Negotiating Professional News Judgment and "Clicks"

Comparing Tabloid, Broadsheet and Public Service Traditions in Sweden

Michael Karlsson & Christer Clerwall

Abstract

Digital media allow for instant tracking of audience behaviour, thus enabling a potential negotiation between journalists' traditional authority and professional news values, on the one hand, and the audience's power in terms of ignoring or paying attention to the journalistic outcome, on the other. The present study investigates whether clicks change news values and have an impact on news routines in tabloid, broadsheet and public service newsrooms. The findings indicate that audience metrics bring a new dimension to the news evaluation process regardless of publishing tradition, but that the commercial media seem to keep a closer tab on traffic. In general, journalists strive for a "good mix" between customization to achieve audience satisfaction and a desire for editorial independence.

Keywords: online news, news judgment, clicks, audience metrics, journalistic profession

Introduction

Consumer preferences have always been important in news production, as news producers are dependent on readers for economic and legitimacy reasons. Traditionally, user preferences have influenced news production in limited, abstract and indirect ways. Certain users contacted the news organization and share their views. Sales numbers were reported back to the news organization, giving them feedback on how they were evaluated. Some users were represented in aggregate numbers in polls made by the news organization. Other users were represented by idealized constructs held by journalists. In other words, the journalist and the news organization had very little systematic up-to-date feedback on how they performed on a specific news story and had no opportunity to change, tweak or replace the news story should it fail to appeal to user inclinations. Instead, the production process was largely guided by the internal media logic, source relations and journalists' news judgment.

With the advent of digitalized online news production, the conditions have radically changed, as one of the defining characteristics of digital news production is the ability for news producers to track, virtually in real time, what kinds of news stories consumers choose to expose themselves to and to adjust the news flow accordingly. Another development is content farming, where large quantities of low-quality news

are produced and/or assembled and optimized for search engines (Bakker 2012). This material can be matched with current Internet traffic trends, the ad market (Anderson 2011) or be syndicated to various news outlets, where user interests can be attuned to through use of appropriate cheap and easily obtainable content (Bakker 2012). Together, these two developments imply that algorithms automatically can produce news at the expense of journalists – a practice that has been labelled robot journalism (van Dalen 2012). Although this algorithmic conception of the audience (Anderson 2011) and news production could very well be a major factor reshaping contemporary news production, journalism research has so far focused surprisingly little attention on the issue, although there are some exceptions (see, e.g., Anderson 2011; Bakker 2012; van Dalen 2012; MacGregor 2007; O'Neill & Harcup 2009; Thurman & Myllylahti 2009). Though technology does indeed shape journalism, it does not do so – as pointed out by several researchers (Boczkowski 2005; van Dalen 2012; Karlsson, 2011; Karlsson & Clerwall, 2012) – unconditionally. Previous research has emphasized the prospective consequences of digitized audience metrics, but has not studied it extensively in relation to other news-shaping factors, such as journalists' news judgment, nor has the research compared the different media traditions.

Against this background, the purpose of the present paper is to study and compare how journalists from tabloid, broadsheet and public service media include "clicks" in their news judgments.

Literature Review

The literature review consists of three parts. First, we explain how the disposition of digital media brings with it new forms of audience metrics and how news organizations have learned about the audience hitherto. Second, we look at the previous research on audience metrics and journalism. Finally, we interlace this research with another factor that is widely believed to be a strong news-shaping force: the individual journalist's professional news judgment.

Every Step You Take, Every Move You Make...

