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FROM “TRUST ME” TO “SHOW ME” JOURNALISM

Can DocumentCloud help to restore the deteriorating credibility of news?

Niv Mor and Zvi Reich

This study explores the potential of an online platform that encourages journalists to post the documents behind their news stories to help restore the deteriorating public trust in news media. Based on content analysis of 200 news items and 315 accompanying documents posted on DocumentCloud, findings indicate that contrary to journalists' traditional reluctance to rely on documents, the platform succeeds in boosting massive use of documents, both by mainstream and alternative journalists. Findings show that documents serve mainly to support factual claims (in 96 percent of items) and enhance the transparency of news processes, allowing audiences' unmediated access to raw materials, and greater capacity to evaluate information independently. However, there are no apparent signs that journalists verified the content of the document. The article suggests that DocumentCloud is a unique example of a technology that may succeed where the former technology that promised to serve as a journalistic reference system, hyperlinks, had failed. If the DocumentCloud experiment is implemented on a wider scale, it might have serious theoretical and practical implications, which are discussed here.

KEYWORDS documents; DocumentCloud; journalism; newsroom culture; technology; transparency

Introduction

Restoring public trust has become essential for the survival of the news industry, an industry now facing one of the worst crises in its history (Jackob 2010; Picard 2014; Anderson, Bell, and Shirky 2015). The strategies for reestablishing media credibility mentioned in the literature include, among others, greater levels of transparency regarding news-making processes and presentation of evidence behind the published stories (Seelye 2005; Plaisance and Deppa 2009; McBride and Rosenstiel 2013). According to Kovach and Rosenstiel (2010), with these strategies journalists shift the balance from “Trust me” journalism to “Show me” journalism, which addresses more effectively the deteriorating public trust in the media.

Technology can play a key role in restoring public trust. It can offer new interfaces for the enhancement of transparency, allow reporters to communicate with their audiences and introduce background information and source materials (Coddington 2012; Blobaum 2014). They can afford reporters' independent data analysis, detecting broader social phenomena, that began with computer-assisted reporting and the precision journalism movements in the 1970s, and continues today with data-driven journalism (Meyer 2002;

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Coddington 2015). The latter tries to utilize the availability of software and databases in current news environments not only to collect, analyze, visualize and present quantitative data, but also to enhance journalistic transparency regarding the sources behind the data (Coddington 2015; Fink and Anderson 2015). However, outside these journalistic niches, mainstream news organizations tend to use technology to mostly promote a friendlier and more communicative atmosphere. For example, news outlets allow their audiences to click on bylines and see reporters' contact info, photos and résumés, and encourage reporters to communicate with their audience, using comment systems and social networks (Blobaum 2014). Mainstream news organizations hardly use such technologies to enhance transparency more deeply, exposing their work processes and evidence (Chadha and Koliska 2015).

One technology that stood out in its initial promise to help restore public trust in media was the hyperlink (De Maeyer 2012; Coddington 2014; Chadha and Koliska 2015). The highlighted clickable text could serve as a journalistic parallel to the academic reference system, leading users to online source materials, raw materials and the evidence behind the published claims. However, as several studies have shown, mainstream news organizations minimized the use of external hyperlinks, which were flourishing at that time among bloggers and citizen journalists (Hayes, Singer, and Ceppos 2007; De Maeyer 2012). According to these studies, mainstream news organizations were concerned that including external hyperlinks would make it easier for their audiences to click their way out of their domains, and thus preferred to allow mainly internal hyperlinks that connect readers to former publications rather than their raw data, sources and evidence (Dimitrova and Neznanski 2006; Tsui 2008; DiMuzio and Sundar 2012).

Another attempt to utilize online technologies to enhance public trust and transparency can be seen in a platform called DocumentCloud, which will be explored for the first time in this article. DocumentCloud is an online platform designed primarily for investigative journalists, providing them a free set of tools that enable better use of source documents, embedding them in a large, open, searchable catalog of documents. News audiences, in turn, can follow this documentation in order to have a more transparent experience of news consumption, being able to evaluate some of the evidence behind the published stories.

DocumentCloud was launched in 2009 by Aron Pilhofer (former editor of digital strategy at *The New York Times* and executive editor of Digital at *The Guardian*), Scott Klein and Eric Umansky (from *ProPublica*). The platform was initially funded with a two-year grant from the *Knight News Challenge*, gaining momentum with an early contribution of source documents made by an impressive list of investigative news outlets that included household names such as *The Washington Post*, *MSNBC* and *The Chicago Tribune* (Seward 2009). After two years of independence, DocumentCloud became part of *Investigative Reporters and Editors* (IRE)—a US grass-roots nonprofit dedicated to improving investigative reporting, headquartered at the Missouri School of Journalism.

