The decline of conventional news media and challenges of immersing in new technology

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We are living in an epoch of continuous accelerating technological change in which information that is driven by digitalization has broken down forms of barriers in seeking and consuming information, revolutionizing methods of news production, delivery and consumption. Contemporary technological media revolution has increased the power of the digital world through the use of social media such as Facebook and Twitter to freely disseminate information to anyone, anywhere, at any time. Simultaneously, technological innovation in this digital era is reshaping the news industry and making dynamics of the news media more complex and condensed. Applications of new technological adaptation are moulding society into a future where information is more easily, readily and specifically accessible, yet complex for the news media industry as news providers. Existence and functions of legacy news media organizations (also referred as old or conventional media organizations) continue to be challenged by highly audience-participatory attributes of new media through the use of User Generated Contents (UGC), media automation and emerging digital media organizations such as Buzzfeed, Vice and more. As a result, conventional news production are pressured to adhere to societal demands through numerous forms of media automation and increased audience engagement, or risk its future existence as a player in the world of the news media. Taking into account of a possible future direction of a digitalized, eminently networked society, this article discusses technological changes which has resulted to declination of conventional method of news production, delivery and consumption within conventional news media and challenges facing news organizations as society and the news media are further immersed in the digital media ecology.

Keywords: Conventional and new media, UGC, data journalism

Technology can transform a society. Technological advances in any given era shape their historical moment and affect the public they serve (Pavlik 2000). Developments in media technology, particularly the invention of the internet, have provided freedom in communication by democratizing information and liberating new knowledge through the open access of the world wide web. Popularization of the web through evolvement of the internet has resulted in the advent of digital technologies. Digitalization is defined as a process of converging any forms of analogue data – be it text, audio or visual – into a digital form that can be processed, stored and transmitted via digital circuits, devices and networks (Ng 2014, p.92). Friedberg (2002, p.32) argues that digital technology intrinsically entails a convergence of all media forms. Taking into account the rise of media digitalization and focusing specifically on broadcast television news, this article discusses the repercussions for traditional news media and journalistic values in practice.

Digitalization within media technology has indirectly and forcibly altered functions of conventional media to merge with newer media forms through the use of the internet. It has also been reducing its distinguishing features as a traditional medium. For instance, this can be seen through adaptations of traditional mass media such as printed newspapers that provide online content to suit the demands of a digitalized media landscape. After printing, imaging, and broadcasting, the advent of digital media has been categorized as the fourth media revolution to change the established social order dramatically (Kovarik 2016, p.344). Within

journalistic discourse, we are witnessing media convergence and digitalization that has led to enhanced connectivity through increased two-way communication, in addition to easier and faster access to information through new digital media developments.

The rise of new media opens up dialogue on two vital factors - reproducibility and distribution (Thomas 2002, p.83). Emergence of multi-platform news production and delivery through technological innovations challenges the role of the traditional journalistic medium as the sole information provider for society. Contemporary media allows vast distribution of content through various platforms, instantaneously diminishing barriers of space, time and geographical locations. It creates a media landscape that permits and encourages open communication and interactivity through active audience engagement. Interactivity between content producers and content consumers shifts, blends and blurs the formerly distinctive roles of news producers and news consumers, challenging the monopolization of news media organizations as mainstream societal information providers. Producing a single form of content, which can work across multiple platforms, is the key to saving time and cost whilst effectively enabling the content to be consumed by varied demographics through multiplatforms.

A brief overview of contemporary television news provision

The dynamics of the news industry are challenging, and can be observed substantially in television news. Television has the power to inform and educate, to influence public opinion, and commands a sense of credibility above other mediums of communication (Barnett 2011, p.16). However, the number of consumers ingesting news through conventional media – be it print or broadcast – have continuously declined over recent years. A survey of 26 nations published by Reuters Institute Digital News Report (2016) revealed that although television news consumption remains important for older demographics, its overall consumption continues to decline. Television news, from evening bulletins to 24-hour news channels, are still delivering their content using traditional methods, which have been widely successful in the past but may not continue to be so as more people are becoming attuned to digitalized media. The transformation from analogue to digital format has brought with it new means of media delivery and consumption that allow content to be shared across platforms. This provides a less hierarchical system of news distribution as compared to traditional media, which is very distinct in its top-down approach to news delivery. Harcup and O'Neill (2016, p.13) introduced the term 'shareability' and defined it as 'stories that are thought likely to generate sharing and comments via Facebook, Twitter and other forms of social media'. However, through 'shareability' of news across multiple platforms, the distribution of content within news media has become significantly de-regulated, decreasing the quality of its output. As a result, the value of new media is not in the information provided but rather in the method by which the content is delivered (Thomas 2002, p.90).

