

DIGITAL TECHNOLOGY AND JOURNALISM: implications for Democracy¹

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ABSTRACT Digital technology has brought sweeping changes to journalism and the social institutions it serves. Journalism has historically played a central role in the U.S. and other democracies, serving as a primary source of news and information for citizens on matters of public importance. This paper examines the implications of these changes for democracy. It explores the question of whether a more interactive form of journalism will produce a more engaged and informed electorate.

Keywords: Digital journalism. Democracy. Digital divide. Transparency of government. Robust messages. Civic participation. Social media. Arab Spring. Wikileaks. Tablet journalism.

INTRODUCTION

Digital technology has brought sweeping changes to journalism and the social institutions it serves. This paper examines the implications of these changes for democracy.

Journalism has historically played a central role in the U.S. and other democracies, serving as a primary source of news and information for citizens on matters of public importance. As digital technology has transformed journalism on multiple levels, the implications for democracy are profound. This paper identifies and critically analyzes five possible sets of influences. These are:

1) Disruption and Innovation in the traditional journalism industry, leading to both a loss of professionally employed and experienced journalists and news organizations, particularly local newspapers, to cover and serve major cities and regions, but also stimulating innovation in an industry often characterized by slow adaptation to technological change;

2) A Digital Divide (i.e., due to the cost of digital technology, a gap in access to information technology is widening between haves and have nots/have less and this may limit access to news and information needed for citizens to stay informed in a timely fashion for making

decisions on matters of importance including voting);

3) Robust Messages (e.g., storytelling, interactive, on-demand multimedia systems are giving citizens more robust forms of news and information that may improve knowledge acquisition and learning);

4) Transparency of Government (e.g., Wikileaks and other networked sources of information provide increased access to public records); and

5) Civic Participation (i.e., interactive networked media are enabling a transformation of the public from an often passive and apathetic to active and engaged citizenry, as witness the role of social media in the so-called Arab Spring of 2011).

Disruption and innovation in the traditional journalism industry

Rapid technological change, including the development of widespread high-speed Internet and tablet adoption, especially in the form of the iPad and Kindle, as well as smartphones, have combined with the U.S. and global economic downturn of recent years to accelerate a half-century decline in the U.S. newspaper industry. Since the mid-1960s, most newspapers in the U.S. have seen their circulation growth rates slide, relative to population growth, due largely to demographic shifts, combined with the rise of television and television news (DAVIES, 2006). Newspaper publishers had grown accustomed to decades of relatively easy double-digit profits, and many saw little need for dramatic change in the basic advertiser-supported newspaper business model. The downward spiral in analog newspaper economics has accelerated dramatically in the past four years.

Ubiquitous broadband and wireless Internet as well as sophisticated mobile technology have given consumers access to news and entertainment media in an on-demand digital environment where analog newspapers and other traditional news media have a greatly diminished role. Advertisers have recognized this situation and have fled newspapers and other traditional media to place their advertising dollars in more efficient new media. Google advertising revenues reached \$ 8.44 billion in 2010 (GOOGLE, 2011), while Yahoo! had \$ 1.9 billion in advertising revenues in 2010 (SHIELDS, 2011), and Facebook topped \$ 1.86 billion for 2010 (O'DELL, 2011), bringing the total for these big three new media online companies to \$ 12.2 billion in annual ad revenues. Consequently, newspapers have seen their annual ad revenues drop dramatically. U.S. newspapers collectively lost \$ 7.5 billion in total advertising revenue in 2008, down 16.6%

from 2007, to about \$ 37 billion for the year (SCHONFELD, 2009). Classified advertising dropped 30% during this period. The steep decline continued in 2009, as the newspaper industry lost another \$ 10 billion in advertising revenues, bringing total newspaper advertising dollars to 1986 levels of \$ 27.6 billion (LaPOINTE, 2010). The loss of print revenues was not off-set by online revenues, which had grown to about \$ 3 billion by 2010. The decline in newspaper industry ad dollars slowed in 2010, but the financial problems for newspapers continued. The Newspaper Death Watch reports that since March 2007 eleven daily newspapers have closed (NEWSPAPER DEATH WATCH, 2011). Two other dailies have stopped publishing print editions and now publish only online. Further, many other newspapers have laid off, or given buy-outs to some of their most seasoned reporters (because of their high salaries), leading to a substantial loss of professionally employed and experienced journalists. *The New Yorker's* Ken Auletta reports that in the past three years, a quarter of all U.S. newsroom employees have been laid off or accepted buyouts (AULETTA, 2011). This has left many of America's metropolitan areas with news organizations stripped to the bare bones in terms of news coverage.