When journalism moves online, this is accompanied by different patterns of communication potentially transforming the traditional transmission mode to different forms of interaction with the audience. One of these patterns of communication has been labelled *registration* (Bordewijk & van Kaam 2002; Jensen 1998). This mode of communication, embedded within digital media, allows for tracking any activity carried out by, in this case, a news consumer visiting the database (i.e. site) where news organizations publish their online news. In essence, this enables news producers to monitor, resources permitting, the real-time activity of news consumers as they click through the website. The technology used to extract web usage data, and infer usage patterns, is sometimes called *web mining* (Batista & Silva 2002). Basically it means that web server logs are explored for, i.e., page view patterns, clickstreams, and session data (a session may in this case entail the time from the start of the web site visit to the end of the visit). Every move (every click) that the user makes is traced by the server and stored in a server log, and these data are then subject to various kinds of mining processes, virtually in real

time (ibid.). This has also been pointed out within journalism studies by MacGregor (2007: 280), who asserts that the computer server "...for the first time in journalism history allows journalists to observe, almost directly, the audience, as they access website content." (see also Currah 2009; McKenzie et al. 2011; O'Neill & Harcup 2009).

This is drastically different from how user preferences used to be represented. Monitoring the audience was previously part of news production in the form of interviews, focus groups or different types of surveys, especially since the decline in newspaper readership (Beam 1995; Hujanen 2008; McManus 1994). However, this type of audience research only allowed limited feedback and there was a substantial time-gap between the time of news distribution and reader feedback. Such knowledge was used to inform news coverage, graphic design and what news stories were run on the front page and was thought to influence entertainment news, the business section and sports rather than the hard news (Beam 1995). On the other hand, there is research suggesting that audience input in any form appears to have been limited, as news production was rather guided by the internal production logic and the fact that journalists have peers and supervisors in mind when writing news stories (Gieber 1999; Schlesinger 1978; Sumpter 2000).

Whatever the role of audience preferences in past news production, digitized audience metrics brings something new to the setting. Not only does the digitalization of journalism permit the news organization to endlessly track audience movements online but also, more importantly, to adjust the news flow according to user taste in real time, owing to the reprogrammable nature of the digital media (Bolter 1984; Karlsson & Strömbäck, 2010; Manovich 2001). On a general level, Turow (2005) labels this phenomenon surveillance-driven culture production. Within the journalistic field, the introduction of audience metrics could potentially change how news items are made and ultimately be a deciding factor in the power over and quality of news production. One reasonable fear is that tools allowing news organizations to monitor the audience would be used for economic gain rather than informative needs (Cohen 2002; McManus 1994). Consequently, chasing clicks could make online journalism even more market oriented than its offline counterparts, as suggested by Cohen (2002).

In the next section, we look at findings from empirical research on clicks and journalism.

Clicks and their Influence on News Production

Although online news has been researched theoretically and empirically for well over fifteen years, digitalized audience metrics have thus far received only modest attention from researchers.

One commonly cited source, and the only study so far to focus solely on live metrics in relation to "clicks" and news judgement is MacGregor (2007), who investigated how journalists relate to various kinds of knowledge about their audience. However, given the speed of development, MacGregor's study may be somewhat dated, and thus more research is necessary.

Previous research (i.e., MacGregor 2007; Currah 2009; Lee-Wright 2010) indicates that "clicks", or "hits", have become an important factor in the editorial process. However, owing to their own logic, web statistics can only inform publishers about past "successes" and past "failures" when they are considering what stories to run, when

and where. In that sense, journalists will still have to rely on their professional skills regarding news judgement. Nevertheless, live metrics about presently on-going stories gives information about which stories are hot and which are not. One consequence of this may be a perpetual (live) negotiation between audience preferences and editorial decisions, although, according to MacGregor (2007), this is exceptional. Similarly, Lee-Wright (2010) argues that although it is possible to track usage instantly, the "hit count" does not seem to be used as a driver of editorial decisions, but rather as an informer.

Other research reveals a different scenario. Thurman and Myllylahti (2009) report, in a study on a Finnish newsroom, that the traffic the site gets was a factor in writing and selecting stories. If traffic was slow, an attractive news story could be posted to get the numbers up. This suggests that, in contrast to MacGregor's study (2007), the news desk was following the traffic virtually in real time and adjusting the news production accordingly. Gynnild (2008) makes a similar observation in a study of Norwegian news. In Gynnilds's study, journalists acknowledge checking the clicks up to twenty times during a shift. The initial publication seems to be especially important, as this gives guidance as to whether the journalists have got some aspect of the news, headline or angle "wrong". Over time, journalists accumulate knowledge of what works and what does not work in the online environment.