For more background about the affordances of DocumentCloud, we interviewed Professor Mark Horvit (Skype conversation, March 15, 2016) the (meanwhile former) executive director of the IRE. According to Horvit, DocumentCloud's tools enable journalists who upload their documents to its servers, to annotate them, analyze their content, highlight specific phrases or sections, share them privately with specific groups of people, or make them public. The platform relies on online services (*DocViewer* and *OpenCalais*) which turn the files, stored as PDFs, into fully searchable texts and allow users to embed their

documents directly into their news items. News organizations, which are the primary target of DocumentCloud, (but not solely, since freelancers, citizen journalists, and other document publishers with no organizational affiliation, can also sign up to the platform), who want to sign their reporters into the platform are encouraged to contribute their documents to the platform’s catalog. As a result, most documents in the catalog are standalones, i.e., not attached to any particular news item, probably since they were contributed to show good will. Individual journalists (whether affiliated with one of the participating organizations or signed up independently), who want to use DocumentCloud tools are required to authenticate their identity to avoid any liability of DocumentCloud for the published content and prevent anonymous posting of leaked and unauthorized documents. The catalog is arranged according to the name of the organization that made the documents public, and they are searchable by any user according to specific names, dates and places, etc. Documents connected to a specific news item are marked with a small icon.

From an empirical point of view, DocumentCloud enables a rare research opportunity—exploring what happens when a platform tries to encourage journalists to post the documents behind their stories under real-life conditions. To what extent do different news producers make actual use of these options and present the raw materials underpinning their reports? Findings are based on a combination of qualitative and quantitative content analyses, sampling 200 news items that were accompanied by 315 documents. They suggest that DocumentCloud is a promising technological solution that may help foster a more trustworthy new breed of hyper-documented journalism and thereby enhance public trust. At the time of writing, the future of DocumentCloud was not entirely clear. After six years under the IRE, during which its catalog was expanded to more than 3.6 million documents, its technical capabilities were improved, DocumentCloud left the IRE and turned into a nonprofit organization, that now struggles to find a revenue model to become sustainable. Whether it survives or not, studying the case of DocumentCloud is worthwhile, considering: (1) the existential need of media organizations to restore their deteriorating public trust; (2) the scarcity of technologies with any promising potential to restore that trust; and (3) the traditional reluctance of journalists to use documents, as described in the following literature review.

Literature Review

DocumentCloud represents a “New bottle old wine” technology, enabling its users to harness twenty-first-century cloud technology to exploit the evidentiary value of a medieval technology—documents. Hence, in order to outline a theoretical framework that enables analysis of the studied phenomenon, our literature review examines a series of related issues: trust and journalistic transparency theory, the traditional reluctance of journalists to rely on documents, and the role of documents as “journalistic objects of evidence” (Anderson 2010).

From “Trust Me” to “Show Me” Journalism

According to a recent Gallup poll, public trust in journalism, which has been declining for the last two decades, has reached its lowest point since the 1970s, with only one third of the American public saying they have “a great deal” or “a fair amount” of trust in their news media (Swift 2016). By “trust” we refer to the ongoing social process in which one side (the

trustor) is willing to take a risk by relying on other (the trustee) (Blobaum 2014). Scholars widely agree that public trust is essential and even has economic and existential value for legacy media organizations (Meyer 2002; Anderson, Bell, and Shirky 2015; Picard 2014), especially in current media environments that are hyper-saturated with free journalistic and non-journalistic news content, while the news industry is facing an economic, technological, and social crisis (Siles and Boczkowski 2012). Studies based on a series of internet surveys with news audiences show that when people's main motivation is to get information about the world, they prefer news providers they trust (Tsfati and Cappella 2003). Furthermore, a recent large-scale survey in the US showed that "People who put a higher premium on trust-related factors are more engaged with news, are more likely to pay for it, install news apps, or share and promote news with their friends" (The Media Insight Project 2016, 1).

What are the potential strategies for journalists and news organizations who wish to restore public trust? Earlier research indicates that public trust in journalism can be developed in different ways and on different levels. However, the supreme strategy for gaining trust, according to various scholars, is to behave professionally and produce fast and accurate reporting, and establish a reputation that solidifies into public trust (Blobaum 2014; The Media Insight Project 2016). Reliance on reputation is not enough in current media environments, according to Kovach and Rosenstiel:

[T]he news comes from all kinds of sources, in all styles and formats, from journalists and non-journalists, we [as the audience] need more. We need to be able to know why we should believe the sources relied on to offer facts or to comment on them. (2010, 33)

In order to earn public trust, according to Kovach and Rosenstiel, audiences must receive greater access to reporters' raw information and evidence and have a greater capacity to evaluate their weight independently; reporters need to be more open regarding their news-making processes and news sources. In short—to become more transparent.

