How newspapers began to blog—recognizing the role of technologists in old media organizations' development of new media technologies

"We want a completely different kind of blogging"—this was the stance of the interactive editor at one of the newspapers analyzed in this article in his struggles with journalists and managers over how to integrate blogs into the organization's website. Taking as the starting point the bewildering array of ways in which legacy media organizations began to blog in Denmark in 2007 I go beyond artificially sharp distinctions between "old" and "new" media and analyze how different communities working within legacy media organizations developed blogging tools and practices to suit their various purposes, shaping both technologies and organizations in the process. I will argue that technologists working in and with these organizations play an active and often overlooked role in the contentious and collaborative processes that shape how "old" media adapt "new" tools in different ways. I will suggest that research focused on technological innovation in news media organizations needs to pay more explicit attention to the role of the technical specialists who increasingly work alongside journalists and managers to change legacy media and their operations from the inside, and shape, often in part through the tensions between the three communities, how news media organizations develop new tools.

The analytical framework used here for that purpose draws inspiration from science and technology studies (Latour 1987; 2005) and sociology (Stark & Neff 2003; Stark 2009). The primary data comes from twelve semi-structured interviews with journalists, managers, and technologists at two newspapers, field visits to both organizations, and from secondary sources. The empirical focus is on identifying the defining characteristics of the communities involved in determining how each of these companies ended up developing nominally the "same" technology—blogs—for the same overall purposes—journalism and the business of journalism—in quite different ways. One newspaper, *Politiken*, developed a “centralized” approach to blogging that assembled people in a top-down manner around a few hand-picked blogs mostly written by staff writers and with limited and editorially controlled forms of user engagement built into both the technical infrastructure and the editorial process. This approach was deeply influenced by the journalistic community and their definition of people as “readers.” The outcome frustrated the technologists involved, as managers from the business side accepted that experiments with more participatory forms of blogging could potentially undermine the newspaper’s brand (seen as based on polished, professionally produced content). *Nyhedsavisen*, in contrast, developed an “integrated” way of blogging that offered people an opportunity to co-create the paper’s website, read professionally produced or user-generated content presented side-by-side, and comment and rate both staff writers and “amateur” bloggers. This approach was much closer to the vision articulated by technologists in the organization (and their definition of people as “users”) than to the journalists’ vision. It was backed by managers who thought this approach to blogging would generate more web traffic and help the newspaper carve out a distinct position in a highly competitive media market.

The purpose of the article is not to explain the particular outcomes in these two different organizations, but to examine the communities involved in the ongoing processes of technological innovation in legacy media organizations through the lens of these two particular development projects from a formative period of early encounters between established news media companies and new “web 2.0” tools. We need to understand the communities involved in these processes because the various tools—like blogs, social media, and mobile applications—that are integral to current transformations in the news industry and beyond are not off-the-shelf, plug-and-play gadgets seamlessly adopted by existing organizations. They are, like the artifacts, infrastructures, and technologically-enabled work practices long studied by science and technology studies in other settings, deeply shaped by how different social groups together end up developing some technological affordances and not others in particular social settings (Pinch & Bijker 1984).

Close attention to how newspapers began to blog brings to light a crucial commonality in development processes at two otherwise very different cases analyzed here: the important and often-overlooked part played by a distinct community of tech-savvy project managers, computer programmers, and information architects. Whereas the adaptation of “new media” by “old media” has primarily been studied with reference to the role of *journalists* from the editorial side (Bozckowski 2004; Domingo 2008) and secondarily with reference to the role of *managers* from the commercial side (Küng 2008; Acthenhagen & Raviola 2009), this article demonstrates the need to consider also the role of the *technologists* involved. (A theme only beginning to be explored in research focused on change in news media organizations, see for instance recent work by Braun 2011 and Westlund 2011; 2012.)

Like the journalists and managers, the community of technologists has its own defining values, perceptions of people (as “users” rather than “readers” or “customers”), and its own strengths and weaknesses in the constant and often complicated development processes that define how old legacy media organizations develop new media technologies for their own purposes. This point is significant not simply in terms of understanding the development of blogging by (Danish) news media organizations in the mid-2000s, but also for understanding the later adaptation of social media, the integration of audio-visual content into newspaper websites, the take-up of mobile media and many other new and disruptive technologies by legacy media more generally. Outcomes differ, and some are stable and sustainable, others not. But the main communities involved in these development processes within legacy media remain the same as journalists, managers, and technologists engage with each other in case after case, struggle with each other over tool after tool. Examining their different takes on a relatively early development project like blogging can help us understand their approach to later technologies too.