The "power of the hits" has also been observed by Phillips et al. (2010), who assert that when "news goes online, journalists are encouraged to find ways of attracting readers via Google's search engine because advertising rates are, increasingly, being linked to the number of 'hits' received" (Phillips et al. 2010:59). However, the authors also make the point that newspapers have to take "long-term loss of cultural capital", owing to overly commercial journalism, into consideration in their quest for more "short-term commercial gains of 'hits'" (ibid.). Several recent studies (Anderson 2011: Bakker 2012; van Dalen 2012) have pointed out that automation and algorithms play an increasing role in journalism, especially given the mismatch between the cost of producing news and the lack of a viable online business model.

All of the above research is relevant and a good starting point, but few of the studies have focused solely on audience metrics, discussing them in relation to other factors shaping news production or comparing different media traditions. In general the impact is often implied, but not accompanied by qualified empirical support. As O'Neill and Harcup (2009) emphasize, this is an area within journalism studies that has long been in need of critical scrutiny. Next, we bring journalists and their news judgment into the mix.

Journalists' News Judgment in Context

Journalists have never had sovereign powers in the news production process, as the literature on the sociology of news has convincingly demonstrated (Schudson 2003; Shoemaker & Reese 1996; Shoemaker & Vos 2009). However, although journalists' discretion may be limited, it is definitely one of the key factors influencing the actual collection, selection and framing of news stories. Since the early days of news media research, the individual journalist has been considered important in shaping the news (White 1997). In this context, news judgment is especially interesting, as it guides the actual gate-keeping process. News judgment is, as Tuchman (1972) suggests, the process whereby journalists assess what can be highlighted as important and interesting

facts and, in the process, create news as a special and "superior" form of information. Their assessment is grounded on, and balances, many different factors, such as cultural proximity, level of conflict, the ease with which information can be obtained, reader appeal, democratic relevance and connection to societal elites (Galtung & Ruge 1999; Harcup & O'Neill 2001; Kovach & Rosenstiehl 2001). Additionally, journalists' news judgment is to be considered sacred and opaque knowledge that separates journalists from outsiders (O'Neill & Harcup 2009; Tuchman 1972). Thus, any changes in the news judgment itself or in journalists' integrity in carrying out news judgment may have critical ramifications both for the news and for the journalistic profession.

One great danger posed by audience metrics is that the cherished professional news judgment will be altered or will even have to surrender to algorithms and the taste of the audience. Accordingly, should the click-o-nomics of online news be fully and unconditionally implemented, it would potentially threaten the journalistic profession. Furthermore, increased pressures to cater to user preferences would be a step towards tabloidization (Esser 1999).

However, all novelties must be implemented in already existing structures and practices, suggesting that changes in news media seldom have immediate, radical or universal effects (Boczkowski 2005; Karlsson, 2011; Karlsson & Clerwall, 2012; Winston 1998). Other research on more traditional forms of audience research has shown that, although this does influence news production, journalistic ideals are not deserted (Hujanen 2008). Because the news selection process is conditioned by many other factors, it seems far fetched to suppose that those factors will become wholly irrelevant. Also, different media operate in different settings. While commercial media need to chase clicks due to advertising, this is not the case with public service media, which have other means of finance. Furthermore, broadsheet papers have a different publishing tradition compared to tabloids both off- and online, although there are also signs that the differences may be decreasing (Jönsson & Örnebring 2011; Harcup & O'Neill 2001; Karlsson & Clerwall, 2012). Thus, the implementation of audience metrics may differ between different media traditions.

To summarize, digitized audience metrics imply that journalists will find themselves with even less space to manoeuvre in and that this space will be occupied by user preferences. This, however, is a question that needs to be addressed empirically. Accordingly, the purpose of the present paper is to study and compare how journalists from tabloid, broadsheet and public service media include audience metrics in their news judgment.