Journalistic transparency at its most basic level can be defined as the public exposure of the hidden factors that shape the production of news to the public (Allen 2008). As a more general moral directive that can serve as an indicator of truth-telling, transparency is rooted in Immanuel Kant's human dignity principle (Plaisance 2007). According to Kant, even if transparency is not a sufficient condition for ethical conduct, its absence is a precondition for fraudulence. Journalists tend to describe transparency as an important moral directive and as one of the main foundations of journalistic credibility, honesty and fairness (Plaisance and Deppa 2009). However, in practice, how they actually put this general and abstract journalistic value into widely accepted practices remains unclear (Florini 2007). And yet, although transparency is generally characterized as the open flow of information (Holzner and Holzner 2006), the kind of transparency Kant was referring to was supposed to enable others to observe not only the mode of conduct of the actors involved, but also the cognitive and moral reasoning behind their conduct. Such a level of transparency is a way to show genuine commitment to truth-telling instead of making general or empty claims about moral values (Plaisance 2007).

Karlsson (2010) identified two essential levels in which journalistic practice can convey a sense of transparency: "disclosure-transparency," generated by news producers' open and frank approach, exposing the manners in which news items are selected and produced; and "participatory-transparency," generated by news producers who invite their audiences to play an active role in news production processes. Both levels have the

potential to improve news producers' public image. Inviting their audience to contribute to the news process is characteristic of news organizations that aspire to turn their site into a convergent place that attracts news consumers (Singer et al. 2011). To measure the impact of the different expressions of transparency and to examine their potential to improve public trust, a recent survey-based study examined how transparency effects source and message credibility (Karlsson, Clerwall, and Nord 2014). Its findings showed almost no measurable effect of transparency on the credibility of journalists and their messages. The only exception was the practice of using external hyperlinks, whose usage "seem important, as effects of links could be found on both source and message credibility" (Karlsson, Clerwall, and Nord 2014, 8).

According to Chadha and Koliska (2015), who interviewed journalists on their use of hyperlinks, journalists seem to understand the potential of using external hyperlinks in order to expose the sources and evidence behind their stories, and improve their public image. As one of their interviewees had put it:

Now there is a sense that I need to show people more. Recently I did a story on the Federal Reserve and I linked to the Excel files that I got from the government, so if someone wanted, they could see where I got my data. (2015, 8–9)

However, despite their capacity to improve source and message credibility by linking readers to sources and evidence behind the information, adding context that enhances transparency connectivity, commercial news organizations, which measure their success according to traffic records, have severely circumscribed these practices. Previous research showed that alternative media, such as political bloggers and citizen media news sites use hyperlinks extensively for such purposes, while commercial news organizations mainly allow their reporters to use internal hyperlinks that connect current stories to former ones published by their own news sites (Coddington 2012; De Maeyer 2012; De Maeyer and Holton 2016).

Documents as Objects of Journalistic Evidence

Like hyperlinks, DocumentCloud enables journalists to show openness regarding news sources and processes by providing access to original source materials, however it does so without the risk of losing traffic. Rather than clickable connections to source web pages, DocumentCloud allows news producers to choose whether to embed the source documents in a PDF form within their online news items, or to link to the documents posted in the DocumentCloud database.

Interestingly, documents are one of three main modalities through which journalists gather information from sources, alongside firsthand observations and interviews (Anderson 2010). One can add here a fourth: auditory channels such as telephones or Skype, which are widely used for these purposes without physical presence (Strentz 1989; Reich 2013). However, despite being considered a highly reliable means for obtaining information, especially when issued by official institutions (Ettema and Glasser 1985; Shapiro et al. 2013), journalists hardly use documents outside restricted niches such as court, business and investigative reporting, as their main objects of evidence (Ericson 1998; Ettema and Glasser 1998; Haltom 1998; Reich 2008). Instead, journalists prefer to interact with sources orally, as it allows them to apply interviewing techniques and obtain at least exclusive details in non-exclusive stories (Tuchman 1978; King and Schudson 1995; Reich 2008).