In the first part of the article, I situate the study theoretically and in relation to the growing literature on technological innovation in legacy media organizations. In the second part, I present the cases, methods, and data that the argument is based on. In the third part I outline the different forms of blogging developed by each of the two newspapers analyzed in greater detail. In the fourth part I analyze the three different communities of journalists, managers, and technologists involved in the development process in each case. In the fifth and final part, I offer a concluding discussion of what the wider implications of my most basic point—that we should not study processes of technological innovation without also studying technologists—has for future research and for our understanding of technological innovation in legacy media organizations.

Technological innovation in legacy media organizations

Various information and communication technologies (ICTs) are and have always been integral to the journalistic and commercial practices of news media organizations. The relation between technological change and change in journalism is, however, complicated and widely contested. Few academics seem willing to play the role of the much-maligned "technological determinist," and successive generations of scholars have continuously argued that though technology, journalism, and change are intimately interwoven, technology is not an inexorable autonomous force (a point made by, for example, Schudson 1978). Processes of technological development and adaptation have long been seen as shaped not only by available technologies and their variable and more or less durable material properties, but also organizational needs and dominant genres (Yates 1989) and wider institutional factors like journalistic role-perceptions and professional incentives (Singer 2005).

In the classic newsroom studies of the 1970s, the role of technology was often acknowledged in passing, but it was seen as of limited importance in terms of understanding how news organizations operate. As Herbert J. Gans (1979, p. 166) put it in *Deciding What's News*, "technological improvements come into being from time to time, but they do not seem to alter the format or story selection." Twenty years later this image of stability and at most incremental adjustments has given way to a sense that change is the only certainty—"journalism as it is, is coming to an end," in the word of one scholar (Deuze 2007, p. 141). Understanding the interplay between journalism and technology has thus acquired a new urgency and spawned a growing literature from the early 2000s onwards. (Much of this work is reviewed in Quandt & Singer 2008 and Michelstein & Boczkowski 2009).

Whereas a first wave of writings on technological innovation in news media organizations seemed to suggest that the arrival of new ICTs should be understood as an exogenous shock that would lead directly to change in journalistic practices (e.g. Pavlik 2000)—a view that seems widespread amongst practitioners too—researchers quickly converged on a more multi-causal understanding of technological change, focusing in more extensive and detailed empirical studies on how endogenous factors like organizational structures, dominant work practices, and specific conceptions of what people might want and expect from their news media shape the adaptation of new ICTs for journalistic purposes in particular settings (see for example Boczkowski 1999; Boczkowski 2004a; Cottle & Ashton 1999; Singer 2005).

In one influential articulation, the underlying theoretical conception of the relation between journalism and technology is the idea that they are characterized by "mutual shaping," interdependence between journalistic practices and the artifacts they rely on (Boczkowski 1999; 2004b). A related approach has been called "constructivist" (Domingo 2008a; 2008b), and holds that researchers should focus on the social factors that shape processes of technological development and appropriation. In this article I adopt a similar analytical framework drawing on pioneering work in science and technology studies. I conceive of ICTs as artifacts that are integral (rather than incidental) to specific "socio-technical" human practices—blogs are, to put it simply, a necessary part of blogging, and the properties of particular blogging technologies shape which kinds of blogging are possible and pursued by bloggers (Latour 2005). Seen in this light, blogs do not represent one particular technology with one set configuration and mode of use, but a family of tools and associated expectations, genres, and enabled forms of action that can be developed in various ways that realize some technological properties and enable certain practices while foreclosing other possibilities. The properties associated with particular technologies or a word like "blogs" should not be seen as fully fixed and pre-determined, but as shaped over time in an ongoing interplay between artifacts and those who use and develop them in various settings. The ideal-typical blog is web-based, reverse-chronology publishing that allows for commenting, but many other forms have been developed in different settings (Graves 2007; Karpf 2008; Domingo & Heinonen 2008). A central empirical question thus becomes the one pursued in this article: *who* shapes technologies and what does that mean for how we understand the process?