Method

The method used here is in-depth interviews with ten journalists in midlevel management positions who make daily and/or strategic decisions concerning nationwide Swedish online news sites (see Table 1). Previous research (see, e.g., Anderson 2011; van Dalen 2012; Macgregor 2007, Phillips 2010) has often been conducted in an Anglo-Saxon context (i.e., the US and the UK), which is marked by a liberal media system with a decidedly commercial nature (Hallin & Mancini 2004). Thus, conducting a study in a country with a Democratic Corporatist Model (Hallin & Mancini, 2004), such as Sweden, might offer interesting and somewhat different findings. Additionally, Sweden, a country located in northern Europe with nine million inhabitants, also has a long history

in the different publishing traditions investigated here: tabloid, broadsheet and public service. In total, findings in the Swedish context may generate patterns that could be used as a backdrop when researching how technology is appropriated in other contexts.

The interviewees are in positions (news editors, online editors-in-chief, heads of development) to make daily and strategic decisions concerning how news is being produced. More specifically, they influence what news will be published on the most important space of the website – the front page (Bucy, 2004; Karlsson & Strömbäck, 2010). Hence, they both have direct experience of the issues under scrutiny here and are important actors in shaping the Swedish online news agenda. Although the sample is relatively small, it covers a large part of the population, as these media outlets are the only ones with online news publishing that explicitly targets and, more importantly, reaches a nationwide audience, and the number of midlevel management positions in each newsroom is relatively small. For the smaller newsrooms (e.g., SVT, SR, DN, and SvD) there are about 1-4 journalists occupying the mid-level management positions, and for the larger ones (e.g., Aftonbladet and Expressen) there are a few more (see Table 1). However, the study focuses on differences *between* different publishing traditions (i.e., tabloid, broadsheet and public service), and thus there is no need for a larger sample from Aftonbladet or Expressen, even though they do have larger newsrooms.

The interviews were carried out in two waves. The first wave spans between November 2009 and June 2010 and includes journalists on the commercial news sites, while the second wave of interviews was carried out in June 2011 and comprises public service journalists. Some of the interviews were conducted via telephone, some on location. The interviews took between 45 and 75 minutes and were recorded and transcribed. Table 1 below briefly presents the respondents and the news sites.

Table 1 illustrates that all interviewees have many years within the profession and have a mid-level management position. Although all sites have many visitors, the two tabloids are far more successful in attracting traffic.

Results

The overall impression from the interviews is that *traffic affects news judgement – as one parameter among many others*. The results also imply that there are differences between the media outlets. The interviews indicate that the number of "clicks" influences the editorial process in two areas: (1) the overall news judgement and (2) the handling of specific news stories.

Overall "Click" Influence

The "clicks" are important in the overall editorial processes and discussions. For example, BH at DN.se states that "Yes, to some extent it [traffic] affects how we choose to work with the news", and HL at SVT.se expresses the same view: "Yes it does affect the news judgement, but not as the sole determinant". AA at Aftonbladet.se acknowledges clicks as important, but also stresses that their news judgment is vital. He emphasizes finding a balance between user preferences and news judgment, calling it an "almost a scientific process". The quotes are quite representative for the respondents as a group, but there are differences between the commercial and public service outlets. At Svt.se,

Table 1. Background Information on the Respondents and News Sites

Name	Site & origin	Staff- size (N)**	Number of editorial decision- makers***	Position	Years within journalism	Visitors*
Andreas Aspegren (AA)	Aftonbladet.se (Tabloid)	70	12	Community manager	20	5 015 683
Kristian Lindquist (KL)	SvD.se (Broadsheet)	20	4-5	News editor	9	1 043 218
Malin Crona (MC)	DN.se (Broadsheet)	25	3-4	News editor	11	1 376 392
Marianne Schvarcz (MS)	Aftonbladet.se			Chief of development	36	
Mattias Lundell (ML)	Expressen.se (Tabloid)	65	8-10	Online edition chief	9	2 384 882
Håkan Wikström (HW)	Expressen.se			Online edition chief	20	
Pelle Sten (PS)	SvD.se			Chief of development	12	
Björn Hedensjö (BH)	DN.se			Chief online editor	10	
Hanna Larsson (HL)	Svt.se (Public Service)	15	4	Chief online editor	6	1 174 838
Katarina Hö (KH)	j SR.se (Public Service)	17	1-2	Group chief, news online	31	926 681