And yet, even when documents do serve as journalists' main object of evidence, they rarely expose source documents to the public eye (Ettema and Glasser 1998), probably due to their deeper routine of avoiding exposure of news sources, as evident in earlier studies (Ericson 1998; Dimitrova and Strömbäck 2012; Shapiro et al. 2013). The majority of these sources are government officials whose expertise and epistemic authority is perceived to be higher than other sources (Hall 1978; Bennett 1990). Veiling sources' identity only encourages them to contribute information when they wish to leak information anonymously, but also to prevent others from following the journalists' work process, allowing them to appear more knowledgeable than they actually are. Journalists, on their part, tend to attribute truth claims to news sources mostly when they question their veracity and accuracy (Ericson 1998; Dimitrova and Strömbäck 2012; Shapiro et al. 2013).

According to the *Oxford English Dictionary* (2017), a document is "A piece of written, printed, or electronic matter that provides information or evidence or that serves as an official record." Academic perspectives, however, tend to overlook the technology that is used to transfer information, while emphasizing the way these objects preserve and transfer information over time. Scholars tend to emphasize that documents are neither natural objects, nor meaningless ones (Sokolov 2009), providing "evidence in support of a fact" (Briet 1951 quoted in Buckland 1997, 806). Documents are seen as artifacts of sociocultural activities, produced within a certain cultural and historical context, created artificially in order to convey a meaningful message in its exact and original form throughout time and space (Sokolov 2009).

Though serving the dissemination of knowledge throughout history, documents started to be used as evidence only during the eleventh century, according to Michael T. Clanchy (2013), a scholar of the history of literacy in medieval England, when large parts of Western societies became literate. During that period, documents started to serve as a means of proof for matters such as ownership, nationality and the state of affairs at the time they were issued. They were gradually adopted by different rulers and public institutions as a reliable tool for conveying their messages (Clanchy 2013). Paradoxically, however, the rise of documents gave also rise to an industry of counterfeit documents, which, in turn, required new technologies, from wax seals to water marks and other safety measures that characterize today's banknotes, in order to authenticate the documents and differentiate them from counterfeits. Establishing their evidential value, Bruno Latour (1986) refers to documents as "immutable mobiles," highlighting the undeniable ability of their content, as artifacts that convey a meaningful message that can be repeated in their exact form through time and space, in a manner that identifies their creators (Sokolov 2009).

Compared to material objects such as print or handwritten papers, digital documents seem somewhat inferior. Web pages are dynamic objects that can be constantly updated and modified to eliminate errors and meet audience expectations for fresh and updated materials (García Avilés et al. 2004). Considering these attributes, researchers refer to web pages as "liquid documents" (Karlsson and Strömbäck 2010; Zamith 2016), ridiculing academics that try to chase these "moving targets" with their content analysis microscopes (McMillan 2000). Hence, unlike material documents, digital documents cannot guarantee that the message they convey is preserved over time. Therefore, journalism scholars who analyze online content must first "freeze" them (Karlsson and Strömbäck 2010).

DocumentCloud enhance the preservation of the content in its original form, not only on its own servers, but also on the devices of each user who downloads the document as a

PDF file. PDF technology makes it possible to freeze digital content in a printable version. Developed by Adobe in 1993, this format became an open standard format for digital documents, that in contrast with hyperlinked materials, which can be changed or removed by their source, ensures that their message will be preserved in its exact form, and hence might be more suitable to serve as journalistic evidence.

Research Questions

In order to examine the potential of DocumentCloud to help foster a new breed of hyper-documented journalism, encouraging its users to publish the documents behind their stories in order to present evidence and enhance journalistic transparency, this pilot study addressed the following research questions:

RQ1: To what extent do journalists post on DocumentCloud documents that present evidence and enhance news transparency regarding the work processes behind their news stories?

RQ2: Are news items connected with DocumentCloud accompanied by further transparency-oriented features: more external hyperlinks, more disclosure of how documents were obtained and more expression of authors' opinions regarding the reported matter?

RQ3: Are there significant differences between legacy and alternative journalists in their use of documents, and in their transparency regarding news processes?

RQ4: Are there any indications in the stories of journalists' efforts to verify the factual information that appears in the documents attached to the story?

RQ5: What is the nature of the sources that issued the attached documents: are they dominated by government sources, or do they open the doors to new players such as NGOs and research centers?

Methodology

To address the research questions and explore the role of documents made public on DocumentCloud in the published news items, we employed a combination of quantitative and qualitative content analyses of hundreds of news items and documents that were attached to them.

Since the DocumentCloud catalog is organized around the names of the registered news organizations rather than the individual journalists who posted the documents, sampling was carried out as a reverse process that began with sampling news organizations.