Focusing specifically on the development of blogs by two legacy media companies as case studies in how "old" media organizations approach "new" media technologies I adopt here the further insight from sociologists that processes of technological innovation are not simply shaped by, but also in turn shape, organizational practices and routines (Stark & Neff 2004; Stark 2009). Focusing on the "relevant social groups" (Pinch & Bijker 1984) involved in developing blogs at *Politiken* and *Nyhedsavisen* I demonstrate the need to consider not only the role of journalists and managers, but also the role of technologists, when trying to understand how technological innovation play out in legacy media organizations. I will suggest that the growing importance of the latter community is likely to, over time, change the very character of the organizations themselves as these employ and empower more people to explore and exploit new ICTs.[1]

This point stands in contrast to the growing body of research that deals specifically with how "old" media have taken up blogging. The emphasis so far has been primarily on how inherited journalistic routines shape adaptation. In a few cases, the accent is on how new ICTs have helped change journalism, as in Matheson's (2004) analysis of how pioneering blogging practices at the UK-based newspaper the *Guardian* rearticulates the relation between producers and users and change the construction of journalistic authority, or in Bruns' (2008) work on "produsage," where inherited distinctions between producers and users are seen as blurred by the development of interactive and participatory digitally-enabled publishing formats and the use people make of them. But a growing number of studies have focused on an ongoing "normalization" of blogs, where the new technology is adopted, but generally used in ways that more or less conform to pre-existing journalistic practices. Singer (2005) analyzed 20 national and regional news blogs in the United States, and found that most journalists used blogs on the basis of their existing norms and practices. Robinson (2006) arrives at a similar conclusion and argues that in most cases, blogs are used by mainstream journalists in ways that "reify traditional norms" and shore up their professional claim to authority even as the new tools also gradually push a more subtle evolution in formats and forms of interaction. Domingo's (2008b) ethnographic work in European online newsrooms identifies a similar trend. He found that journalists' professional culture exhibits strong inertia, remaining relatively unchanged and sometimes inhibiting innovation. Research in Denmark has arrived at parallel conclusions (Hartley 2011).

These studies represent important empirical contributions but leave one with the impression that technological innovation in news media organizations primarily is a question of *journalistic* adoption of new tools rather than of *organizational* development. Reading some of these studies you would be forgiven for thinking that legacy media organizations are made up mostly of journalists and that journalists make all the decisions that shape processes of technological innovation. They are not and they do not. In Denmark, for example, the Newspaper Publishers' Association reports that the industry employed 10,005 people in 2007. Only 3,086 of these were journalists. Managers from the commercial side of news media companies and the technologists involved in the introduction of new tools need to be taken into consideration too to understand how newspapers began to blog, to understand the tension-filled processes through which "old" media develop "new" media for their own purposes, to understand the ways in which they integrate various new ICTs into their everyday operations, and to see how the tools and the organizations themselves can change in the process.

Cases, methods, data

To address the question of how newspapers began to blog and draw out the wider implications for how we understand technological innovation as "old" media organizations adapt "new" media for their own purposes, I analyze development processes at two different Danish newspapers, chosen as strategic cases on the basis of their similarities and differences and examined at a formative moment in time when they in 2007 for the first time tried to integrate web 2.0 tools into their websites. Both companies are based primarily, in their professional and business practices, on the print platform, but are increasingly moving online to supplement and expand beyond their paper product. They both employ a number of people working specifically with new technologies, and in addition use external partners to develop their digital activities. They are privately owned and commercially run. One, *Politiken*, is an established, nationally-distributed paid morning broadsheet with a 2007 daily weekday circulation of 116,000 copies. It has been considered one of the pioneering news organizations online in Denmark, and in 2007 it had the most visited non-tabloid newspaper website in the country. The other, *Nyhedsavisen*, a new entrant on the Danish media market, was launched in 2006 as a free daily newspaper with the aspiration of expanding home delivery to most of the country and an explicit goal of becoming "one of the five most read newspaper websites in the country." In 2007 it was, with 540,000 copies printed on an average weekday, the highest circulation newspaper in the country, though it was some way from realizing its online aspirations.[2] What the two cases have in common is that they are legacy media organizations, primarily based on a print platform in structural decline, and that they are both perceived by others in the industry as early adopters of new technologies. What separates them is their different histories, business strategies, and particular resources, one being a well-established and dominant organization with a long history, the other a new entrant struggling to establish its position.

Both *Politiken* and *Nyhedsavisen* entered 2007 keen to harness blogs for their own purposes, but they ended up doing so in very different ways. Importantly, the impetus for adapting new technologies in these two organizations did not come from the journalistic side, but from, first, managers from the commercial side, eager to experiment in their search for new revenue streams to supplement the declining legacy print product, and, second, from people working on the two papers' websites, keen to develop their online offerings. The challenges both companies face are broadly speaking similar to those faced by newspapers across much of the Western world— circulation problems, stagnant advertising revenues, a fight for relevance in an accelerated and fragmented media landscape (Nielsen & Levy 2010). While the particular outcomes in terms of how each began to blog may be peculiar to these two organizations and the Danish market they operate in, I will suggest that the processes themselves—and in particular the active role played by technologists in both organizations—

highlight important and recurring aspects of how technological innovation in news media organizations work more generally. Focusing on their early encounters with blogs, one of the technologies often taken as central to what has been called "web 2.0", help us understand their approach to later technologies too, as the processes analyzed here are likely to recur as legacy media organizations try to come to terms with a whole range of later tools from social to mobile media—processes that, in the words of one interviewee, has "only just begun."

