The Production and Consumption of News in an Age of Mobile Media

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The mobile device constitutes a highly diffused information communication technology (ICT) around the world and interpersonal mobile communication has certainly become ingrained into contemporary social life. It has also gained traction for conveying news in more and more countries, including those where both legacy news media and new media are subject to censorship. Having its offspring in telecommunications and the telephone, it has typically been known as the mobile- or cell “phone”. However, this device has turned into something else than simply a portable “phone”. Facilitated by technological convergence and digital developments, the mobile nowadays accommodate for multimedia functions that enable the processing and interaction of content and information through audio, video, graphics, text and animation. It has become equipped with an interface customized for mobile internet experience, involving mobile site browsers and mobile applications, popularly referred to as “apps”. It has essentially developed from being a communication technology to becoming internet-empowered information and communication technology (ICT). Equipped also with features such as camera, mp3-player, radio and GPS, the mobile “phone” will hereafter be termed mobile device. With is ubiquitous presence in everyday life, the mobile device has been referred to as the miniaturized mobility par excellence, implying its affordances for media lives on the go. Tablets and laptops constitute other sorts of miniaturized mobilities, and the boundaries between these ICTs are continuously transforming, becoming less and less distinguishable in terms of functionalities. Baron acknowledges that research has tended to lump these devices together, arguing that the functionalities they carry have more influence on our language (writing, reading and speaking when using these devices) than has the fact that these can be carried with us.

The use of legacy news media, as well as accessing news via computers and tablets, are certainly important areas of research related to mobile news. Similarly important areas of research in this context are the increasing importance of social media for news media in general, and Twitter more specifically. This chapter will however focus specifically on legacy news media publishing mobile news, here referring to mobile devices that make possible for traditional phone calls via mobile operators’ networks, but which also enable electronically-mediated information and communication. More specifically the chapter focuses how mobile devices currently are gaining foothold for production and consumption of news. Journalism and news are here treated as salient examples of contemporary mobile media developments. Following from this a brief contextualization to the shaping and accessing of mobile internet is legitimate.

While interfaces for mobile internet emerged in the late 1990s they were hardly used for such purposes for most of the first decade of the 21st century, with some groups actually taking a stance against domesticating such usage into their everyday life. However, Japan has constituted a prominent exception, which is reflected in their embrace of mobile news and explained by factors such as that services tailored for the mobile (i-mode) were launched alongside payment models based on flat rate tariffs for data. In Europe, the U.S. and other parts of the developed world, incipient signs of a user uptake breakthrough formed around
2008-2009\textsuperscript{12}, and a study from 2010 reported that more than 20 percent of the population in 14 out of 16 studied countries used their mobile devices for accessing internet\textsuperscript{13}. Research suggests that usage of internet-based services is especially higher among users of so-called smartphones\textsuperscript{14}, although it is worth noting that there is great diversity in the usage of mobile internet also among those\textsuperscript{15}. Social media and e-mail are prominent examples of content popular among users from North America, Japan and several European countries\textsuperscript{16}, and also news and search functionalities have become increasingly popular\textsuperscript{17}. As a way of comparison, in Sweden using e-mail is the most commonly used internet-based service, followed by search, social media and news accessing\textsuperscript{18}.

While the mobile has become increasingly versatile, the purpose of this chapter is to focus on scrutinizing current research on the production and consumption of news. The mobile device represents an important area of development work for legacy news media in their pursuit of being omnipresent, and has most certainly paved way for both new and altered ways of accessing news. The first section of the chapter discusses the production of mobile news, while the second focuses usage patterns. Both of these sections begin with reviewing contemporary international literature and are closed with discussions based on research findings from Sweden. There are two important reasons to this design. Firstly, relatively much research on mobile news originates from Sweden. Secondly, Sweden is a developed country with a historically strong newspaper circulation that exhibits a mature ICT infrastructure involving high diffusion of both mobile devices and 3G-networks.