^{*} Source: KIA Index, week 24, 2011

user metrics are used on a daily basis as part of the discussion in morning and afternoon meetings on whether and how news items are to be followed up. KH at the Swedish Radio says that they do not follow the "clicks" at all in making calls about specific articles. However, user metrics are used in internal discussions about the overall mix of content on the web. This suggests that although traffic is not an immediate concern in the daily work at SR.se, it is important for the long-term news judgements.

None of the representatives from public service media monitor clicks in real time, in stark contrast to the commercial news organizations. What's more, the public service journalists emphasize that *relevance* is the main principle when assessing clicks. SVT

^{**} The numbers are estimations made by the informants at the time of the interviews. For media organizations with multi-channel publishing and semi-integrated editorial offices, it is hard to clearly draw the lines between the web and the other channels (i.e. print, radio, and TV).

^{***} Estimated number, based on interviews, of journalists in mid-level management positions that are involved in news selection and judgment. How many people are actually involved depends on the situation. Occasionally developers, deputies, sub-editors and journalists employed on a project basis are involved, but mostly not. Sometimes those involved also hold other positions within the media corporation, making editorial decisions on a part-time basis only.

and SR are licence funded by users, and one key argument is that licence payers should find the news from these news sites relevant. "If we are not getting read we have failed to be relevant to the licence payers" (HL). In that sense, they also strive for a balance that allows all licence payers to find news that is relevant to them. Journalists from the commercial media refer to both relevance and economic incitement – attracting clicks to fund their operation. Next we present our results on how the journalists put this into practice.

Keeping it Alive, and Negotiating with the User

The second influence of "clicks" concerns how individual news stories are handled depending on whether or not they generate many clicks. One general answer is that if a news item attracts traffic, it will be kept longer on the front page, and (more importantly) it will be altered, elaborated or in other ways updated to keep the news alive. AA, at Aftonbladet.se, makes this view very clear:

If an article attracts many readers, it will stay [on the front page] longer than we had planned for. However it cannot stay for too long [in its original form] so we try to update the news by, for example, giving it a new angle, calling a minister who can make a statement on the issue, or finding other ways to do a follow-up. (AA)

It is evident that user attention is an important factor in shaping the ongoing work of making a news story. However, it is also evident that the clicks themselves do not lead directly to calling a minister. Here, traditional news judgment, using a representative from the political elite as a source, is also mirrored. The on-going negotiations with the readers are quite noticeable on the commercial news sites. KL says that if an article that *should* (according to general news values, we presume) attract readers does not – "then we try to do a re-make; we might try a different headline, a different blurb or adding/changing the image(s) or the like" (KL). Thus, the clicks are used as a kind of sounding-board to see whether, and when necessary make sure that, the users appreciate a, by journalistic standards, proper news story. Altogether the clicks seem to come into play when they deviate from the *expected* patterns:

A *good* [emphasis added] piece of news that does not attract the audience makes us wonder what we've done wrong (KL)

If we notice that a news item we did not have high hopes for attracts many readers, we might choose to keep it on the front page, and try to add new information to it if possible. (BH)

The two quotes are good illustrations of how click patterns deviating from journalistic expectations trigger an editorial response. Overall, there seems to exist a negotiation between journalistic news judgement and audience preferences, in this case represented by clicks, but PS makes it clear that when the readers value a news item higher than the journalists do, the readers' interest takes precedence:

When we understand that the readers are more or less interested in the news than we are, it is the their interest that decides how we handle the material – if we should let it sink more quickly, or put more effort into it. (PS)

The news sites do not follow the traffic patterns slavishly. AA on Aftonbladet.se says that even though the readers easily could consume three news stories a day on the Swedish equivalent of *Idol*, the paper will not provide that much coverage. Instead they wish to have an appropriate *mix* of different content. The mix is something that all interviewees stress.