To understand the development of blogs at each newspaper, I interviewed several journalists working on the editorial side with blogs (online journalists, editors, and staff bloggers), managers from the commercial side of each organization working to integrate these new tools into an overall business model, and technologists working to develop blogs and integrate them into the two newspaper websites (interactive editors, project managers, computer programmers, information architects). I visited both organizations to see the newsrooms, and interviewed a total of twelve people, 6 journalists, 4 technologists, and 2 managers. (I sought access to more managers but they declined to participate.) One woman and eleven men were interviewed. Most were between thirty and forty, one manager close to fifty. The interviews were semi-structured and most lasted between 30 minutes and an hour. Eight were done over the phone, four in person on-site. Ten interviews were recorded and quotes in the article are from these. Two interviews were off the record, and are used for background only. Everyone interviewed was promised anonymity. All interviewees were asked to talk about how their organization came to blog and to describe the role played not only by themselves and their own community, but also of others, in the process of adapting and developing these tools. Relevant passages from the interviews where transcribed and analyzed in an inductive fashion, coding statements made by different people according to the community they identified with and the ways in which they articulated how the development processes had played out in their organization, their own role in it, the role of others, and what they saw as the purpose and stakes of their organization's attempt to integrate blogs into their website.

Centralized versus integrated forms of blogging

When *Politiken* and *Nyhedsavisen* introduced blogging on their websites, they did so in very different ways. The first adopted a "centralized" approach, the other an "integrated" approach. From the point of view of the technologists involved, what *Politiken* launched was not even, in the words of one, "really blogging at all"—but a simple hack of their existing Esenic content management system to brand certain parts of the papers' website as "blogs," publish their content in reverse chronology, and allow for (pre-moderated) reader comments. (At the behest of the technologists involved in the development, the paper switched to a dedicated blogging platform later in 2007 to ease interaction, the tracking of traffic and activity, and the promotion of blog content across the website.)

In the spring of 2007, *Politiken* hosted thirteen blogs, eleven by staff writers, and two hosting a circulating population of guest bloggers invited to contribute (mostly members of parliament and various media personalities). *Nyhedsavisen* adopted a drastically different approach and set up their website in a way that equipped all their 170 editorial staffers with a personal blog and allowed registered users of the site to set up their own blog (just as on blogger.com and similar platforms) hosted, branded, and promoted by the newspaper. In early 2007, the website hosted about 1,900 blogs by users, most by ordinary citizens but also including several prominent politicians and other public figures. The way in which the two newspaper websites displayed their blogs also differed in important ways. On *Politiken*'s website, content was initially hidden away on the unique URL of each blog (only with the introduction of Wordpress MU could the web editor automate the process of promoting some blog content across the website). *Nyhedsavisen*, in contrast, displayed a continuously updated list of the most-read blogs hosted by the paper on their front page. In April 2007, the first 25 spots on this list were occupied by user-blogs, and only at number 26 does the first blog written by a journalist appear (the site used a color code to differentiate staff blogs from user blogs).

Whereas *Politiken* developed blogging software and practices in ways that privileged the inherited norms and values of the journalistic community, *Nyhedsavisen* offered a form of blogging that presented user-generated content on an equal footing with professionally-produced content and let users of the site vote with their feet as to what they found most interesting.[3] On *Politiken*'s site, people were invited to read blogs and submit comments which, after approval by in-house editors, might be published. On *Nyhedsavisen*'s site, people could comment on blogs by journalists, start their own blogs, comment on other people's blogs, and in addition rate blog content they found interesting via various "like" buttons. As one technologist working at *Politiken* put it: "[*Nyhedsavisen*] are way ahead of everyone else. … They are much better at getting people involved. I feel like crying just thinking about how much better their site is." Journalists at the newspaper did not necessarily feel the same way. As one put it: "I don't really see the value of [*Nyhedsavisen*'s integrated form of blogging]. I mean, I haven't seen any kind of online debate, not even on the *New York Times* or the *Guardian*'s websites, that really broke news, set an agenda, or published anything of real value. If we [at *Politiken*] are to pursue this, I think we have to do it in a way that creates real value."