At the time the sampling took place (August 2014) just over 400 registered organizations appeared in the DocumentCloud catalog. In order to maximize the diversity of the studied users, we randomly selected 100 names—almost a quarter of the entire population of registered organizations. To avoid documents not associated with any published news item, as well as non-journalistic, occasional and non-active users, we excluded from the list any of these cases as well as organizations whose journalists had uploaded less than five documents, leaving our sample with a total of 96 news organizations.

To upload the published documents, we clicked on the selected names of the organizations, randomly selecting only documents connected to a news item and written in English. After exhausting the list of 96 organizations, we started working the other way around, collecting the source documents connected with each of those news items. To avoid over-representation of heavy document users, some of whom posted thousands of documents, news items were selected randomly with three news items for heavy users (who posted thousands of documents), two for medium users (hundreds of items), and a single item for small users (less than one hundred documents).

All in all, the sample ended up with 200 news items attached to 315 source documents, published by 96 news providers.

In order to detect the spectrum of potential roles that source documents play within the specific news item, an initial random sample 30 news items that were attached to the selected documents were analyzed qualitatively. This initial analysis was guided by a constructivist grounded theory approach, in which the scholar uses his or her interpretations, terms and ideas from the relevant field of knowledge to construct new theory (Kelle 2007).

The analysis pinpointed four distinct roles that documents play within an item: (1) presentation of evidence; (2) presentation of counter-evidence; (3) presentation of additional information; and (4) invitation of audience to participate in the analysis of the document's data. These four roles were later used for the quantitative coding, according to the measures detailed below. Categories were not mutually exclusive, since the same document can play more than one role in a given news item (e.g., presentation of evidence and conveying additional information on the reported matter). Each item was coded according to the measures below for the genre of the news content, the professional orientation of the news producer, the number of attached documents, and the presence or absence of any textual indication of a reporter's attempt to cross-check the information in the attached document/s.

To capture the overall standards of transparency, beyond the specific use of documents, coding included three additional measures mentioned in the literature: the extent to which the item included external hyperlinks, reporter's explanations regarding how the attached documents were obtained, and the extent to which he or she expressed a personal opinion regarding the reported matter.

To explore the extent to which documents are dominated by government agencies, the attached documents were coded for the identity of the issuing agency: governmental (e.g., government agencies, courts, and police) and nongovernmental (e.g., NGOs, academic and research centers). To ensure intercoder reliability, 10 percent of the sampled items were tested by a second trained coder, yielding a relatively high agreement between coders) Krippendorff's $\alpha = 0.81$).

Measurements

In order to quantitatively code the sampled news items and the documents attached to them, we used the following measures:

Document role

- *Presentation of evidence*: Documents whose content establish and support claims that were made either by the reporter, or by one or more news sources or by both.
- *Presentation of counter-evidence*: Documents whose content challenges such claims made by the news source/s.

- *Presentation of additional information:* Documents whose content adds information about the reported matter, contextualizes it, illuminates the interactions between reporters and sources and the journalistic work process behind the news story, and suggests sources' positions regarding the reported matter.
- *Invitation of audience participation:* Documents accompanied by reporter's invitations to news audiences to get themselves involved in the news making process, e.g., by verifying the documented data.

Media type

- *Traditional news media:* Items published by news outlets.
- *Alternative news media:* Items published outside such outlets by independent writers, citizen journalists, bloggers, writers for an NGO website, e.g., *Midwest Center for Investigative Reporting*.

Cases where the media type was not clear were coded individually, based on searches of the relevant website.

Item type

The sampled materials contained four types of items: regular news items, investigative reports, commentary and advocacy. Coding relied firstly on the original classification of the items and their labeling and placement in specific sections by the news organizations or the journalist who published them. However, these classifications, labels and placement were juxtaposed with the following identifying markers of item type. For regular news items: any news story, report or article which included information about recent, current or forthcoming events. For investigative reports, items that deal with revelations about a public or social issue, whose content included clear reference to an extended journalistic effort, time and initiative, e.g., reliance on multiple sources and intricate news work (Harcup 2014, 144). Four items were coded as commentary since they included mainly analysis and opinions on the reported issues and events, and four other items were coded as advocacy pieces, containing either speaking up for a particular cause, issue or party in an unequivocally unbalanced manner while promoting a specific policy.

In order to test the reliability of item classification, we trained a second coder, who classified 10 percent of the items according to these criteria, yielding a fairly high agreement between coders (Krippendorff's $\alpha = 0.79$).

Findings

Findings illuminate for the first time what happens when a rich variety of news producers come across a platform like DocumentCloud, which encourages them to post the documents behind their stories and the extent to which they actually accede and exploit it in ways that may earn the trust of news audiences, by presenting evidence behind their items and enhancing the transparency of their work routines.

