

The Many Futures of Digital Journalism

*By Brian L. Massey**

This paper challenges conventional narratives about the future of digital journalism. It argues that digital journalism is not a globally uniform practice with a predictable universal future. Instead, it has many possibility-futures owing to the cultural diversity of the news outlets that engage it and the contexts in which it is engaged. To develop that argument, the paper locates digital journalism as the latest waypoint in humankind's long quest to send messages ever farther and ever faster. Next, digital journalism is decentered through interdisciplinary theory into a novel framework for forecasting the futures of digital journalism as a diverse global phenomenon.

Keywords: Digital journalism, digital journalism diversity, digital journalism futures, global digital journalism

Introduction

In 2009 Mitchelstein and Boczkowski reflected on the state of digital journalism research and found that “most studies continue to apply existing lenses at new phenomenon” (p. 575). That is, they slotted the new “digital” journalism into the legacy-journalism box of theories, methods, and more. But it is a “Made in the Global North” box (e.g., Banshal et al., 2022; Zeng & Chan, 2023). Its tendency is to frame itself as the measure of digital journalism in the Global South.

How digital journalism is done in the developed, capitalist North “is [often] considered to be the norm,” Mitchelstein and Boczkowski (2021) write,

and whatever happens everywhere else should aspire to achieve that status if it is to have a positive connotation. The world has a normative center and a deviant—or at least un-developed—periphery; a periphery that is to be redeemed by aspiring to shed its singularities and model itself in the virtuous image of the center (pp. 130–132).

The reality is that instances of digital journalism are as diverse as humankind. To see that, image digital journalism as a beam of light passing through a prism. Infused into the prism is every possible combination of every possible condition that could split the beam into any possible variation of itself. Whether observers see many, a few or the “one” seemingly universal beam depends on the field of view they choose.

This work contributes to the field by proposing a novel interdisciplinary theoretic framework for opening up the fields of view for forecasters of digital journalism's possibility-futures. To work out that framework, digital journalism is

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decentered from the North-South critique to reveal it as a global and richly diverse phenomenon that unfolds in culturally unique niches. It is the forecaster's task to account for that natural diversity and the sociocultural, economic and political conditions at play in newsmaking.

History for Context

A forecast is at its core a product of the forecaster's best-judgment assessment of the relevant data available at the time. It is an exercise in accounting for influences on the thing under forecast and assigning probabilities to the likelihood of A or B or even an improbable C happening to it at a future time. There is a *caveat-emptor* warning to make, and it is that "past results are not a guarantee of future performance." It is a typical cautionary note from the financial services industry. It means that last week is not always a good guide to what you can expect today to be.

Even so, "the future has a history," as Rees (2021) reminds. By taking account of the past, she says, we *could* discover "patterns ... clear cycles, waves, or sequences" that *could* hint at one or more possible future. Journalism has a long past, and it could hold clues to the possibility-futures of today's digitalized iteration of it.

For digital journalism, signals from its before-time reveal its inherited essence as the human desire to communicate at ever faster speeds across ever greater distances. Profit, broadly defined, is and has been the essential incentive for coming up with technological ways to do that.

Before 'The Digital'

Recorded history finds early expressions of this in the ancients' "writing at a distance" signal codes of smoke, sound, fire and flag (Hershbell, 1978; Rihll, 2017). They were tools mostly for militaries and war, and their use lasted for centuries.

In the mid-1400s there came a sea change, and it took form as Johannes Gutenberg's hand-crank printing press and handset movable type. The press had lots of lasting consequences, and one was that it allowed scholars and inventors to easily share and shape ideas by committing them to ink on paper. In that way Gutenberg's press helped prepare the ground for the rise of the digital.

In the early 1700s another new communication system emerged, and it took form as Claude Chappe's mechanical optical telegraph (Koenig, 1944; Selleri, 2017). It transmitted messages from signal tower to tower through cranks, wires and pulleys that moved a trio of pivot beams into symbol-shapes for each letter of the alphabet. Chappe's device turned out to be a primordial internet. It spread quickly across Europe and beyond, "connecting hot spots of information sources with information consumers" (Opptiz & Tomsu, 2018, p. 48).