These two quotes forcefully illustrate the tensions present in both newspapers between different communities working for the same organization and involved in developing the same technology. Centralized blogging is no less blogging than integrated blogging, and neither approach is inherently superior to the other. They simply represent different ways of developing blogs as technologies and as editorial and commercial practices, each closer to the aspirations of one of the three communities involved in shaping the technology. Journalists at both papers generally wanted to develop blogs as a tool for existing journalistic purposes, the publication of professionally-produced content for people to read and perhaps comment on. The technologists were more interested in enabling a much wider breadth and depth of user-engagement with the site through the development of blogging as a platform open for all who signed up.

Politiken's adaptation of blogs was, broadly speaking, in line with the wishes of the journalists (and with the "normalization" trend identified by Singer (2005) and others). In the eyes of those involved it reflected a process in which journalists working within an older and more established organization successfully resisted more radical innovation in part because the managers remained unconvinced that the more open forms of blogging favored by the technologists held substantial commercial promise. ("We talk a lot," says one journalist, "about whether we should have these things *at all*.") *Nyhedsavisen* in contrast embraced their technologists' vision of a more distributed and participatory form of blogging, suggesting that even "old" media like print newspapers can use new media in novel ways. It represents a development closer to what has been called the "internetization" of legacy media (Fortunati 2005). Asked to explain the approach adopted here, people involved argue that the technologists' view came to dominate in part because managers thought that the newspaper, as a new entrant, had to offer something distinct and new to attract people online, and in part because the newspaper, launched only one year before, was less "stuck in its ways" (as a rare sympathetic journalist put it) than older incumbent legacy media.

The three communities involved in developing blogs

Though *Politiken* and *Nyhedsavisen* came to blog in quite different ways, interviews suggest that the three key communities that took part in the development work within each organization—journalists, managers, and technologists—were strikingly similar. The outcomes differed between the two cases, but the communities involved and some of the basic tensions accompanying processes perhaps best summarized as "contentious collaboration" were alike in the two organizations ("contentious" because the work was full of tensions and disagreement but also (collaboration" as they were team efforts intended to help the newspaper everyone worked for). All three communities were explicit objects of discourse for people in each of the newspapers, as interviewees talked about "the journalists" (also sometimes called "the newspaper people," even when referring to web journalists), "those on the commercial side," and to "the programmers" or "the IT people" (sometimes referred to as "the nerds"). Two of these communities, the journalists and the managers, have long been recognized as important parts of legacy media organizations, and it is widely recognized that the industry is rife with tensions between the editorial side and the business side, between creative and commercial aspirations (Küng 2008; Achtenhagen & Raviola 2009). The third community, the technologists, is, on the other hand, often overlooked (for exceptions, see Braun 2011 and Westlund 2011), but they too increasingly have a permanent foothold in legacy media organizations in the form of interactive editors, IT support staff, and in-house developers. This community also includes people on fixed-term contracts or brought in as consultants to work on specific development projects, like the adaptation of blogging at *Politiken* and *Nyhedsavisen*.[4]

The three communities involved in the development processes are united by a shared, abstract mission: to integrate blogs into the journalistic and commercial practices of the newspaper they work for. But because of their differences, concrete development processes are full of tensions. In part due to the malleability of the technologies involved, these differences and tensions can lead to different and more or less stable outcomes. Each community involved at *Politiken* and *Nyhedsavisen* brought to the table a specific view of what would make blogging worthwhile for the newspaper and a certain view of the people who should be reached via blogs (parallel to what Boczkowski (2004b) has referred to as "representations of the user"). (Compare three different takes on the relationship between newspapers moving online and public debate, one from a journalist, one from a manager, and one from a technologist, all taken from my interviews: "We used to host the debate." "We need to own the debate." "Today, you can't own the debate.") They also each had strengths and weaknesses in the negotiations that go beyond their formal authority and have to do with how others perceive their role in the organization. The key characteristics of each community can be captured through stylized descriptions along these lines—values, view of people, strengths, and weaknesses.