**Legacy news media shaping mobile news**

Our mediascape is constantly changing and in many countries legacy news media, especially the press, have become increasingly pressured. Newspapers have, for centuries, catered to different people’s needs for news and information. The high willingness of readers to pay for newspapers, accompanied by advertisers’ interest in paying for access to them, has secured their existence and function for decade after decade, but these conditions have worsened. Since the end of the 1990s, there has been a cry for the imminent death of newspapers in print. Emergent digital and mobile media have contributed to an expansive, diverse and fragmented media landscape, which has paved the way for cross-media news work\textsuperscript{19}. News providers worldwide have made investments in mobile news services. The role of mobile devices among contemporary news media institutions around the world has become increasingly pronounced\textsuperscript{20}, and contemporary literature reviews presents a growing body of literature documenting and analyzing this shift towards an age of mobile media\textsuperscript{21}. The mobile device has been appropriated by news media in multifold ways, including being utilized by so-called mobile journalists (MoJo’s) in news reporting\textsuperscript{22}, which has been seen from examples such as the iReport by CNN and the development of a MoJo kit through collaboration between Reuters and Nokia in 2007. Much development work for mobile news has however focused the distribution of news. Many news media institutions have in recent years added mobile components to their production and distribution of news. On the production side this has involved utilizing mobile devices in work, not only for news publishing but also for communication means such as voice calls and e-mailing, as a gateway for internet access (perhaps using it as a WiFi hotspot), for journalistic practices such as live-blogging or taking, editing and publishing photos.

Publishing news for the mobile device has come to play an increasingly important role for legacy news media. At first this involved news provisioning by pushed news alerts through SMS and/or MMS, crafted by journalists to fit the predetermined word count.
limitations of such messages. Such practices emerged among many legacy news media in the 21st millennia in countries such as Brazil\textsuperscript{23}, Germany\textsuperscript{24}, Sweden\textsuperscript{25} and many other places.

For instance, a study of the China-based Yunnan Daily Press reports that two of their newspapers launched SMS news alert services in 2002, followed by MMS-services in 2005 when a general trust crisis towards SMS services in China gained significance\textsuperscript{26}. A more recent study of several newspapers in Kenya, Uganda and South Africa found these to offer push news alert services for mobile devices. The Daily Monitor in Uganda, for instance, launched a fee-based SMS news alert service in 2007 which had 30,000 subscribers receiving 3-4 SMS alerts per day by 2010/2011. Some of these SMS alerts were part of their Fantasy football service in which users could compile individualized settings for specific soccer players they wished news updates on\textsuperscript{27}.

SMS- and MMS pushed alerts are used by many news media also in other parts of the world. However, it is worth noting that these forms of pushed news alerts have become accompanied message alerts built into mobile news applications (i.e. apps). In some places, such as the U.K., this has coincided with fewer news media offering pushed news alerts by SMS- and MMS\textsuperscript{28}. Most importantly, this feeds into a growing trend of many news media institutions mobilizing their efforts to publish news through sites and apps tailored to the interface(s) of mobile devices. Such developments have taken place on all continents over the world, including but not limited to titles such as Rio Times, Shanghai Daily, Sky News Australia, The Guardian, Washington Post, as well as the already mentioned Daily Monitor.

Moreover, industry reports have informed that newspaper managers perceived developments of mobile platforms as highly important to prioritize\textsuperscript{29}, which goes in concert with findings from academia on the transforming sensemaking of mobile media among the members of editorial-, business- and IT departments at a large newspaper\textsuperscript{30}, as well as studies that have documented the developments of mobile news among news media firms. The most comprehensive publication to date is based on longitudinal and quantitative audit studies of 66 metropolitan newspapers in the United Kingdom from 2008 to 2011. In brief, these newspapers commanded more and more attention to developing mobile news sites and apps, for which they focused on publishing (auto-directing) traditional journalism content that was also published in other platforms, plus providing and also services for weather, traffic and travel. These news publishers did little to facilitate conversation or interactivity, and typically applied a revenue model focusing advertisements, similar to the main commercial initiative that has become institutionalized for the Web\textsuperscript{31}. A Swedish audit conducted in Sweden during 2011 serves as a way of comparison, showing that nearly half of all newspapers offered a mobile news site, whereas 24 percent offered an iPhone app and 12 percent offered an app for Android. These typically published news focusing crimes and accidents, and included some sort of conversational functionality\textsuperscript{32}.