But the conditions that have spawned this crisis in American journalism are also creating an environment ripe for innovation. Data show that by August 2011 some 28 million iPads had been sold in the U.S., and several million more other e-Reader devices were in the marketplace as well (see Figure 1). The current surge in tablet and other mobile and online technologies has stimulated a wave of entrepreneurial activity in the journalism and media world both in the U.S. and internationally.

In early 2011, News Corp. CEO Rupert Murdoch launched an iPad newspaper called *The Daily* with the help of Apple's Steve Jobs. Murdoch, whose far-flung media empire later in the year captured headlines for less positive reasons (a subject examined elsewhere in this paper), hired an estimated 100 journalists to produce his *iPad Daily*, much of which features original reporting and multimedia storytelling. The iPad paper costs subscribers about one US dollar per week, or \$ 0.14 an issue. This is comparable to a low-cost analog printed newspaper.

Given the pricing structure of *The Daily*, it might signal an opportunity to digital newspapers almost as significant as Benjamin Day's *Penny Press* of 1833. Recall that Day innovated a model of newspapering based on a new technology of his era, the Cylinder Steam Press which made rapid printing of 18,000 copies per hour possible (STEVENS, 1994). Printing had been limited to about 125 copies per hour, and newspapers

were targeted to the elite, and priced accordingly. With Day's innovation, the era of mass media was born. His innovation ushered in a model of advertising-based media, which was adopted by commercial radio and television in the U.S. and has stood for more than a century.

Murdoch says the iPad-based Daily will "make the business of editing and news gathering viable again." "No paper. No multi-million dollar presses. No trucks," Murdoch says. "We're passing on these savings to the reader, which is why we can offer *The Daily* for just 14 cents a day". News Corp. will operate *The Daily* for \$ 500,000 a week, Murdoch states (PEPITONE, 2011). This translates into an annual operating cost of \$ 26 million. Of course, it remains to be seen if enough consumers will judge *The Daily* of sufficient unique value to warrant even the dollar a week subscription price, given the commoditized nature of news in the Internet age.

Coming soon to the marketplace are new flexible digital displays, what is called electronic paper, now in research labs (HEIKENFELD, DRZAIC, YEO, KOCH, 2011). Electronic paper may be on the consumer market by 2015. It is possible the price for electronic paper will be considerably more affordable than current tablet devices, perhaps less than \$ 100. But, this is a forecast and hard to know with any certainty, yet it may spur considerable innovative opportunity in journalism and media.

Adding to the increasingly entrepreneurial news media mix is the emergence of hyperlocal news. Hyperlocal news refers to news reporting, typically online, about events and issues targeted within a particularly well-defined geographic community. Moreover, hyperlocal web sites serve primarily local residents, often produced by local reporters or residents. Hyperlocal news sites such New Jersey's Redbankgreen.com are typically staffed by a small number of seasoned journalists, often one or two, equipped with digital news gathering tools, such as a smart phone, who know their communities well. They are mobile and conduct mobile news gathering and storytelling for an often mobile and online news audience engaged in interactive dialog. Subscribers to hyperlocal sites often want their news customized, on-demand and with a personalized editor who can respond to citizen requests for story ideas or will accept citizen journalism or reporting and photos. As John T. Ward, founder and editor of Redbankgreen.com has said, his community has 11,000 residents, and that means at least 11,000 stories for his hyperlocal site (WARD, 2009). Hyperlocal sites also typically feature active online reader discussion communities, another aspect of robust digital content and engaged citizenry linked to quality journalism.

One of the fastest growing areas of hyperlocal journalism is

AOL's Patch.com AOL has hired some 800 journalists nationally and operates in 18 states, serving roughly 800 communities across the U.S. While many news organizations in the U.S. have laid off reporters, AOL has been a counter-trend (AULETTA, 2011).

Patch features mostly editors, regional managers and statewide directors as its editorial decision makers, with freelance reporters providing the original news gathering and writing. Significantly, unlike traditional newspapers which historically have also had local as their area of focus, whether on a daily or weekly basis, Patch has no statewide coverage. This means there is no coverage of the state house in New Jersey, for instance, where state government including the legislature and the governor make law and policy. The consequences for maintaining an informed electorate in an era of hyperlocal journalism in the form of Patch would be potentially problematic, to say the least.