The <u>journalistic community</u> in both newspapers defined the value of blogs mainly in terms of *editorial value*, their ability to break news and host public debate (like an online letters to the editor-site or an updated version of a bulletin board site). A web journalist at *Politiken* says "we want to develop blogs as editorial tools. … While I accept that a lot of blog material isn't as good as what we put into the paper, I suppose we have to accept a lower barrier online. … I know [the chief online editor and chief executive for online content] think I'm very conservative, but I think we need to insist that what we host has to be hand-held, moderated, and quite carefully cultivated to make sure it has real value." The journalists represent the people they expect to reach via blogs as *readers*. One journalist puts it this way: "just as our readers have certain expectations that we will have to honor on our blogs as we do elsewhere, so we will have to develop our readers as good and engaged commentators so they can get heard without reducing our online debate to the kind of garbage you see on some sites." The central strength the journalistic community has in negotiations with others is their *privileged relationship to the perceived mission of the newspaper*. Newspapers may be businesses, but they are not *only* businesses, they are companies that see themselves as engaged in the business of news and by extension public debate. One manager from *Politiken* says "there has to be a clear and consistent relation between our print product and our online product, and the journalists still define the print product." The journalists' weakness in both organizations is that they are *seen by others as oriented towards the past*, not the future, and blogs in both newspapers are seen as an integral part of the company's web presence moving forward. One journalist at *Politiken* says "I realize we are often perceived as conservative and dragging our feet. It is just that many on the editorial side fear that this whole experiment will result in [the paper] being thrown in the gutter and dragged through the mud, you know. You never know what is going to get published this way." (One manager and one technologist, working at different newspapers, both used the same phrase in implicit response: "We *have* to experiment.")

The <u>managerial community</u> brings a different set of values, perceptions of people, strengths, and weaknesses to the table. For them, the value of blogs lies in their *commercial potential*. (This is not so crude as to be simply profit here and now, but also includes long-term growth potential, brand extension, and positioning vis-à-vis competitors.) One online chief operating officer says "of course, from the outset, we have assessed the commercial potential of this. I know the journalists are very skeptical and want a lot of editorial oversight with this, but that is expensive and we have to remember that we have to prioritize our resources and make sure we generate a reasonable return on investment." Another says: "The motivation for getting involved [in blogging] … is that advertisement is moving online, so we need to improve our website." The managers do not see the people they hope to reach via blogs simply as readers, but as *customers* who should be allowed to engage with the product more or less as they want to. As one puts it, in language that draws on the terminology of the technologists but frames the technology's participatory potential in decidedly commercial terms, "we have a strategy where we want more people to engage with our brand. […] In our online ventures, we want to establish a dialogue around both editorial content and other kinds of content so that we can build a large base of customers that generates traffic we can sell to advertisers and attract people that we can perhaps sell other products and services to." (Few journalists would speak in such terms.) The managers have considerable formal authority inside each company, though both organizations operate with separate editorial and commercial hierarchies only united at the very top under the publisher (the traditional "firewall"). If the journalists have to be more or less on board to relate a new venture to the mission of the organization, the managers have to be more or less on board to relate the venture to the commercial side of each company. The way in which this is most clear is in the managers' *near-monopoly on commercial projections*. As one journalist puts it "they would just keep on coming with all these numbers. I mean, we would have meetings and they would go on about this many thousand visitors, this many page views, CPMs, and I don't know what." One manager says "we constantly try to do projections and calculations to assess whether this is worthwhile." The liability of the managers is that they are perceived, certainly by the journalists and the technologists, and to some extend even by themselves, as the proverbial and often derided *"bean counters."* As one person from the business side put it: "well, to be completely honest, we have to listen to the editorial side and the IT people, because at the end of the day, I can spend all night on my Excel sheet, but my tools are just better for known quantities than for an experiment like this. … We have to experiment, and we will track success closely, but it is an open-ended process."

