outlet for narcissism was also central to participants' impressions of Facebook and Twitter. As an employment agency manager from the suburban Northeast in his thirties said, "It's like having an audience, I guess, to some people, and maybe you feel you're so important that you want to share these things, but nobody cares." These comments suggest that many participants had a limited understanding of Twitter insofar as they only saw the service as an outlet for people's mundane daily actions, rather than recognizing its potential to spread information through pointers to interesting sites and stories.

Others did not seem to understand the full potential of Twitter either, associating it with celebrities illustrated in the following conversation:

> Male 3: You got your celebrity stalkers. They follow these people. They put the minutia there, and everybody's following what they're doing.
>
> Male 4: I'm gonna go out to eat tonight, at this place. [makes a noise of mock celebration]
>
> [laughter]
>
> Male 4: [yelling] Oh, sweet!
>
> [more laughter]

The stream of unwanted information that online social networking facilitates did seem to be an aspect of the new media environment that was, in fact, overwhelming. An entrepreneur from the suburban Midwest in his forties said: "Twitter was sort of for me the first example of once you get past, you know, following half a dozen people, it's impossible to keep up with it [. . .] I've kind of got to the point where I let it wash over me."

At the same time, several participants who use Facebook or Twitter did like the opportunities such sites provide, and they often were people who used the sites in more ways than simply keeping up with friends. Some of them mentioned getting news through social network sites. A woman in her fifties liked Twitter as a tool for following missionaries or human rights activists instead of celebrities. A man in sales from the suburban Midwest in his twenties used Twitter to follow news sites instead of friends. A woman in banking in her twenties from the suburban Midwest highlighted how Facebook could be used in a multifaceted way by saying, "Yeah, I keep in touch with family and friends that way, but you can also link to various news sites, political organizations and they'll keep you up-to-date on a lot of information as well." One participant noted that "if you're just sort of browsing Facebook you see what your friends are reading or thought was interesting enough to post." In a clear echo of the celebrated two-step (and multistep) flow of mediated information, the executive director of a nonprofit in her twenties said:

> "I have friends who attach newspaper articles to their news feed on Facebook and things like that. Things that are going on that they somehow came across that they thought were important."

Overall, several participants (22 out of 77) seemed to have considerably negative feelings about social network sites, while fewer (9 out of 77) expressed strong positive feelings about them. Most of the participants were neutral or had mixed feelings. Thus, the general sentiment among the respondents was that the Internet is a good source for gathering information about what is going on, but there is a distaste for activities on social network sites, suggesting that many people are annoyed by what they perceive as the minutia of people's lives fed to them through Facebook and Twitter.

A Persisting Digital Divide in Access and Skill

Of the participants who did not like to use the Internet as a news source, some were flummoxed by the technology and did not possess the tools or education to use the Internet effectively, even while appreciating that it was a positive source of news for others. When asked on a short questionnaire to rank their familiarity, on a 1–5 scale, with such terms as "blogs," "RSS," and "tagging," almost one-third (32%) of the participants gave themselves the lowest score on all of the items. In comparison, about one-quarter (23%) gave themselves the highest ranking for these terms, suggesting that while some people have very limited understanding of recent Web developments, others feel very much at home with them.

A bartender in her twenties from the suburban Midwest said: "I went on Twitter and signed up for an account, and I didn't know what to do. Like, it's confusing to me, really, and it's weird." Predictably, when asked to rank her knowledge of Internet terms, she gave mostly answers of 1, the lowest skill ranking out of a possible 5. In her case as well, her frustration with Twitter was likely a factor of her self-professed confusion rather than a critical dislike of the service itself. Web-use skill, more than age or any other noticeable factor, seemed most important to whether or not people expressed feelings of being overwhelmed. The bartender was in her twenties, while the woman from the rural Northeast was in her fifties, but both expressed frustration because of a lack of skill. There is a stereotype that young Americans are highly skillful online whereas older users know little about the Web. In our group of participants the salience of skill-related issues was not related to age in any apparent way.

Some participants who live in rural parts of the United States confront limited Internet access and report feeling left out. A middle-aged couple from rural Maine was disappointed by the lack of Internet access in their area. The husband said:

> "Unfortunately, we live in rural Maine, and there's very little high-speed Internet, so [. . .] the crawling Web browser, [..] you have to have an awful lot of patience to wait, so actually we don't do it very much at home."