On the other and, there is a vigorous form of independent hyperlocal journalism, and it has an organization to support its efforts in the New Jersey Hyperlocal News Association (NJHNA), which has formed under the auspices of Rutgers University. NJHNA actively supports the rigorous journalism of government reporting by hyperlocal news sites and such reporting seems to be flourishing, at least in the early days of this fledgling industry (NEW JERSEY HYPERLOCAL NEWS ASSOCIATION, 2011). An NJHNA conference on political reporting was hosted at Rutgers on September 9, 2011 and was well attended.

A digital divide

Journalism in the U.S. and many other democracies has historically played a central role in providing an independent source of news and information about matters of public importance, to help keep the citizenry, the electorate, informed. As such, journalism has been vital to helping democracies maintain a system of informed governance. In the age of analog media, most forms of news delivery in democratic societies were inexpensive and sometimes free, and sometimes state-supported, as in the form of public broadcasting or postal subsidies for mail delivery of printed matter or joint operating agreements (JOA) to permit two newspapers to share printing facilities in a single city, which might otherwise violate anti-trust laws. Broadcasters in the U.S. were given free use of the airwaves as a scarce public good in exchange for serving in the public interest, convenience and necessity, a part of which meant providing news coverage for the communities or audiences they served either locally or nationally. Viewers were given free access to the

broadcast signal, which included news reporting. Newspapers were low cost to the reader or subscriber, sometimes free, with the primary source of revenue being advertising.

In the digital age, the business model is undergoing a sea change and is being convulsed by both technology and the global economic crisis of the early 21st century (GRUESKIN *et al.*, 2011). While there are still low-cost or even free newspapers and broadcast television and radio stations providing news coverage, many newspapers and broadcasters have implemented dramatic cut-backs in staff or even gone out of business. Virtually all have created digital versions of their news and other media products, and deliver them via the Internet and other platforms including tablet devices such as the iPad or smartphones. New competitors have entered the scene, including giants such as Google, once known as a search engine, but now much more (free online news aggregator) with a recent mobile phone acquisition and Craigslist, a provider of online classified advertising. Subscribers to SiriusXM satellite radio news and entertainment is a significant challenger to traditional terrestrial broadcasting. SiriusXM targets the most affluent and educated consumer who can afford and is willing to pay about \$ 13 a month for the service. Moreover, SiriusXM is not only available via satellite but is also available online, and is more than simple radio, with on-demand audio services, a visual display with additional text and graphical content. Programming includes not only music and other entertainment, but extensive news, such as that provided by NPR, as well as the BBC, CNN, MSNBC and others. SiriusXM reports 21 million subscribers as of August 2011 (SIRIUSXM, 2011).

Television is now fully digital, whether over the air, via satellite, cable, or phone/fiber line. Consumers can opt for free over-the-air DTV, but the vast majority (about 80% nationwide in the US) opt for some sort of pay DTV service. The options are varied, and include services that do not necessarily include news. For instance, a subscriber who wishes entertainment video programming on demand, mostly in the form of motion pictures, and subscribes to Netflix, can get any of the Netflix video content delivered on demand to any device (from a laptop to a tablet to a digital TV set) connected to an Internet service or 3G or 4G telecommunications connection. Similar online or satellite services are available in the U.S. or worldwide from HBO Go or others, such as DirectTV.

In any case, these services require a monthly subscription fee from the subscriber, and this is where the digital divide starts to grow. The growing portion of the U.S. population that is unemployed or

underemployed, the elderly, the low-income, is facing a serious challenge to pay for digital media that are increasingly expensive to purchase each month. A study released in 2010 by the U.S. Commerce department shows that more than 36% of US population still lacks broadband Internet access, as well, and more than 10% lack Internet access at all (U.S. DEPARTMENT OF COMMERCE, 2011).

From a digital divide perspective, however, *The Daily* also assumes a \$ 500 purchase by the citizen, or the consumer, depending on one's point of view. How does the iPad or other tablet initial purchase threshold impact a new digital divide as a new level of cost is introduced to access news and information? Does this threshold create a new news and information underclass?

What is the democratic impact? Will there be a two-tiered structure? At the bottom will there be those who have very basic tools to access news and information in limited form, such as free media delivered over the air to low-cost receivers such as inexpensive DTV sets? At the top will there be those who can afford high-speed internet service or other advanced telecommunications services and their corresponding monthly service fees, sophisticated mobile devices that are upgraded frequently both in terms of hardware and software, and who are fully engaged in the news and social media, and who reap the financial benefits of such a system as well (i.e., who are able to take advantage of what-ever financial opportunities are made available online to the elite)?