It is also common among journalists that there are certain things they will run on the front page even when they know it will receive little attention from users. It could be a matter of promoting information that is democratically important or making journalistic statements, such as the ongoing campaign to free Swedish journalist Dawit Isaak, who is being unlawfully imprisoned in Eritrea. In cases like these, the journalists are trying to, as MC puts it, exhaust the users into getting interested in the issues.

There is variation in how the news sites utilize the clicks. As stated above, the public service journalists do not follow the clicks in real time at all, but there are differences between the commercial sites as well. The commercial sites with the highest amount of traffic (Aftonbladet.se and Expressen.se) and the ones with the lowest amount (DN. se and SvD.se) have different approaches to the clicks. At Aftonbladet.se and Expressen.se, the "clicks" are used to inform editors about what is generally working and not working, also in the long run, whereas DN.se and SvD.se tend to use the click data to a greater extent to monitor specific articles so as to determine whether or not they work. If not, alterations are made to attract more traffic. However, journalists on the tabloids are also aware of specific traffic statistics that breaks expected patterns. For instance, ML on Expressen.se speaks about a narrow boat passage under a bridge in Öresund strait that drew more traffic than expected. When this was observed, he decided they would expand the piece and try to get hold of moving images of the event.

According to the interviewees, clicks can also be used to increase the quality of journalism. All journalists take firm stands on journalistic ideals and their role as information providers in a democracy. The clicks, they argue, can be used along those lines too. If an important news story is not receiving user attention, journalists have done something wrong. Without an indication that something is wrong, the problem cannot be addressed. Thus, clicks can be utilized as a tool to make sure important issues reach the audience.

Discussion

Early research (i.e., MacGregor 2007) reported that audience metrics had little direct impact, because the news organizations did not monitor the clicks in real time. This has evidently changed, at least in the Swedish context, and clicks are now having a daily impact in all of the news rooms, as all journalists are very aware of their existence and have, in various ways, incorporated them to inform news decisions on a regular basis. In many cases, this is an ongoing process that has a strong presence in the newsroom, as clicks have a direct influence on how news stories are told. However, journalists' professional news judgment is still considered a vital asset, as it is used to initially select the news, interpret the clicks, make changes, interpret if/how the clicks are changing and, most importantly, to balance the click input against other factors. Also, the clicks play the biggest role when they *diverge* from journalistic expectations. This illustrates both that a great deal of the time users seem to be in tune with the journalistic selection and that journalistic judgments are still the norm. Compared to other research that often points out and/or illustrates the potential of audience metrics and clicks (see, e.g., O'Neill & Harcup 2009; Phillips et al.

2010, Thurman & Myllylahti 2009), the present study finds the effect, so far, to be heavily moderated by journalists and their news judgment. These findings may also be due to the specific media system, Democratic Corporatist (Hallin & Mancini 2004), where the press historically have been less commercialized as compared to the liberal system, although the division between commercial and public service media, as elaborated below, appears to be more important. Consequently, journalists still seem, at least by their own account, to be in the driver's seat, however, in the long run clicks may, as suggested by Gynnilds study (2008), cultivate journalists. There are also signs on the websites – in terms of most read/shared/recommended articles lists and "light/funny" news – that audience attention may be more central than the interviewees care to admit, especially considering that the audience can be utilized as promoters (and traffic increasers) of news content through social media software – integrated on the news sites – to their networks. Furthermore, as the downsizing of editorial offices continues, it is reasonable to suggest that algorithms will play a bigger role when the numbers of journalists decrease.