The husband, who mentioned that he works with the Internet often at work, ranked his Internet skills high. The wife, who was retired and spent more time at home without broadband Internet access, ranked all of her Internet skills as 1—the lowest category, representing "no understanding" of things like RSS, tabbed browsing, and blogs. This discrepancy in their online skills suggests that lack of convenient broadband access at home can pose a serious barrier to Internet skills and corresponding usage.

A woman in her fifties who was from the rural Northeast summed up her frustration about access by saying:

> "I think the thing is about availability and education of how to access. I think that that's where I become overwhelmed and that's why I become overwhelmed, is because I don't want to have to read the directions. I want somebody to show me."

Search Engines: "I Just Trust Google"

Search engines were connected in participants' minds to commercial interests, and thus were less trusted, though widely used, features of the Internet. A woman in her forties working in customer service in the suburban South noted: "But those search engines, [. . .] the first things that come up are the people that paid them the most to get them up there at the top." Similarly, a human resources manager in his forties from the suburban West critiqued: "I think if you see the top featured stuff, you know they're paying for that." Another concern participants had with search engines was that results were based more on what one participant called "popularity" than on relevance or authority. A bartender in her twenties from the suburban Midwest complained, "I wish that if I Googled something, it was from a professional, not from some Joe Blow on the street."

Still, most participants seemed satisfied with their search results, and trusted their preferred search engine to give them the results they were looking for. A director of a nonprofit in her twenties from the urban northeast said: "I trust Google to do a basic search. And then it becomes my responsibility from there to say: Is this enough? Do I then want to go further?" Although some participants had expressed concern with the motives of search engines' top results, they still felt comfortable overall with using tried-and-true search engines like Google. A sales manager from the urban Northeast in her twenties said, "I'd rather use Google [than Bing] even though it gives me an overload of information. I just trust Google. I'm more comfortable with Google than trying something else." A director of learning technologies in her twenties from the urban Northeast was generally happy with her search results. When asked "how are you feeling about the results you get from search engines," she responded: "You can find basically whatever you want when you want it."

Fragmentation, Polarization, and Yellers

A prominent concern in the new media literature is a worry that increased media choice will lead to increased audience polarization and fragmentation, that is, that people will seek out news that agrees with them or pick entertainment over news, because they can customize their media intake more easily than before. One particularly insightful comment from a woman in her twenties working in systems support in the rural South reflected the academic concern about fragmentation. She said:

> "I think TV news is terrible, which is why I use the Internet, but I don't think that people are better informed about general issues. [. . .] Now that there's Internet you can still find out something if you want to find out something, but it comes down to if the person cared before there was Internet, they're going to care the same amount now that there is Internet about finding out what they want to know. And making it easier maybe they'll know a few more things, but they're still going to search Angelina Jolie, Khloe Kardashian and you know like Bubble Boy or Balloon Boy."

When we asked participants explicitly whether they preferred news sources that agreed with them, most people said no. In fact, bias in news coverage was more often than not a source of complaint. A college student in her twenties said she preferred to hear "from all sides," and a nurse in her thirties described how she had switched from formerly watching only Fox news to CNN because CNN "talks both sides." A wildlife biologist in his forties who had indicated on the questionnaire that he is somewhat interested in politics described his strategy for getting all sides of an issue:

> "I do watch MSNBC and I do watch Fox on health care, just to see both sides, and then I try to listen to Rush, but that's tough, it's a struggle. [some laughter] But I do try to do it, just to see his spin on it. And then I also follow with some local talk shows, you know, sometimes they interview congressmen and stuff on the subject, so I'm just trying to gather as I can either from the radio interviews or congressional polls, and two different channels."

A college student in his twenties who suggested that he was somewhat interested in national news said he tries to consume a variety of views, and that he thinks "the

various views would be positive," indicating that he is not an example of the kind of one-source or one-view citizen critics fear. A woman in her twenties with a postgraduate degree summed up the general dislike of bias by saying,

> "You can't fully understand even the side you think you would stand on without knowing the alternative argument. So in order to be able to fully understand the issue, I think you have to know what the argument is."