On the other hand, consumers can purchase Amazon's Kindle new for just \$ 139, a considerably lower price than Apple's tablet device. The Kindle, which is limited in functionality compared to the iPad, features e-Ink, and is an e-reader soon to be in color, with a loyal following. With its substantially lower price it begs the question, is it more democratic? Is more competition in the e-reader marketplace needed? A 2011 study shows that the tablet U.S. consumers overwhelmingly want (95% who want a tablet) is the iPad (BILTON, 2011).

One danger raised its Orwellian head in 2009 when Amazon deleted from Kindle owners' e-copies of Orwell's classic *1984* (POPKIN, 2009). One of the features of the Kindle is its free, life-time 3G wireless Internet connection. It is a bit of a wireless double-edged sword, so to speak. It enables the consumer to purchase books at any time, do email, and surf the Web. But Amazon can check on consumers' book purchases any time, or even delete them. Apparently, the e-book rights for *1984* had not been secured for the U.S. market, and Amazon decided it was more expeditious to simply delete the copies electronically in the

middle of the night without telling the persons who had purchased the ebooks than inform them and ask their permission. The deletions were soon discovered and a firestorm of criticism ensued. Amazon admitted its policy mistake and vowed never to repeat its action, yet the irony of deleting Orwell's classic tale of Big Brother was not lost on its loyal customers, and a lawsuit was filed and is still pending as of this writing. The case also raises the question of what possibilities of future spying by government or corporate entities might occur for those who read on e-readers connected to ubiquitous networks.

Clearly, the news business does not exist in a vacuum. The considerations central to succeeding go far beyond technology, spreadsheets and business plans. Sound ethical practices are also vital, as witness the case of Murdoch's London-based tabloid, the *News of the World* scandal. Of course, this case involved more than just ethical breaches. Editors have been embroiled in legal and even allegations of criminal wrong-doings as cell phone accounts of murder victims and others were hacked and Scotland Yard officials were paid for information. This case demonstrates that any news decision maker would be wide to place in a central position the notion of journalism as public good. This principle has been eroding in the digital age as business has more-often taken a front row seat, and a pre-eminent one at the sake of editorial integrity. But this scandal in the UK that cost the life of a once proud 168-year-old daily newspaper has reminded those in the world journalism enterprise that ignoring the public good is at potentially great peril.

Still, at least one newspaper in Murdoch's News Corp. has fared well in the digital era. *The Wall Street Journal* has been a pioneer in charging for its online site from the start, and it has seen its revenue climb in recent years and months.

The Wall Street Journal's print advertising revenue jumped 21% in the 2nd quarter of 2010 compared to the 2009 2nd quarter. Total print and online revenue was "up more than 17% in the fiscal 2011 first quarter when compared with the same period a year before," Dow Jones CEO Les Hinton said in a memo, first reported on the Poynter Institute's Jim Romanesko site (2011). Digital advertising revenue also increased, and by more than 29%, the memo said.

The Wall Street Journal may be a bellwether for better journalistic times, or it may be an exception, since its domain is financial news and its scope is national. There are few other examples of even modest success to point to, at least financially in digital journalism linked to the world of newspapers. Given the crisis journalism faces, whither

newspapers? If newspapers decline or disappear, especially dailies in metropolitan areas that historically have depended on them for serious reporting on government and matters of public import, what is the future of democracy in the digital age?

We should consider the wisdom of Thomas Jefferson, the principal author of the Declaration of Independence and third US President. Jefferson - in a letter to Edward Carrington (1787) - wrote this about the central role played by newspapers in enabling sound government:

The basis of our governments being the opinion of the people, the very first object should be to keep that right; and were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate a moment to prefer the latter. But I should mean that every man (or woman) should receive those papers and be capable of reading them (JEFFERSON, 2011).

It is worth noting especially two things here. First, Jefferson wrote only “man” and the author added “woman” to update his perspective to a more contemporary non-sexist standard. And second, Jefferson wrote that everyone should receive and be able to read those newspapers. In a contemporary context, Jefferson’s meaning would imply we should be sure to cross the digital divide and ensure universal access to news and not permit a knowledge gap (DONOHUE, TICHENOR, & OLIEN, 1975).