By taking a close look at previous developments in Sweden, we may expand our gaze into the dynamic changes taking place among and within news media in the salient case of mobile news. 2008 marked a year in which several newspapers made substantial investments into mobile news. Dagens Nyheter, the largest quality newspaper owned by Bonnier group, launched a mobile device with a dedicated button for accessing their mobile news site, in collaboration with Nokia and a telecom operator. Their chief of mobile presented their efforts toward a unique initiative at the annual conference held that year by the international industry organization World Association of Newspapers (WAN-IFRA). This initiative did however not gain traction, most likely because it coincided with the launch of iPhone and Android mobile devices in Sweden. Moreover, Dagens Nyheter also launched a niche news site that promoted entertainment news and location-based restaurant reviews, which turned out to be a more successful path. The same year Aftonbladet, the largest newspaper in Scandinavia, launched a new company with a dozen employees dedicated to mobile news and services. One of their
innovations was to implement and use the technology for so-called QR-codes, by displaying these in conjunction with selected articles published in print, thus providing a direct gateway from print to mobile to access additional multimedia content. Their ambition was to foster complementary ways of accessing news in print and through mobile. Numerous journalists were employed to work with this and also manual editing of news for their mobile news site. Such manual editing was also commonplace at Expressen, the other national tabloid, who in addition formed a strategic initiative with a television channel within their media group (Bonnier). As of 2013 Aftonbladet operates with a mobile first strategy, which is prevalent considering that they in fact generate almost as much user traffic (page impressions and number of visits) from mobile devices as from computers.33

A longitudinal case-study of Göteborgs-Posten (GP), the second largest quality newspaper in Sweden (owned by Stampen media group) informs on transformative sensemaking processes from 2008 to 201134. GP started online news publishing in 1995 and began experimenting with mobile news services after the turn of the millennia, first with PDA and SMS and thereafter a mobile news site functioning through automation. In 2008 they invested much in redesigning and developing their mobile news site, which involved to employed a journalists for a position as a mobile editor. Her work in 2008 consisted of compiling SMS news alerts as well as performing manual editing of their articles and photos being published for the mobile news site. An “upgrade” to a new digital publishing platform had the consequence of losing functionalities for mobile editing in the fall of 2009, and with the recession that had struck they chose to prioritize recovering lost ground for the news site in favor of the mobile news site. The mobile editor gradually worked less and less with mobile editing, and as the position was officially terminated in 2010 GP essentially came to rely entirely on automated news publishing for the mobile news site once again35. That same year marked the start of a shift in their focus on mobile news publishing, as the journalists, businesspeople and technologists joined forces in the social negotiation and shaping of an iPhone app, which was released in June 2011. They were very satisfied since they experienced an uptake by users far beyond their initial expectations, although there were conflicting views on the extent to which they made possible for user participation. Following this launch, GP later developed and made available apps also for Symbian and Android. What is more, they also performed continuous upgrades to all their apps36. Such continuous developments of their apps have continued in 2013, while these are nowadays made to fit with a strategy towards facilitating seamless transitions between different platforms for their users.

All of these developments among news media firms can be seen as attempts for becoming omnipresent, that is, accessible anytime, anywhere and through any device. Such strategies have formed a countermeasure to compensate for losses in print37. However, recent studies evidence that news sites not only have become complementary, but have also led to displacing effects38. The emergence of mobile news publishing has fuelled additional shifts in news consumption patterns, especially among specific and younger generations39. Such shifts are discussed more closely in next section.

**Ubiquitous mobile news consumption**

Online news used to be accessed only with stationary computers with a fixed Internet connection, confined to places such as home or work. Contemporary ICTs increasingly offer always-on connection, disentangling accessing limits from space, time and device, and consequently becoming increasingly intertwined into the rhythms of everyday life. American researchers investigated accessing of news with mobile devices in relation to other news media, and found that the mobile had found a niche in the interstices of everyday life. Such interstices occurred, for instance, when people commute to and from work30. While there has
been a preconception that mobile news is predominantly accessed on the go, there is in fact extensive usage taking place in both public and domestic contexts.41

Turning to earlier empirical studies in industry and academia, there are reports that the uptake of accessing news via mobile devices certainly has increased over the years, although it has not gained as much traction as mobile Internet42. A number of survey projects have been conducted, although the representativeness varies due to factors such as sampling number of respondents and response rate. Several American surveys utilize relatively small samples of college students while the Swedish survey projects typically involve larger samples representative to their population. Following from this, results must be interpreted with caution, in particular when making cross-cultural comparisons.