Our interaction and social use of technology drives change in an unpredictable manner (Boyle 2014). Despite the fact that the journalistic field evolved from its inception to the present day through the utilization of past technological inventions, current ongoing adaptations are anything but straightforward (BBC 2015b; Singer 2010). Current technological changes are occurring at a faster pace than ever; whilst they are interwoven with extensive digital media convergence, the structure and mandate of news organizations as institutions of provision are

being challenged. Such change has blurred the boundaries of an entity's role, be it a news organization or an audience, and has made journalism and its practices less defined, as technology alters the nature of journalists (Gleason 2015; Franklin 2014; Vis 2013), and what constitutes journalism (Russial et al. 2015; Franklin 2014). The next section in this discussion will explore some of the factors challenging the dynamics of conventional media in television news production.

Curation of news through open data, data journalism and algorithmic equations

The movement of industries into the digital business sphere has made data the new currency (Ng 2014, p.93) enabling it to generate myriad forms of information. The term data journalism was coined with the launch of open data in 2009, aiming to empower the public with the provision of as much knowledge as possible (Rogers 2012). The underlying concept of data journalism is defined as a journalistic practice involving a computational role within news production, providing huge amounts of data to choose from, ranging from governmental bodies to private corporations, which can then be selected and structured by journalists in their reporting. In a way, data journalism has become a journalistic source of news production. The recognition of data journalism is increasing through various professional data journalism-based awards (Dick 2014), with the BBC, for example, aiming to establish a world-class facility that enables holistic coverage of the news because of the increased use of data journalism in its newsrooms (BBC 2015a). Data journalism unlocks a gateway for journalists to produce indepth news content with essential and relevant statistics. The use of data journalism places importance on huge amounts of data, in the hope that the audience will be lured into its news content, making the news both relevant and interesting. However, with so much information available and audience demand so incessant, succinct and relevant information is essential (Kormelink & Meijer 2014). Yet the question of whether there is too much information supplied in news coverage for the majority of the audience remains to be answered.

Every new phenomenon brings out both positive and negative outcomes (Ng 2014, p.220). Within any new innovation that is observed to be beneficial, there will also be a downside. The use of algorithms in news practice is a new milestone in the evolution of mass media institutions (Lundsten 2016, p.364). Algorithmic practice is supposedly applied to ease media users through its personalization of information but has proven to be disadvantageous, as has had been witnessed in recent political news events across the world-Brexit in the UK and the US Presidential elections being amongst current examples. Algorithmic processes enable the system to be an automatic gatekeeper to news consumers through such popular social media platforms as Facebook and Twitter. With an algorithm in practice, the news consumption of a reader is observed according to certain patterns or themes of utilization. Algorithmic operations then provide more news with similar themes, thus making news consumption biased towards a particular frame of news content. This technological development remains surrounded by concern over the level of trust and reliance news media organizations should place in the use of algorithmic streaming. In addition, questions remain on the role of news organizations as information providers for society, as the dynamics of news media are changing towards a heavily business-oriented journalism through the use of algorithm.

Mobile platform and multi-platform practice

Advancements in technology and infrastructure developing across electronic devices have led to an enhanced tendency to multi-task using second screens; this has subsequently led to a decrease in audience attention span on television screens (Wilbur 2016, p.210). In addition, invention and enrichment of smart phones in the digitalized era has modified the methods of news delivery and consumption. The Office for National Statistics, UK (2016) reported that 71 percent of people above 16 years old use mobile devices to access the internet, making the mobile phone the most popular device in the country, comparative to desktop computers and others. Smart phones have become one of the most important inventions on the digital landscape, because they function as handheld computers that provide connectivity for mobile users (Albarran 2010, p.59). Quite often, recorded mobile footage or tweets from non-professional sources are utilized to fill up breaking news reports of events from places defined by geographical, linguistic, cultural or governmental boundaries. The popularity of mobile media means audiences demand more graphic news, with recent literature showing an increase in mobile journalism (Scott 2016), paving way for new conventions in news media.

The consumption of news via mobile platforms is one of the consequences of the digitalization of media distribution which allows niche products to be channelled to consumers (Wilbur 2016, p.217). Furthermore, screen proliferation—a shift in screen technology that offers screens of various sizes on electronic devices, which provides flexibility and convenience for its users (Wilbur 2016, p.210)—subsequently challenges television's role as a household's primary source of news, diminishing audio information to a mere background noise. Increasingly, consumers are using smart phones to multi-task whilst watching television, rendering second screen consumption either a complement to or substitute for conventional television (Wilbur 2016, p.212). As a result, legacy news organizations which provide their content via linear television are now challenged through the propagation of second—and third-hand screening. On the other hand, this also exemplifies the benefits of multi-platform distribution of news by allowing audience participation through the social media platforms of news organizations.