The community of <u>technologists</u> again sees things differently. While they, like the journalists and managers, try to be empathetic with others' views, they also have their own values, perceptions of people, strengths, and weaknesses. The central value for the technologists at both *Politiken* and *Nyhedsavisen* was the *realization of technological possibilities,* in the case of blogs a broad-based user-involvement. Asked what blogs has to offer to the newspaper, one says "they enable a much wider dialogue than the printed paper." At the other paper, the project manager says "blogs will allow people to become co-producers and participants in the creation of the paper. It gives us ways of opening up the editorial side, get more input, hear more views, ask our readers for advice, enter into discussions with them." The perception of people articulated in this community is clear: people are *users* of the website, and some of them will want to contribute content, interact with, go beyond simply reading and maybe commenting on professionally produced content. One says "we just have to get away from viewing people as readers. … If you want to be relevant in the future, then you will simply have to realize that the readers can make their own media now, and that they are used to shopping around and debating. They will demand the same here." Another says "[blogs] allow for a totally different kind of user-engagement, and it is clear to me that that is the future. That is where everyone is going, that is where everyone ought to go, that is where everyone will go. We should stop thinking of user-involvement in terms of a dozen letters to the editor or two dozen comments on some blogs, and think of how we can involve thousands of people, and then tens of thousands of people, in our sites." One manager expresses his sympathy with the technologists' view and establishes a link to his own commercial concerns, saying "a lot of user-generated content is as valid as that which makes it into the paper … user-involvement will make us more relevant to our customers. It will make people want to subscribe. … It will help us generate volume [in traffic]." The technologists' central strength in the internal negotiations over how to integrate blogs into the newspaper websites is that they are held to have *a privileged relationship to the future.* If journalists represent the past, many involved see technologists as harbingers of the future. In this, the editorial side and the commercial side are in agreement: "I think we will ultimately have to come to terms with some of these new things," says one journalist. "We need to experiment with these things to move forward," says one manager. The technologists' weakness in negotiations is that even though they are active participants in these conversations, recognized as integral to developing the tools, and some of them are permanently employed by the organizations they work for, they are still in many respects *regarded as outsiders*. (This is likely to change as legacy media organizations hire more and more people for in-house development teams and experiment with more and more new ICTs.) One technologist with a staff role at one of the newspapers says "in everything I do, I have to try to get both the editorial side and the commercial side on board."

Keeping everyone "on board" is hard work. Journalists, managers, and technologists in both organizations were involved in collaborative processes, but processes that are also often contentious because of the different ideas and interests of those involved. The journalists are repeatedly referred to as "more skeptical" by managers and technologists at both *Politiken* and *Nyhedsavisen*. One journalist accepts this characterization and says "I suppose part of the problem is that many of us just feel that the downsides [to all this] are greater than the upsides." A manager at one of the papers says "sometimes we are far apart." One of the technologist interviewed is more pugnacious—"we need to confront the mindset that the print product is more important, more prestigious, more profitable than the web, this idea that blogging and the like is just some sort of sludge that we don't really want to deal with."

There are tensions between all three communities. Both managers and technologists express their frustrations with the journalists. The commercial director at one paper says "the journalists need to accept that they are not the only ones who are interesting [to people visiting the site]." A technologist says "many journalists are used to one-way communication … they need to be reminded that they from now on will have to be part of a conversation." But the editorial staffers are not the only ones perceived as difficult. A manager says about the technologists "they want to try all these things, but we need to keep in mind that what we do should in the end serve our editorial and commercial purposes." A journalist expresses a similar sentiment: "there are all sorts of things we *could* do, but we need to be clear and explicit about *why* we are doing things, and [the technologists] don't always think that through." Finally, of course, both journalists and technologists express their frustrations with managers, especially when they feel that the latter are too tight with the money. As one online editors says: "Frankly, we need more editors [to moderate debates] to make this work the way they say they want to do it." "We need to invest more in this [blogging software] to really get [the site] off the ground," one technologists complains.

The ways in which old media organizations develop and appropriate new media technologies will differ from case to case and context to context, but in most contemporary news media companies, tensions like these will be integral parts of the internal process as journalists, managers, and technologists work together (and sometimes argue and fight over) how tools like blogs, social networking sites, various applications, and mobile media should be integrated into their organizational practices. The communities can continue to ascribe different meanings to new tools but an element of common ground has to be forged at a practical level and in terms of technological configurations. As made clear from the outset, *Politiken* and *Nyhedsavisen*, both legacy media organizations, came to blog in quite different ways, one centralized and close to the values of the journalistic community, the other integrated and closer to the values of the technologists. In other legacy media organizations in other contexts, other constellations between the communities involved, and other strategic interests and tactical ambitions will lead to other outcomes. But despite the clear differences between an old, incumbent, paid morning broadsheet and a newly established, insurgent, free daily trying to break into the market, development processes at the two newspapers involved communities that were strikingly similar. These communities are likely to be involved in future innovation processes too as legacy media in Denmark and elsewhere continue to contend with rapid technological change and the rise of new, new media like social media and mobile media. “You have to remember, this is an ongoing experiment”—this was the parting caution of a technologist involved at *Politiken* after he had voiced his frustrations with the ways in which his newspaper had come to blog.