There has been a steep increase in the adoption of smartphones and tablets in the U.S, with figures reaching 120 million smartphone owners and 50 million tablet owners in 201243. An American survey project has included questions on mobile news in 2010-2012. The 2010 results suggested that 47 percent of Americans used either their mobile phone or tablet to study the "local news and information”. Inclusion of two ICT’s and two sorts of content in the same question results in interpretation difficulties. A more tangible result was that those using both their mobile device and tablet for news also tended to use several other news media as well44. Also the analysis of the results from the survey in 2011 focused on complementary news usage: 44 percent owned a smartphone, and 18 percent owned a tablet. The mobile news users consumed 45 percent of their digital news with the mobile, while 27 percent of them also accessed news with a tablet45. The 2012 results found that 45 percent owned a smartphone, among which 36 percent used it to access news on a daily basis. As a way of comparison, one out of three American adults owned a tablet, among which 37 percent consumed news every day with it.46 A British survey project from 2012, utilizing Web survey methodology, found that in 13 percent reported that the mobile was their main way of accessing online news, compared to 4 percent for tablets and 80 percent for computers. Among their key findings was that mobile news was starting to play a significant role, which also their findings from Germany, the U.S. and Denmark indicated47. In 2013 they carried an expanded follow-up survey project that included online surveys in ten countries. A doubling in tablet usage constituted a key finding, while it was also emphasized that mobile news accessing continued to increase. The proportion of weekly mobile news users varied between countries, being twice as high in Denmark than in Germany.48

Another study of Danes news accessing, conducted in 2008, suggested that a relatively small proportion of Danes accessed news with their mobile. Moreover, the mobile ranked last among 16 news media when these were analyzed in terms of so-called worthwhileness, that is, the relative advantage of news media when it comes to factors such as time, price and possibility to become an informed citizen.49 In 2011 a new survey was conducted in Denmark, reporting an increase from 7 to 29 percent for mobile news accessing, indicating an increasing sense of worthwhileness50. In this context it is worth noticing another American survey project, in which the concept of "newsfulness" was introduced, aimed to measure the probability various media are used for accessing the news on a daily or weekly basis. From their empirical analysis of weekly use the iPad scored as the most newsful device, followed by e-readers and the iPhone. When the analysis instead focused daily use computer were placed first, while the iPhone and the iPhone ended up slightly lower. The study placed other smartphones in a separate category that attracted lower values, suggesting it is used less for news compared to the iPhone51. This is linked to the fact that as the proliferation of smartphones now has reached a broader majority there are also owners who have no intention of using them for internet and news, indicating a discrepancy between ownership and use.

Looking towards developments in Sweden, findings from a national survey of young Swedes (aged 9-16 years) in 2010 showed that usage was relatively limited. More important,
it was more common among those young exhibiting extensive Web usage than those with extensive news usage, suggesting that a digital orientation rather than a news orientation is important. Another Swedish survey project, which has been carried out annually since 1986, has included questions on mobile news usage every year from 2005 to 2012, a period in which the total share of users has increased from 7 to 45 percent. Figure 1 report on how the daily, weekly and monthly use of news with mobile devices has unfolded over the years. The findings illustrate that there was an incremental increase in usage from 2005 to 2008. At this point of time only one in ten Swedes accessed news with their mobile, while hardly any did so on a daily basis. In 2009 and 2010 the levels of adoption increased, much thanks to an increase in daily usage from one percent to five percent. 2011 marks a year in which those figures tripled, as there was a breakthrough in terms of both weekly and daily usage. In 2012 the use of mobile news continued to gain traction, but only in terms of daily use whereas more seldom use actually decreased, suggesting that the domestication of mobile news has increasingly become marked an integral part of everyday life.

**Figure 1  Mobile news accessing in Sweden 2005-2012 (percent)**

**Source:** Elaboration from the author’s previous analysis of the annual surveys by the SOM-institute at University of Gothenburg: statistically randomized and representative surveys of Swedes aged 15-85 years (2005-2008) and 16-85 years (2009-2012).