News organizations are continuously challenged as news provision becomes highly fragmented (Bell 2015), increasing the growth of a narrowed niche market in the industry and the escalation of immersive journalistic practices, whereby media-audience interactivity through hybrid forms of old and new media is also expected. Therefore, multiplatform practice is adapted within any news organization which aims to sustain its operations in the industry. Digitalization occurring through technological change has allowed better interaction between audience and media, as well as between the different tools of medium operatives, enabling easier access and usability, whilst transforming news mechanics through its adaption. In the past, different media competed for news delivery, but nowadays news produced in one medium is then distributed or shared through other means. Although the format of this news may differ, the content remains similar. It is therefore a common practice for a video clip of news content delivered by a television broadcaster also to be available on the radio, the organization's website, its official social media accounts and the personal social media accounts of the journalist covering the story.

Multi-platform practice enables news content to be recycled, minimizing costs for the news organization and increasing its economies of scope, particularly for broadcast television,

which is a highly expensive industry. In legacy news organizations, such as the BBC, content-sharing of visual materials is practiced by its journalists when covering certain news genres, with the aim of saving expenditure on news resources to cover other events (McNair et al. 2010). Distribution of similar news content across numerous platforms is not only cost-effective, but expands opportunities for wider dissemination and public dialogue.

Social media and emerging digital news players

Technological developments are creating a society in which social media is embedded. For example, 65 percent of adults in the UK with social media accounts log into them more than once a day (Ofcom, 2016). Social media platforms such as Facebook, Twitter, Instagram and Snapchat are ceaselessly gaining new account holders. In its 2016 report, Reuters revealed the popularity of social media as a main source of news, with Facebook being the most important source for discovering, consuming and sharing information (Newman *et al.* 2016). As of 2016, Facebook had 1.86 billion monthly active users (The statistics portal 2016) whilst users for microblogging sites like Twitter, photo-sharing app Instagram, and blogging network Tumblr, continue to rise. Currently, there are 38 million social media users in the UK with 15 million active users of Twitter (Think Digital First, 2017).

The use of social media and news applications via smart phones result in another challenging quest for news organizations: speed. News producers have always been continuously challenged to provide breaking news as soon as it happens and through the existence of social media that acts as a platform for the dissemination of news, the challenge for speedy news delivery becomes a more crucial factor than ever before. Technological advancements in the mobile industry, in collaboration with social media companies, ensure that traditional news methods face a complicated future. As more social media platforms adapt to instant messaging, live streaming and various new forms of video news delivery, which will further complicate the dynamics of news media, this move will be particularly felt by traditional media as they strive to remain as information providers. Discussing the new media economy, Alan B. Albarran states that 'Social media will emerge as one of the main drivers to other media. All companies must have a strong presence among social media, and use social media to drive awareness and interest in media products and services', (Albarran 2010, p.178). The gradual shift of broadcast news media organizations towards using Facebook and other social media as substitutional platforms of news delivery through its live streaming programmes is a reflection on the decline of conventional news delivery.

In addition to social media, technological developments have created the birth of mushrooming digital news players such as Huffington Post, Vice, Flipboard, Vox, and Buzzfeed, which supply alternative news to mainstream, traditional media organizations. Understanding the demands of millennials, these digital news players are gaining more influence and popularity in the digital world, through the creation of catchy headlines, and news content that embraces various forms of graphics ranging from videos to GIFs, to lists of lists (as in the case of Buzzfeed), quizzes, and briefly-written articles to name a few. Buzzfeed is a digital media company which reflects broad preferences of millennials: the company produces news, which is short and succinct, interesting, contains graphics and, most importantly, some elements of human interest. The popularity of these new forms of digital

news among the producers' target market of news consumers is indicative of the further declination of broadcast television news as a conventional news medium.

User-generated content (UGC) and journalistic virtue

Digital media technology provides a two-way communication between news producers and news consumers through the contemporary journalistic norm of user-generated content (UGC). The application of UGC through submission of videos, tweets, online forums, blogs, podcasts and many others, mainly with the aid of social media as a disseminating platform, widens channels of communication between news producers and news consumers. This does, however, simultaneously bring forth challenges to the conventional news industry. The emergence of news consumers acting also as influential news providers has given rise to the establishment of journalistic terms such as 'interactive journalism', 'citizen journalism' and 'participatory journalism' (Singer 2010; Nip 2006). There are, however, debates surrounding these terms (Russial et al. 2015), as they contain substantial levels of obscurity, and can overlap one another (Holton *et al.* 2013).