All in all, 71 percent of the 200 items were published by journalists from traditional news media. Between them, one can find both legacy media such as *The BBC Online News* and *The Guardian*, as well as local news sites such as *The Dallas Morning News*. Although DocumentCloud has been operated by the IRE since 2011, only a minority of the stories (27 percent) were investigative reports, while the majority (66 percent) were

regular news items, 4 percent of the news items were commentary and advocacy, and 3 percent were categorized as unclear. In most cases (82 percent), items were accompanied by a single document, culminating with ten documents per item in 3 percent of the stories.

In relation to RQ 1, which pondered the role of the attached documents, our finding indicates that their main role was primarily epistemic. As can be seen in Table 1, most news items (96 percent) contained at least one document that was used as evidence—supporting the claims of the reporter and/or one of the sources. For example, a news item on the improvement of the employment rate in the US was accompanied by the Federal Employment Report, and an investigative report about climate change was accompanied by a Greenpeace Report. In 21 percent of the news items, documents were used as counter-evidence, e.g., an item on a new type of tear gas used by the Bahraini army was accompanied by an official US army document that contradicted the official statements of the Bahraini government, showing that despite their denial, specific tear gas was used.

In half of the items, the role of the documents was categorized as presentation of additional information, consisting mostly of background and contextual information on the reported issue. Some of these documents suggested an unmediated perspective of the sources and institutions that authored them. For example, one police report described how police decisions were made during actual events. Since these documents were issued by different authorities, agencies and institutions, they rarely shed light on the news making process. In rare cases, they do so mainly by presenting correspondence between the reporter and the source organizations or by conveying sources' comments to published claims. "Participatory-transparency" (Karlsson 2010), in which the journalist invited the audience to get involved in the news process by helping analyze the embedded documents was found only in 11 percent of the items.

With regard to RQ 2, on the overall transparency of items beyond the specific act of posting documents, findings show higher levels of transparency (See Table 2). The extended transparency, possibly in tandem with the general atmosphere of openness of DocumentCloud, is manifested in four main features. First, items accompanied by documents made a substantially broad use of external hyperlinks—39 percent of the items incorporated at least one external hyperlink that landed on a third-party website. Though mainstream news organizations used external hyperlinks less than alternative news—in 36 percent of the items compared to 45 percent in alternative news items—

TABLE 1
The function of documents in the studied news items of traditional and alternative media

	Traditional Media N= 143	Alternative Media N= 57	Total N= 200
<i>Presentation of evidence</i>	98%	90%	96%
<i>Presentation of counter-evidence</i>	21%	19%	21%
<i>Presentation of additional information</i>	50%	51%	50%
<i>Elicitation of audience participation</i>	11%	12%	11%

* Differences between traditional and alternative news producers' functional usage in documents were tested using a Chi-Square test of independence and found to be non-significant.
** 20 randomly-selected news items (10 percent of the sample) were tested for inter-coder reliability. Coders agreed on: presentation of evidence (Krippendorff's alpha = 0.89), presentation of counter-evidence (Krippendorff's alpha = 1), presentation of additional information (Krippendorff's alpha = 0.86) and Elicitation of audience participation (Krippendorff's alphas = 1).

TABLE 2

Items' transparency-oriented features

	Traditional Media N= 143	Alternative Media N = 57	Total N = 200
<i>Exposing how documents had been obtained</i>	23%	31%	25%
<i>Hyperlink usage</i>	36%	45%	39%
<i>Expression of author opinion</i>	12%	23%	15%

*A significant difference found between traditional and alternative news producers on the questions of Expression of author opinion, using Chi-Square test ($\chi^2(1) = 4.35$, $\phi = .15$, $p < .05$).

** 20 randomly-selected news items (10 percent of the sample) were tested for inter-coder reliability. Coders agreed on expression of author opinion, yielding Krippendorff's alphas of 0.89.

*** Differences between traditional and alternative news producers on the questions of Hyperlink usage and Expression of author opinion, were tested using a Chi-Square test of independence and found to be non-significant.

differences between the two groups were statistically insignificant, probably due to the small sample. The overall use of hyperlinks in these items is strikingly high compared to earlier studies, which found external links in 8 percent through 20 percent in mainstream news (Dimitrova and Neznanski 2006; Tsui 2008; De Maeyer 2014). Second, while in regular news in general one can hardly find openness regarding the origins of information (Ericson 1998; Shapiro et al. 2013; Hermida 2015), among stories that posted documents on DocumentCloud, 26 percent contained a clear explanation of how documents were obtained. Further transparency regarding the broader news-making process was evident in 16 percent of the items. Finally, 15 percent of the items expressed the author's point of view regarding the reported matter.