The prescience of Jefferson’s remarks seems particularly clear in light of the decision by leadership of *The New York Times* in March of 2011 to introduce a metered pay wall for its online and digital news product for iPad or smartphone. Readers can access a limited number of articles each month (about 28) but once they have reached that limit, they must pay. Moreover, *New York Times* publisher Arthur Sulzberger, Jr. has stated, “We will stop printing *The New York Times* sometime in the future.” Sulzberger made his remarks at the WAN-IFRA 9th International Newsroom Summit, a conference in London 2009, implying that *The Times* might be distributed solely on electronic tablet or electronic paper or some other delivery platform in the future (SULZBERGER, 2011), or delivered digitally to the consumer who might have the option for home or other on-site or on-demand printing. Preliminary data suggest *The Times* has had initial success with its metered pay wall, generating an estimated 200,000 or more paying subscribers (SENTEMENES, 2011). Data suggest consumers will pay for unique quality content, value-added. Revenues for the digital metered pay wall *New York Times* could exceed \$ 100 million a year it is estimated (KRAMER, 2011). If *The Times* is successful with its business model for digital journalism, it is likely

other newspapers or news organizations in general will follow suit, as research shows *The Times* is highly influential as a news agenda setter or in the business realm (WANTA AND YU-WEI HU, 1993; MCCOMBS, 2002). In August of 2011 the Media News Group, which publishes 57 daily newspapers across the U.S., introduced a metered pay-wall similar to *The New York Times* for 23 of its papers' web sites, where visitors get up to five articles for free each month and then have to pay for content (MEDIA DAILY NEWS, 2011).

Robust messages

Research shows that in the U.S., the Internet and mobile media are fast rising as daily news sources, especially among the young. Of course, these sources are often only aggregators or re-transmitters of news originally produced by newspapers or other traditional news providers. Nearly half the population 18 and older (44%) report getting their news daily from the combination of mobile media and Internet, and the number is rapidly increasing (ROSENSTIEL, 2010; see Table 1). This exceeds either newspapers (34%) or radio (31%), both of which are declining, although Internet- or satellite-based radio is increasing as a media choice, but not necessarily for news (unless one counts traffic and weather).

The only medium that Americans still rely upon more for news is television (TV). More than half of adults (58%) report watching TV news each day. In fact, local TV news is the primary source of news for most adults in the U.S. (STELTER, 2011). Unfortunately, research shows that the quality of local TV news in the U.S. is very uneven. Although there are pockets of excellence, newscasts in most local stations are dominated by crime and weather reporting, with little political coverage (WALDMAN, 2011).

Mobile TV and video are also growing, and growing rapidly in the U.S. and around the world, with more than 250 million mobile TV/video subscribers in 2011, as the data in Figure 2 show. The numbers are expected to increase significantly in the next decade. In the U.S. recent data show that with a total population of about 330 million, there are now 300 million mobile phones in use, and most of those are smart phones, and video enabled. Subscribers are accessing, shooting and sending video, for a variety of purposes, sometimes for breaking news.

Television news providers recognize this trend in public demand for mobile video news and have dramatically increased their delivery of on-demand mobile video news. All the major networks including ABC

News, CBS News, NBC News and Fox News and many of their affiliated stations provide mobile video news services for their viewers, including sophisticated iPad apps. These are all available for free, at least for now. A variety of other sources of digital video news are also available for both online and mobile users, ranging from CNN to the BBC to Yahoo! to Al Jazeera to Univision, as well as aggregators such as Google. Combined, they are bridging the digital divide. Some of this video news may lack depth, but it is current and covers a wide and diverse range of topics. The use of multiple platforms for delivering video news has significant implications for democracy, including insuring a potentially broad audience and minimum level of impact in terms of understanding of basic facts or matters of public importance. The networks tend to conform to a shared minimum standard in presenting the news and there is homogeneity in the agenda of news reporting, research indicates (CONNELL, 2010).

Augmented reality is a new form of digital, location-based content beginning to find its way into mainstream journalism (PAVLIK and BRIDGES, 2011). Augmented reality involves geographic tagging of photos, video or other content and layering it over live video, such as a smartphone or other mobile device, such as a tablet device. Newspapers including *USA Today* and the *Boston Globe* have in the past year produced augmented reality (AR) reports as has the magazine *Esquire*. *USA Today* is developing an investigative reporting series using AR. These reports utilize tablet apps such as Aurasma, which enable the tagging of multimedia content onto real-world locations. AR enables new forms of storytelling such as the *situated documentary* developed by Feiner, Pavlik and Höllerer (HÖLLERER, FEINER and PAVLIK, 1999), in which the individual equipped with a mobile device visits the site of a past news event and then via AR can re-experience in an immersive, three-dimensional fashion via over-laid video and audio those past events where they took place, almost as in a form of time travel. Experimental situated documentaries have been produced on the Columbia University campus enabling visitors to re-experience the 1968 student strike or protest, and other campus history.