Whichever label is applied, one significant change is undeniably true: the voice of the public has become, in this new age, significantly amplified and can no longer be sidelined. As Kovarik (2016, p.345) puts it 'The new digital media spoke to a new generation because it allowed members of that generation to speak with each other'. Doyle (2015), Sørensen (2015), and Schifferes *et al.* (2014) all concur that although news organizations still face challenges when identifying their news stories, and verifying their audience-sources (Schifferes *et al.* 2014), current journalistic practices across media platforms continue to prove audience influence in content decision-making. Thus news organizations should remember that their core reason for existence is to disseminate news to the public and to do so within a contemporary landscape. To do this, they have to keep abreast of the continuing changes within the digital context of media discourse.

As news organizations incorporate UGC into their news production, questions of accuracy and credibility remain significant. To overcome these issues, news organizations have formulated their own methods of verification to ensure UGC are reliable, by using specific systems of verification software. News organizations are additionally subscribed to factchecking agencies such as PolitiFact, FactCheck.org and First Draft to ensure that the information received is credible before being published to the public. Thus it is thought that the rise of 'fake news' could possibly lead to an expansion of the role of fact checking websites as a new form of content gatekeeper for news organizations in vetting inaccurate news. With more news organizations outsourcing or becoming increasingly reliant on these fact-checking websites, other complexities within news media discourse will continue to emerge. These may include questions of how credible and impartial fact-checking websites are and how capable they are of debunking fake news. How much reliance news organizations should put on these fact-checking websites, knowing that framing and news agenda exists in each news institution, is another concern. Additionally, if news organizations rely on these fact-checking websites to source and debunk news, what happens to the basic role of news media as information providers?

Hence, questions pertaining to truthfulness, impartiality and credibility in news linger despite the evolution of digital media technology. There is a need to question UGC

contributions to the overall quality of news, and its implications upon the general public (Domingo *et al.* 2008). Therefore, the popularity of UGC adaptation has resulted in the need to create a new set of editorial guidelines for news organizations to adhere to, when implementing UGC practice within their organizations.

Editorial standards and news values

Are emerging technologies obliterating the basic values and practices that previously constituted journalism? A journalistic discourse and the multifaceted factors which contribute to news creation would not be complete without discussion of what constitutes journalistic news values. News values are factors gauged by journalists when deciding the standards of news reporting, which are inferred rather than deliberate (Gans 1979, p.40). They derive from implicit assumptions based on three factors: audience interest, accessibility of a news story to reporters covering said story, and whether the story will commensurate well with organizational operations (Golding and Elliot 1979, p.114). News values can therefore be summed up as working rules derived from perceived audience perception and material availability that implicitly guide newsroom operations (Golding and Elliot 1979, p.115).

The popularity of UGC adoption has resulted in the need to create a new set of editorial guidelines for news organizations to adhere to when embedding UGC practice within their organization. Herbert J. Gans (1979 p.80) stated that the public does not have the authority or position to decide what events are considered newsworthy, or what should influence journalists in their news selection. This situation has changed dramatically over the years, with the role of audiences as mere news consumers having evolved into them as news sources in certain contexts, due to the establishment of social media. For example, the news values of the BBC changed with the introduction of broadcast television news (Schlesinger 1978) before further changes occurred over geographical space and between different news sectors (Harcup and O'Neill, 2001). This is particularly important for television, as its diffusion produces fully original effects, causing challenges for print media, and culture in general (Bourdieu 1998). Whilst similar news values are generally practiced across all media, the development of certain news media may alter the nature of reporting, resulting in either some news values being highlighted over others, or the requirement of an altogether separate set of news values. Therefore, what is considered newsworthy depends not only on the message but also the function of the medium carrying the message (Cushion 2012). Results from a study of news determinants by Swedish journalists revealed the possibility of creating stratified taxonomies of news values (Strömbäck et al. 2012). Since journalistic values are subjected to re-negotiation and re-interpretation, there is a need for occasional analysis of those previously established standards (Cushion 2012; Othman 2012).