In addition, the media tradition appears to play some role in how closely traffic is monitored, where journalists from the public service sector use it more as an after-thefact evaluation rather than as a real-time assessment, which is the case in the commercial outlets. Thus, while all news media may monitor clicks, their routines and reasons for doing so vary, as does the impact of clicks on the actual news judgment. Public service journalists talk about being relevant to their users when looking at the clicks, while journalists in the commercial outlets refer both to relevance and to economic factors. This, as the results section illustrates, seems to affect their approach to clicks. It is journalists from the broadsheet news sites who give voice to most closely monitoring page hits. The more traffic the commercial news sites get, the less concerned they are about specific news items, as this is evident on both the sites with relatively limited and those with great amounts of traffic. This also relates to the position on the market, referring to commercial media only, where those with smaller shares report following the traffic more closely. In an analogue environment, audience attention is coupled to subscriptions for broadsheet media outlets, while the tabloids sell single copies. Overall, the tabloids appear better equipped to make the transition to the online world because they perform better in terms of traffic. When journalism is produced online, it is evident that the absence of trusty subscribers seems to impinge on the journalist-reader relation and conceivably broadsheet journalists' news judgment. It also seems reasonable to suggest that there might be a general movement towards tabloidization and catering to market considerations, as news stories are touted individually rather than as packages, and that audience preference plays a role in this. Then again, the tabloid news sites can rely on a sizeable and relatively faithful audience, apparently making the sites less focused on specific news stories and more focused on the whole package.

Previous research on how the media tradition affects the implementation of new technology is somewhat divided (Jonsson & Ornebring 2011; Harcup & O'Neill 2001; Karlsson & Clerwall, 2012). The present study, although based on a very small sample, suggests that the broadsheet tradition is becoming weaker as it moves online and that this thus entails increased catering to market demands (Cohen 2002). However, the public service tradition does not seem to be affected by this to the same extent, implying that the distinction between commercial media and public service is reinforced online. Altogether, clicks serves as a catalyst of commercialization and further division between

commercial and public service media. Nevertheless, all journalists, including those from public service, bear witness to the importance of the mix and of balancing different types of content. This might suggest that the differences between media outlets are less on- than offline, although how the proportions of the mix may vary between the news organizations, media system and traditions is an empirical question.

On a more general level, it can be noted that technology – here in the form of tracking user input or more specifically *web mining* (Batista & Silva 2002) – does not have an unconditional impact on a social practice like journalism. Rather, as previous research suggests (Boczkowski 2005; Karlsson, 2011; Karlsson & Clerwall, 2012; Winston 1998), technology is appropriated into different socio-material settings. The presence of clicks does not short-circuit the news judgment process, nor does it leave it unaffected. Clicks are, so far and according to the journalists themselves, used to assess and assist the news work, which is firmly controlled by journalists. Audience preferences have grown in importance, but are still being eclipsed by other factors. Furthermore, the impact of clicks is unevenly distributed among the media outlets under scrutiny, implying that the media tradition and especially the commercial/public service dichotomy play a significant role. Nevertheless, clicks have become an integrated part of news work in all media traditions, suggesting a long-lasting impact. The level and character of that impact remains unclear.

Because the present study is confined to a few nationwide media outlets in Sweden, it provides little ground for generalization. More research is needed to see whether the results have bearing outside the Swedish nationwide elite media. However, as all of the media organizations in the study incorporate clicks into their news judgment to some extent, regardless of tradition, the results are interesting enough to encourage further and comparative research. Future research on digitized audience metrics could include ethnographical studies and content analysis to further understand and compare the news processes and products between different media traditions and countries. Moreover, as much of the previous research focuses on national elite media, it would be valuable to study to what extent local media or specialist press (business, technology) appropriate algorithms in their news production. Conducting a longitudinal content analysis of the websites would balance the journalists' accounts and shed light on whether the actual, and not the stated, news selection has changed.

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MICHAEL KARLSSON, Ph.D., Associate Professor, Faculty of Arts and Social Sciences, Karlstad University, michael.karlsson@kau.se

CHRISTER CLERWALL, Ph.D., Assistant Professor, Faculty of Arts and Social Sciences, Karlstad University, christer.clerwall@kau.se