Transparency of government

WikiLeaks.org has become well known as an online source of government documents, including diplomatic cables, military war logs and U.S. military video, not to mention documents from large corporations. On its web site, WikiLeaks describes itself as

a non-profit media organization dedicated to bringing important news and information to the public. We provide an innovative, secure and anonymous way for independent sources around the world to leak information to our journalists. We publish material of ethical, political and historical significance while keeping the identity of our sources anonymous, thus providing a universal way for the revealing of suppressed and censored injustices (ASSANGE 2011).

Many news organizations around the world have made extensive use of WikiLeaks as a resource for news stories, especially in their coverage of the wars in Iraq and Afghanistan.

Is WikiLeaks a 21st century analog to the Pentagon Papers (which revealed former U.S. federal administration secrets about the war in Vietnam)? Daniel Ellsberg, who leaked these documents in 1971 to *The New York Times*, which subsequently published them, says so (BURNS and SOMAIYA, 2010).

The impact of the heightened government transparency of WikiLeaks is increasingly apparent. There seems little doubt that a Wikileaks-released cable describing the opulence of Tunisia's now former president Ben Ali's lifestyle played a key part in his downfall in early 2011 in what is known as the Jasmine revolution (TRISTAM, 2011). Citizens throughout the country and the region had long suspected government corruption but their worst suspicions were confirmed when WikiLeaks released a U.S. embassy cable online in December of 2010. Among the excesses revealed in the cable was the president's son-in-law El Materi, hoping "to assist McDonald's to enter Tunisia," hosted an extravagant dinner with ice cream and frozen yoghurt flown in by private plane from St Tropez. The El Materi household, the cable also revealed, was home to a pet tiger named Pasha, living in a cage, and fed four live chickens a day. The situation "reminded the US envoy of Uday Hussein's lion cage in Baghdad" (HASSINE 2011).

Civic participation

Transparency alone did not bring about the revolution the world has come to know as the Arab Spring. Social media played a central role in these social movements and political protests. While the initial revelations may have been fueled at least in part by WikiLeaks documents, there is widespread evidence that Facebook, YouTube and Twitter, as well as mobile media, played vital roles in facilitating citizen communication throughout these countries and the region (SULLIVAN, 2011). Citizens utilized social media and mobile phones to communicate and share information as well as organize their activities, and sometimes outmaneuver authorities. A

Google executive, WaelGhonim, created an important Facebook page dedicated to an Egyptian boy, Khaled Said, killed by Egyptian authorities loyal to former President Hosni Mubarak. The page was a critical resource for many Egyptians in learning about the abuses of the Mubarak regime, and it sparked much of the unrest. Ghonim was arrested and jailed for creating his Facebook page (GHONIM, 2011).

Traditional news media acted to place the stream of social media consciousness into a broader context and perspective, as well to provide additional information. Print and electronic news media delivered news of the unrest in the region to the rest of the world and frame the conflict in historic, political and other context. Professional journalists conducted interviews with a range of diverse sources, including official governmental, rebel and private citizen sources, to add coherence to the fragmented and sometimes conflicting images coming from places such as Cairo's Tahrir square.

William H. Dutton, director of the Oxford Internet Institute, has conducted research that indicates networked individuals are becoming what he calls a "fifth estate" (DUTTON, 2009). Just as the news media have historically acted as a fourth estate, or check on the three estates or branches of government, the public, enabled by mobile and social media, today often act independently as a citizen-based news reporting check on government. Further, research conducted in Moscow, Russia indicates that traditional news media have a difficult time competing with social media on breaking news in terms of speed (ZASSOURSKY, 2010). News of the killing of terrorist and leader of Al Qaeda Osama Bin Laden broke first on Twitter, 20 minutes before it was reported in traditional news media, including television news, and even before it was announced officially by U.S. President Barack Obama (CANGELOSO, 2011). The vast numbers of citizen journalists gathering news and distributing it with their mobile devices and other Internet-enabled digital media often overwhelm the traditional news media work force. An estimated 700 million persons subscribe to Facebook worldwide; 300 million subscribe to Twitter. Compare this to the largest professional news organizations with a news gathering and reporting staff of hundreds. Of course, citizen journalists can also often get the facts wrong, and as a result, rely on the self-correcting mechanisms of the Internet and social media.