A woman in her fifties, however, did say that she tended toward stations that agree with her, and a banker in his twenties also said that he would not watch news that was clearly biased against his opinions, though he was open to discussing issues with anyone in person. Overall, the responses of participants clash with the academic notion that people will abandon consulting opposing views in favor of news that lines up with their own views.

Regarding pundits, a number of participants mentioned their distaste for opinionated newscasters whom one man called "yellers." A man in his forties complained that he almost stopped watching cable news because of that type of bias, and a public affairs analyst in her fifties said that she wanted to hear all sides of an issue for her job:

> "But when you can't hear because they're just yelling or berating you it's like I don't even want to, I don't even want to play it so I just turn it off. And then I'll go back to a less invasive medium and try to read these opinions in a newspaper so that I don't have to, you know, suffer that."

Once again, the culture of a medium like cable news or talk radio was the aggravator in this scenario, rather than the issue of gathering multiple viewpoints, in which most people expressed interest.

CONCLUSION

Findings from our focus-group interviews suggest that Americans are getting their news from an increasingly diverse set of sources and are actually quite pleased about it. They complain from time to time about too much fluff and sensationalism, but that may not be a recent development. The Internet is seen as a helpful source of information about current events, while television news, particularly cable news, attracts more criticism because of sensationalism and the constant stream of repetitive stories. Only a scattered few participants expressed a sense of being overwhelmed by the volume of information or the type of media they encountered.

Communications scholarship has been struggling with a definition of and an analytic approach to studying the concept of interactivity (Bucy 2004; Neuman 2008). It appears that we are witnessing a fundamental shift in the interface between the media environment and the individual audience member, moving from the characteristic "push" of a fixed broadcast schedule and daily news headlines to a "pull" dynamic characterized by an online search. Between push and pull is an intermediate form of interaction characterized by recommendation engines, collaborative filtering, short messages on current events, and e-mail attachments from the mainstream media, which could be characterized as the electronic equivalent of the classic two-step flow.

Where once Americans might have gossiped over the back fence or while sitting around the cracker barrel at the general store, online gossip and commentary through social network sites are now all the craze. Twitter and Facebook get mixed reviews, with over-sharing by some as a subject of particular scorn and humor. Online social networking is relatively new and, as is often the case in social diffusion, it may be some time before the norms of appropriate use and skills at filtering start to stabilize. Currently, those who are technically savvy report setting up their media usage in a way that represents their preferences, while those less savvy simply tune out completely.

On the issues of fragmentation and polarization, our discussions did not reveal evidence of individuals retreating into a partisan silo or "daily me" of one-sided information. On the contrary, reinforcing recent survey and experimental research (Garrett 2009), our participants indicated an interest in understanding more about how "the other side" felt and the logic of their arguments.

Our reliance on the focus-group technique means that we were not able to observe new media behavior in naturalistic settings and did not have the benefit of extended one-on-one interviews that might have revealed more subtle shades of frustration, anxiety, or reluctance in confronting the new media deluge. We relied instead on what people said in spontaneous conversation in a public setting, which has been shown to result in surprising candor, and frequent and well-articulated differences of opinion.

The casual use of the concept "information overload" for consumers of traditional mass media and the increasingly prevalent digital media may be misleading and would benefit from some conceptual clarification. We identify four structural conditions that are associated with the overload phenomenon (see earlier list). Further research could usefully probe how frequently each is actually in evidence for a typical media consumer and how individuals react and adapt to those conditions. Also, further survey research with projectable samples could clarify more precisely the distribution of responses to an environment of increasingly abundant information,which we could only approximate from limited focus groups.

Our participants, for the record, expressed near-unanimous enthusiasm about the new media environment. Those in rural areas with only dial-up access were looking forward to getting hooked up to broadband and getting more reliable cell phone service. When frustration is mentioned, it typically takes two forms: (1) Individuals have

not yet perfected skills at mastering the searching and filtering that enable them to find what they want; and (2) they find much content to be sensationalistic and lacking in seriousness. This may be a manifestation not at all new in media behavior, represented by the oft-told story: I watched three hours of gossip and fluff on TV last night. It was awful. I plan to watch another three hours tonight.

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