As society adapts to more media technology, and news media organizations continue to find ways to enhance news delivery to their consumers, it is expected that there will also be changes in the criteria of newsworthiness along the way. Conventional news organizations need to think of reformatting their news content into unique, nuanced and engaging delivery that suits contemporary and perhaps future news consumers, but nonetheless remains grounded in its existential purpose: to inform and educate society through objective, fair and balanced output. This shows that the rise of emerging technology through digitalization is gradually and indirectly forcing news organizations to allow public interaction in content production, and that

doing so may result in the modification of the range of product quality offered (Wilbur 2016, p.217).

What lies ahead for television as news medium?

The digital shift which has transformed the media landscape, is moving at a very fast pace that is making it difficult for media observers and practitioners to predict possible changes in the future (Kovarik 2016, p.346). News producers are aware that new technology is paving new ways to reach people and that there is a pressing need to restructure their news content to cater to different media. As the symbiotic process of two-way information becomes the norm within news organizations, it is possible that television as a conventional news medium via linear news delivery may fade out. Nonetheless, television as a physical form itself will remain a medium in which we consume news because, unlike new media, the strength of television, as a traditional news platform, is its regulatory control that remains significantly strong. Sørensen (2014) and Barnett (2011, p.16) agree that television is not only persuasive and popular in attracting viewers to their programmes and content (Sørensen 2014), but also that it is the only medium of communication which commands a high degree of credibility (Barnett 2011, p.16). Even with the onset of mobile devices and their growing popularity amongst younger generations globally, television's role as a medium of news delivery remains substantial, with many studies mentioning the strength of this method, especially in terms of news and factual reporting (BBC 2015a; Sørensen 2014).

In addition, there have been various discussions regarding the strength and sustainability of television, particularly pertaining to live events and news delivery (Newman et al. 2015; BBC 2015b; Sørensen 2015; Boyle 2014). In many nations across the world, public service broadcasters play a vital role in conventional television markets (Peitz and Reisinger 2016, p.460), thus strengthening the sustained existence of television as a traditional news medium. Screen enhancements enabling audio-visual quality will continue to be the main living room viewing experience and provide a universal form of relaxation (Barnett 2011, p.244). Further, as O'Regan and Goldsmith (2002, p.92) state, to consider new media requires recognizing the presence of the new in the old, and the mixing of the old and new. Therefore, with increased audience autonomy shaping media consumption, the sustainability of television requires both collaboration and transformation of its forms in the context of new media. All these changes will occur, while television continues to remain as essential to the lives of its viewers as ever (Barnett 2011, p.245).

Conclusion

News organizations need to be on their toes to ensure that they are aware of the latest media developments, and should adapt accordingly without risking their main purpose of existence in the journalistic field – to inform and educate. A study on multimedia practice in journalism reveals that changes occurring in the contemporary media setting is not unprecedented but rather indicates a situation where many things happen concurrently; therefore adopting a singular approach in handling media practice is no longer relevant for media organizations (Deuze 2004). The technological changes that we are witnessing today are reshaping various facets of journalistic discourse. As the methods of global news consumption continue to evolve, the modification of journalistic practice becomes a compulsory course that needs to be

undertaken by any news organization in order to remain relevant in the contemporary media environment.

This article has highlighted the key challenges and on-going changes in news media in the light of media digitalization. It has also discussed the rise of technology impacting the news media industry, and the fall of conventional methods of news delivery and consumption. More research is needed to analyses the complexity of this fast-changing industry. Compared to changes in the past, contemporary technological innovations are moving too quickly, and thus we face an uncertain, complicated future. Surrounded by its fluidity and complexity, digitalization has modified the way news media operate and now demands new methods of business operations to replace standard business models that have been practiced for many years, but which grew stale in the light of change. Within journalistic discourse, the rise of digital media has brought numerous benefits for societal enhancement. It has increased news speed and omnipresence; it has also diminished gatekeeping barriers which ultimately allow news consumers to provide feedback and contribute to news discourse through the information-sharing of UGC. Society is increasingly enhanced by vast knowledge that is transmitted across the globe through this new form of two-way communication.

It is presumptuous to assume that the rise of digital media will result in the complete degradation of conventional news media. Rather, traditional news media are gradually transforming themselves to adapt to the digital environment, which emphasizes a high degree of audience-participatory attributes and personalization. In doing so, factors previously gauged as news values by conventional news media may be replaced with updated standards. As digitalization increases the autonomy of the audience, and decreases the domineering power of news organizations as news providers, the role of gatekeeper in news organizations will continue to be challenged. What constitutes quality broadcast television news remains an open discussion. Ultimately, as conventional news media further adapt to digitalization, linear news delivery as a format may cease to exist, possibly to be replaced by news delivery formats which better suit the rigorous demands of the digital era.

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