This story of synergy between social media and online transparency in the Arab Spring has continued in Syria, Libya and elsewhere in the region. In Egypt, authorities tried to quell the unrest by cutting off Internet service. Ironically, this action may have added fuel to

the revolt, by angering citizens even further. In a study of the situation in Tahrir square, Yale's NavidHassanpour found that,

The disruption of cell phone coverage and Internet on the 28th exacerbated the unrest in three major ways. It implicated many apolitical citizens unaware of or uninterested in the unrest; it forced more face-to-face communication, i.e., more physical presence in the streets; and finally it effectively decentralized the rebellion on the 28th through new hybrid communication tactics, producing a quagmire much harder to control and repress than one massive gathering in Tahrir (HASSANPOUR, 2011).

Yet the lesson has apparently not been learned in the West, where civil authorities in the summer of 2011 attempted to quash a series of flash mobs organized at least in part via text messaging and IM from San Francisco, CA to London, UK, by interfering with citizens' mobile phone service and Internet access. The question may be where is the tipping point?

U.S. Pres. Barack Obama has been considering legislation s. 3480, the cyber emergency bill that would give him power to take control of Internet service in the U.S. The Bay Area Rapid Transit (BART) police in San Francisco in August 2011 interrupted citizens' cell phone service in an attempt to disrupt flash mobs on the train platforms (ELIAS, 2011).

Is this a good idea? Would it protect national or local security? Would it violate the First Amendment to the U.S. Constitution? Consider the U.S. Supreme Court case *Near v. Minnesota* (1931) and its establishment of a "No Prior Restraint" prohibition against the government blocking publication, even of offensive materials. Does the principle of no prior restraint extend to speech in an electronic form? Would such police or law enforcement action blocking cell phone service, or social media or Internet access, serve democracy? Is using a cell phone to organize a flash mob akin to shouting fire in a crowded theater? Is blocking cell phone use or Internet access in the name of public safety turning a democratic state into the very worst of an authoritarian dictatorship where citizens' rights--human rights—are crushed in the name of state security?

2011 is the 135th anniversary of the invention of the telephone. It is said that when writer and satirist Mark Twain, who was among the early adopters of the telephone when it was a new technology, answered the phone, he would say: What the hell do you want! (SCHEMENT, 2011). The protocol for answering the phone had not yet been developed, and civility, at least on the phone, had not been cultivated.

Considering social media and journalism in the age of networked communication, what should be the role of civility in public discourse? Historically, journalism has long placed a premium on civility,

although this has not always been the case. In the era of so-called yellow journalism about 1900, incivility often characterized the news or opinion pages. In 21st century journalism, the blogosphere often features discourse that not only offers strongly worded opinion but even rudeness or a distinct lack of good manners. The blogosphere is a vital source of political information, especially during election campaigns - see the Blogosphere Authority Index (KARPF, 2010). Incivility is seen as increasingly characteristic of American political discourse (MANSHIP, 2011). Political scientist Robert Entman writes:

Incivility can be defined not just in terms of politeness, but also in terms of orderly discourse. Today's "political and policymaking processes are not ordered around acknowledged facts or even the search for [...] arguable facts. Nor are public policy decisions in the U.S. driven by the desire to solve problems [...]" Our political conversation has become increasingly disorderly. [...] One of our two major political parties today benefits electorally and in policy-making from impolite and disorderly discourse, while the other lacks incentives to fight back with equal fervor (ENTMAN, 2011).

Yet, civility should not be used as a pretense for censorship.

While there is no clear evidence linking a lack of civility with resulting social problems such as violence, many critics contend that such a link is likely if not inevitable, and point to a spate of campus shootings and other anecdotal cases as evidence. At Rutgers, a 2010 case involving a student suicide was directly linked to two students who surreptitiously transmitted live via the Internet video shot from a Web cam of the student's intimate encounter with another student and then announced on a social media web site. Conversely, there is a direct and compelling link between political speech and violence, presumably meant to have a chilling effect on freedom of expression. On August 25, 2011, for instance, masked gunmen brutally attacked the well-known Syrian editorial cartoonist Ali Farzat, just days after he published a cartoon showing President Bashar al-Assad thumbing a ride with deposed Libyan dictator Col. Muammar el-Qaddafi (BAKRI, 2011). After the attack, Farzat was thrown from a car and left bleeding along side the road, with two broken fingers, a broken arm and a bruised eye.

Conclusions

Malcolm Gladwell in *The New Yorker* writes that digital technology, particularly social media, is exerting only a small influence on democracy (GLADWELL, 2010). He contends digital technology is not making a significant change, and not for the better. The influence of social media amounts to only small changes, such as persons signing online petitions

or making charitable donations. Although these might be worthwhile, in Gladwell's view, they are not substantial, nor are they making the world qualitatively different than before in a political or social sense.