Conclusions

In this article, I have examined how two newspapers in Denmark developed blogs and blogging practices and integrated them into their websites in different ways. I have focused on how “old” media organizations develop “new” media technologies for their own purposes and have stressed the need to look at *all* the different communities involved in the processes of innovation—not only journalists and managers, but also technologists. These three communities have different hopes and aspirations that help explain how they seek to shape the new media technologies that old media organizations increasingly incorporate into their editorial and commercial operations. These differences are a source of much friction and frustration along the way. But the tension they produce may also be a resource, as the deep diversity they reflect can be a key driver of innovation (Stark 2009). To realize the journalistic, commercial, and technological potentials of new ICTs, news media organizations accustomed to “duality management” (Achtenhagen & Raviola 2009), the reconciling of editorial and commercial communities, will have to deal with a more complex set of relations and cultivate forms of “trisection management” (Westlund 2011) to ensure they harness their technologists as well as their journalists and managers. Relations between members of the three communities analyzed here are full of tensions, tensions that can help drive innovation as news organizations appropriate new tools for their various purposes, but tensions that can also, if allowed to, be an impediment to change. (In a recent report from the United States (Project for Excellence in Journalism 2012), 10 out of 13 news media executives surveyed identified internal “culture wars” as the single largest obstacle to change in their companies.) Which community or constellation of communities will shape the development of a given technology in a particular company cannot be decided *a priori*, but must be examined empirically, as the resources, resourcefulness, and intra- and inter-communal relations may well differ, just as the technology in question may appeal in different ways to different communities. But in most legacy news organizations as they are currently configured, all three communities *will* be involved in the process of development and adaptation, and should be the subject of closer enquiry.

We need to understand these different communities better because the development work they are engaged in *within* legacy media organizations plays an important role in realizing the journalistic, commercial, and technological—and ultimately also democratic—potentials of new media like blogs and later ICTs. Some have argued that the spread of digital and networked technologies will lead to the arrival of a new “networked public sphere” that is more transparent, inclusive, and empowering than the top-down, few-to-many, mass media-dominated one we have known in the late twentieth century (Benkler 2006). That is possible, but by no means certain. Like previous generations of “new” media, such as radio, today’s new ICTs are often praised for their participatory and democratizing potential. Whether those potentials will be realized in practice depends on a wide range of social and structural factors as well as more contingent, modular processes of development such as those analyzed here. Blogging software does not necessarily offer more participatory and interactive forms of publishing than other web platforms. That depends on how the tools are developed and used.

In the future, technologists will in all likelihood become even more involved in these processes, as organizations historically build around distinct platforms like print, radio, or television broadcasting struggle to adjust to a convergent media environment and continue to integrate an ever-wider range of new technologies in their everyday operations. As the former web editor of *Nyhedsavisen* has pointed out, the community of computer programmers, IT developers, and social media experts will only continue to grow in size and importance as legacy media move more and more aggressively into new platforms.[5] These technologists do not simply execute decisions already made by journalists and managers. They play an active role, bringing not only technical know-how and a suite of artifacts that can be developed and integrated into an organization in a myriad of ways, but also their own values and views on how this ought to be done.

As long as "old" media have to continue to experiment with an ever-expanding list of "new" media, ranging well beyond blogs to social media, mobile media, and whatever comes next, technologists will play an increasingly central role in processes of technological innovation, changing both the tools and the organizations themselves in the process. As one manager put it to me in interview: "We haven't cracked the code yet." That arguably remains the case. Processes of innovation like those analyzed here are continuously under way. To understand them, and to understand the implications as we may or may not move towards a more participatory media future, we need to pay close attention to how journalists, managers, and technologists *together* develop new media in old media organizations through collaborative and often contentious processes, changing not only the practice of journalism, but also the business practices and indeed very organizational structures of a set of legacy news media organizations that continue to play a central role in our democracies.

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[1] Journalists, managers, and technologists should not be seen as members of pre-defined, fixed, and neatly separated categories with essential and stable traits. They are human actors in continually re-constituted communities involved in ongoing processes of defining and re-defining themselves, what they do, and the tools they use within each newspaper (Latour 1987).

[2] Hard hit by distribution problems, fierce competition from industry incumbents, flagging advertising revenues, and insufficient financial backing, *Nyhedsavisen* closed in 2008. Its website lives on, with new backers, and is today the most-visited pure player news site in Denmark.

[3] The two approaches to blogging are akin to the "producer-centric" and "participation-centric" approaches to mobile media outlined by Westlund (2012) in his study of the development of mobile applications at a Swedish newspaper.

[4] Neither of these communities are entirely internally homogenous and a few people move between them. But they identify as communities and each share a set of values and dispositions that individual members hold more or less strongly—values and dispositions that have changed over time and will change again in the future.

[5] Quoted in http://journalisten.dk/de-nye-nyhedskonger (accessed November 22, 2011).

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