In relation to RQ 3, which address the use of documents among legacy and alternative journalists, findings show no significant differences between the two communities, neither in their frequency of reliance on documents, nor in the roles that documents play in their stories. This is somewhat surprising since alternative news providers such as political bloggers are expected to try harder to establish their credibility (Mindich 2005). The only significant difference between these journalists emerged when we compared between items that conveyed the author's opinion or point of view—23 percent in alternative news compared to only 12 percent in mainstream news ($\chi^2_1 = 4.35$, $p < .05$).

Regarding RQ4, on journalists' efforts to verify or refute the contents of the attached documents, in most items we couldn't find any observable indications of such an attempt, not even in 21 percent of the news items where documents served to present counter-evidence. In the few cases that bore clear traces of verification (4 percent), reporters used traditional journalistic methods such as cross-checking to verify the information in the document with an additional source. For example, in order to verify claims about the greenhouse gas effects made by an official US government document, an ABC reporter consulted three environmental experts who mapped the errors in the original document. Though one cannot rule out that at least some of these cases involved some verification without leaving unequivocal traces, it is safe to assume that the majority of them were not verified, due to the reasoning presented in the discussion below.

With regard to RQ5, which focused on the entities that issued the documents, findings show that the DocumentCloud did not pave the way for new producers of documents,

such as NGOs, as well as online and offline global agencies—neither among the documents posted by mainstream journalists nor among those of alternative ones. Both rely most of the time on official governmental documents. Sixty-nine percent out of the 315 analyzed documents were issued by government agencies or public institutions, such as police, the courts and government agencies. Eighty-two percent of the news items were accompanied by at least one official document.

These findings reflecting journalists' tendencies to trust public institutions, may be problematic according to the "show me" doctrine of Kovach and Rosenstiel (2010) especially in an era where public trust in institutions keeps declining (Pew 2015) and when journalists put more trust in their own media organizations than in public institutions, such as government institutions and political actors, as manifested in the Worlds of Journalism study (see Tejkalová et al. 2017). Obviously, one cannot rule out the possibility that at least some of the documents were verified without leaving clear traces in the item. Yet, the lack of indications of verification may also reflect deeper epistemic dynamics such as the unavoidable gaps between the potentially endless chains of evidence and the limited chains of verification that can be found even in more robust occupations than journalism, as detailed in the discussion.

Discussion

This study was triggered by our interest in the extent to which it is possible to encourage a new breed of hyper-documented journalism that makes heavy use of documents to present evidence and to enhance journalistic transparency in ways that might help restore the deteriorating public trust in the news media, if implemented on a broader scale. To explore this potential, we examine the case study of DocumentCloud, a platform that tries to create a new socio-technical environment to encourage journalists to present the documents behind their stories.

Obviously, due to the self-selection bias of the journalists who posted the documents, our sample cannot represent the entire journalistic population. And yet, with more than 3.6 million documents, there can be no doubt that DocumentCloud shows an impressive success in convincing hundreds of journalists—most of whom are not investigative reporters known for their "documented state of mind" (Ettema and Glasser 1998, 40). It is especially impressive if one bears in mind first that most journalists are reluctant to rely on documents most of the time, as diagnosed by a series of scholars (Koch 1991; King and Schudson 1995; Ericson 1998; Ettema and Glasser 1998; Haltom 1998; Reich 2013). Second, one should bear in mind that technologies that can promote public trust in the media are not only rare but also are not always exploited successfully. The former promising technology, hyperlinks, which had the potential to serve as a journalistic version of an academic reference system, showing audiences how journalists arrived their conclusions, failed to do so, due to commercial motivations of news organizations that harnessed this system for internal links only (Chadha and Koliska 2015).

Our findings indicate that in 96 percent of the cases, journalists use documents to present evidence—i.e., support claims made by the reporters or their news sources. Both traditional and alternative news producers shifted gear from "trust me" to "show me" journalism (Kovach and Rosenstiel 2010) trying to earn the audience's trust rather than take it for granted. Showing their audiences how they know what they know via source documents enhances journalistic transparency in several aspects. Firstly, by disclosing the

evidence behind their stories, journalists enable their audiences to assess facts, sources, raw materials and news processes independently. Secondly, half of the sampled news items were accompanied by documents whose additional information enables audience to learn more about the reported matters. Thirdly, in addition to the enhancement of "disclosure-transparency," in a minority of items (11 percent) documents were used to enhance "participatory-transparency" (Karlsson 2010), inviting audiences to participate in verification of the document's content. Promoting overall transparency can be seen even in the relatively high use of external hyperlinks in stories whose documents were posted on DocumentCloud (39 percent), compared with earlier studies (Dimitrova and Neznanski 2006; Tsui 2008; De Maeyer 2014).