Earlier reports based on the first couple of survey projects into mobile news (2005-2008) showed that the typical users were men aged 15 to 49 years with a subscription (rather than pre-paid card). Furthermore, they were inclined to be interested in technology, were frequent users of online news media and enjoyed an active lifestyle. A more recent study that included 2009-2011 in the analysis suggests that most of these differences between different groups remain. It also showed that the total share of mobile internet users (44%) was only slightly higher than for mobile news users (37%). However, when daily usage was compared mobile internet (26%) scored significantly than mobile news (15%), which implies that mobile internet is more ingrained into everyday life than is mobile news. Similar patterns for
daily use were found in the 2012 data (36% versus 24%), data which also informed that mobile news sites and applications (apps) were the most common ways for accessing the news with the mobile. These results may be embedded into the context of transforming patterns of news accessing from 1986-2011 among four generations of Swedes. Findings evidences that generation X (1965–1976) and the dotnets (1977–1995) have commanded much attention to mobile news in recent years, whereas dutifuls (1926–1945) and baby boomers (1946–1964) still mostly turn to legacy news media and online news accessing using their computers. This result, in turn, goes in concert with previous research concluding on the emergence of a mobile generation. When it comes to Swedes news accessing with tablets, findings from 2011 and 2012 evidence that about one out of ten Swedes regularly do so, and almost all do so complementary to computers, mobiles and newspapers.

Conclusions:

This chapter has discussed that various actors and news industries around the world have come to utilize the mobile in their production and distribution of news. Legacy news media have initially distributed news by pushing news alerts by SMS or MMS. These have typically been fee-based and manually crafted by journalists, although exceptions include news alerts free of charge, provided by other actors (such as telecom operators and start-ups), sometimes offering other sorts of content. There has later been a move towards mobile news sites, which typically have displayed auto-directed news content free of charge. Throughout the developed world these platforms are now increasingly becoming overshadowed by efforts for news publishing via apps or sites either tailored for the mobile or crafted to be responsive or adaptive to what is perceived to be its specific affordances.

A plethora of approaches to mobile news publishing can be found, involving both free- and fee based approaches that can be placed on a continuum ranging from pure replication to customization of unique content and services. Manual editing by journalists is not a prerequisite for news media striving to accomplish news publishing tailored to its various platforms. Instead the affordances and interfaces of mobile devices may be taken into consideration by inscribing machine-led publishing for mobile apps and sites with journalistic values. Technological opportunities are harnessed through customized mobile news services such as those involving packaging and publishing of news depending on personalization and locative features. Such customization features are present also among the growing number of news aggregators that have entered the scene in later years, including services such as Pulse Reader and Flipboard.

The dynamics of human-led and machine-led publishing of unique vis-à-vis repurposed are captured in a recently developed model of journalism for an age of mobile media. The 2x2 matrix model outlines four different approaches to mobile news publishing. At present much suggest that journalistic content put on display for Web and mobile often is seamless and platform neutral, contemplating to the machine-led repurposing approach in the model. This represents a shift away from earlier original crafting of text-based news alerts, which is categorized as human-led customization in the model. Consequently this makes a shift away from earlier emerging practices towards a sort of mobile journalism. Moreover, this witness contemporary efforts for effectiveness and efficiency among increasingly economically pressured legacy news media, which ultimately seem to involve a displacing effect of technological machines on human labor.

Following the strategies for omnipresence news distribution among legacy news media, a remarkable uptake of mobile news has formed in recent years. While previously envisioned
as a complementary news medium, mobile news media accessing to many nowadays seems to go far beyond the interstices, becoming ubiquitously intertwined into the rhythms of everyday life. Following from this, the mobile will certainly empower citizens in both the developed and developing world to keep themselves informed. The increasingly powerful functionalities designed for news accessing offered through the mobile may cause both complementing and displacing effects to other news platforms maintained by legacy news media. The mobile device is gaining traction on the behalf of printed newspapers and computers, and recent developments of so-called phablets (such as the Samsung Galaxy Note series) add further to the blurring of boundaries between mobile devices and tablets. Ultimately this touches base with the more general tension between old and new media, and how the two exert continuous reciprocal influence on each other.

The production and consumption of news-related content and services for mobile devices has certainly thrived in recent years. Still it is an insurmountable task to predict exactly the ways in which mobile news will influence legacy news media industries and our social everyday life. Nevertheless, we can be assured that the future unfolding of mobile media will involve extensive and longstanding change to how news is produced and consumed.

NOTES
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