Considering all the evidence presented in this paper, however, it is important to ask whether these small changes might have a cumulative effect. Research has often shown how media influences, such as exposure to violent imagery or depictions of body types, have a cumulative effect (LIEBERT and SPRAFKIN, 1988; COHEN, 2006).

Do billions of small changes add up to a big effect? Consider the case of microloans, which originated with the Grameen bank in Bangladesh. In 1976, Professor Muhammad Yunus, a Fulbright scholar at Vanderbilt University and a Professor at the University of Chittagong, launched a program of microfinance in which the poor of Bangladesh, especially women, could obtain small loans without collateral. In response, millions of poor individuals in that country have been able to participate in the Village Phone program (as of 2007, 7.3 million persons had been awarded microloans, with 93% going to women), in which mostly women entrepreneurs started businesses providing wireless pay-phone service in rural areas of the country. The local economy was stimulated greatly and job growth was spurred tremendously. Yunus won the Nobel Peace Prize in 2006 (BLOOMBERG BUSINESS WEEK, 2007).

With a billion persons using social media and an estimated five billion mobile phones in use worldwide (WORLD BANK, 2011), the potential cumulative impact of mobile news and social media on democracy is profound. Evidence suggests such widespread digital technology could enable not only economic development but also political participation where other infrastructure is limited. Nearly ubiquitous mobile digital media can empower the individual. They have the potential to close the digital divide and the information gap. With an active and interactive dialog between professional journalists and networked individuals, which some call citizen journalists, it is possible to narrow the knowledge gap on matters of public importance. There is the potential to engage citizens in digital democracy.

Scott Campbell at the University of Michigan has data showing digital mobile media are linked to citizen engagement in public discourse (CAMPBELL and KWAK, in press). In particular, Campbell has found that citizens' use of mobile technology for discussing politics is positively associated with both political participation and openness. Moreover, Campbell's research indicates use of mobile media is also linked to discussing public affairs, or news. These findings suggest that a more

interactive and robust journalism may lead to not only a more informed citizenry, but to a more engaged one, as well. Whether the 21st century and beyond will see an innovative journalism industry characterized by vigorous and independent reporting about matters of public importance remains to be seen.

Table 1

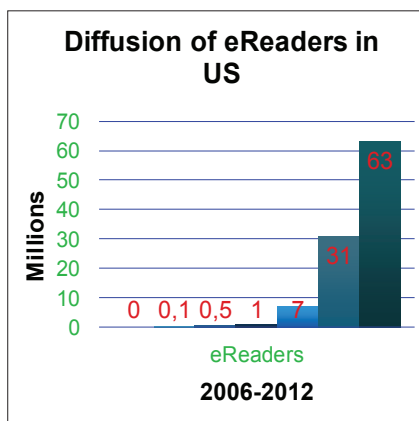
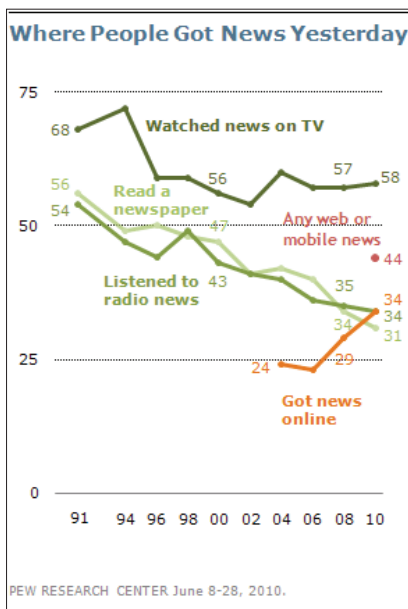


Figure 1. Forrester data for eReaders (primarily iPad and Kindle) in millions in US, 2008-2012.

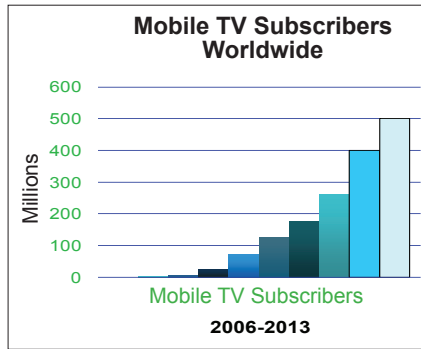


Figure 2. ABI research data in millions worldwide, 2006-2013

| NOTE

- 1 This paper was presented at the SBPjor Congress, Journalism and Digital Media, Rio de Janeiro, Brazil, November 3-5, 2011.

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