As far as the content can tell, in most of the items that used documents as evidence no apparent attempts were made to corroborate or refute the content of the document. Only in a few cases news item bore clear traces of journalistic verification (4 percent). Obviously, one cannot rule out that at least some of the documents were verified without leaving clear traces in the item. The possibility that most documents weren't verified offers important insights on the gaps between potential chains of evidence and practical chains of verification.

While chains of evidence, as legal epistemology tells us, are potentially endless with one cue leading to another (Stein 2005), practical chains of verification are much shorter, sometimes non-existent—not only in journalism but also in broader societal and occupational contexts. Verifying every fact in their stories, as several journalism scholars have suggested, is simply impractical under the constraints that characterize journalism (Tuchman 1978). Hence, journalists follow the chain of evidence up to a certain point, trusting sources more often than corroborating their claims (Tuchman 1972; Ericson 1998; Manning 2001; Diekerhof and Bakker 2012; Godler and Reich 2013; Shapiro et al. 2013). A similar tendency to avoid progressing along the chain of evidence can be seen not only in reliance on documents—most of which (69 percent) were issued by various government agencies—but also—as studies have shown—when other accountable sources are involved, such as scientific journals (Schünemann 2013), news agencies, and even public relations practitioners (Davies 2009). Gaps between chains of evidence and chains of verification can be found in more robust occupations, such as science, where practitioners often trust others rather than try to corroborate or replicate their results (Coady 1973; Hardwig 1991; Davies 2009). In fact, one of the characteristics of different epistemic communities is the development of professional norms and practices that do exactly that—short-circuit the chains of verification to avoid slowing down their performance (Cetina 1999).

Conclusion

To better understand the hyper-documented breed of journalism encouraged by DocumentCloud, and the trust of journalists and their audiences in official records, one must develop a broader perspective on two questions: what is a document, and how its role is changing across history with the emergence of new social norms and new technology, especially in the digital age. According to Clanchy (2013), the romantic perception of documents as decisive evidence, as objects that hold evidentiary power, was developed mainly throughout the medieval period, following the growing need to distribute accurate information from identified authors. The construction of their authority as evidence was a

cooperation of social, political and religious institutions, evolving technologies of documentation, preservation and authentication, and the employment of symbols and markers signifying their origins and authority (Clanchy 2013). Bruno Latour (1986) acknowledges the stabilizing power of documents, calling them “immutable mobiles” whose “claims” cannot be denied after the fact. According to Anderson (2010), documents are “objects of journalistic evidence” (Anderson 2010) that can bestow a “patina of truth” on their content (Koch 1991, 316)

What happens to these documents in the digital age, where web pages, for example, are becoming “liquid”—dynamic objects, subject to constant modification and updates by their originators or by others (Zamith 2016). Web pages can hardly guarantee originality and authenticity. As a matter of fact, even the former candidate for authentication of news content—i.e., hyperlinks—couldn’t guarantee the stability and authenticity of landing pages, in an environment where websites keep altering, correcting, updating and removing content (Chang et al. 2012). However, unlike the dynamic web pages, DocumentCloud uses PDF files, a static form of digital documents. Once a document is uploaded to DocumentCloud, neither the source nor the reporter can correct errors seamlessly, change or remove it. This stability allows news producers and audiences to rely on DocumentCloud’s documents as evidence.

DocumentCloud tools may be revealed as more fit to survive in the mainstream news environment than external hyperlinks, since once a news organization decided to participate in the DocumentCloud project, the decision whether or not to post a document on DocumentCloud is the jurisdiction of the individual journalist, whereas hyperlinks were typically inserted or vetted by their editors, and hence could be easily circumscribed by the commercial interest of news organizations. Hence, DocumentCloud embodies an extra-organizational platform, beyond the reach of the commercial interests of news organizations. These interests may explain the consistent and significant lag between mainstream journalists and their alternative counterparts in their magnitude of reliance on external hyperlinks (Coddington 2012) that entirely disappeared in the case of DocumentCloud.

It is important to note that despite these findings, further studies that are less exploratory than the current one, are required to explore whether the DocumentCloud experiment is expandable to broader news environments, or can even become a journalistic standard, and what are the necessary conditions for such upscaling. This becomes especially crucial in an era of when the loss of public trust embodies a growing existential risk for Western news media.

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