Dawn of ‘The Digital’

“Digital” technology, strictly speaking, is electronic and it makes and manipulates information by means of a binary code of positive/nonpositive, on/off, 1’s and 0’s. In the mid-1800s the world got close to that when the electric telegraph came online. It was a sea-change technology: the start of an early digital age.

Telegraph operators rendered messages into Samuel Morse’s eponymous binary code of short “dot” and long “dash” electrical pulses tapped out on a telegraph key. The key worked like a light switch: each tap, short or long, turned the circuit on. No tap, the circuit was off. Chemical batteries supplied the electricity that powered the encoded messages across transmission wires atop tall wood poles.

The electric telegraph quickly spread around the world, and among its early adopters were news “wire services” that distributed news content through the burgeoning network of land and undersea data transmission (Boyd-Barrett, 1980; Blondheim, 1994). As it spread it became an early information superhighway.

Standage (1998, pp. vii-viii) describes the global telegraph network as a Victorian-age internet that “revolutionized business practice, gave rise to new forms of crime, and inundated its users with a deluge of information. ...

The benefits of the network were relentlessly hyped by its advocates and dismissed by its skeptics. Governments and regulators tried and failed to control the new medium. Attitudes toward everything from news gathering to diplomacy had to be completely rethought. Meanwhile, out on the wires, a technological subculture with its own customs and vocabulary was establishing itself (Standage, 1998, pp. vii–viii).

Transitional forms of faster-farther and technologically augmented communication came and went through the dawning of the 20th century. Among them were the wireless railway telegraph (ca. 1880s), the wireless telegraph (ca. 1890s), and the radiotelephone (ca. 1902). An invention of the 1870s—the analog landline telephone—proved longer lasting and by 1900 it had all but fully replaced Morse’s telegraph.

Newsreels opened in movie theaters in the 1910s to deliver news in sound and moving images (Althaus, 2010). The first radio newscast was aired on Aug. 31, 1920, by a newspaper’s experimental station called 8MK (Schneider, 2020). Platform convergence briefly appeared in the 1930s as the radio facsimile newspaper (Koehler, 1969; Schneider, 2014). At the end of the 1940s and into the 1950s, a wireless sound-and-image technology—the analog television—grew in popularity (Pruitt, 2021).

Time of ‘The Digital’

The true digital age arrived in the 1950s when the business side of news firms turned to mainframe computers to automate their bookkeeping tasks (Mari, 2019). Broadcast journalists trialed the mainframe in 1952 (Houston, 2015). In 1962 TV

news delivery went digital with the first live-event satellite broadcast (Space.com, 2012).

Newspaper production went digital in the 1970s when papers began computerizing their pre-press typesetting systems (Mari, 2019). Newsmaking followed when journalists started writing and editing their content on video display terminals linked to a mainframe computer (Francke & Anderson, 1980). From then on, the digitization of journalism sped up.

TV news stations took to electronic newsgathering in the 1970s (Smith, 1984). Platform convergence reappeared (ca. 1970s) as videotex and teletext that broadcast pixelated print news stories to subscribers' TVs (Carlson, 2003). In the 1980s, newspapers "began tinkering" with delivering news by telephone with audiotext services (Boczkowski, 2004), and using computerized news-page design systems (Garrison, 1983). News outlets started posting content to pre-internet Bulletin Board Services (BBS) and Gopher networks that decade (Carlson, 2003; Garrison, 2005), and journalists began integrating desktop and mobile computers, digital photography, email and the internet into their everyday work routines (Mari, 2019; Scott, 2005).

By 1995 print and broadcast news outlets were building their own websites on the planet's newest information network—the internet (Kawamoto, 2003). By the 2000s, people were accessing content, including news, posted to social media and through smartphones. And news wire services had started using AI to automate the writing of routine financial news reports (Colford, 2014; van Duyn, 2006).

Patterns and Cycles

Even a short walk across time-past can bring to the fore patterns and cycles. For digital journalism, three stand out. One is the cycle of continual progression. Humankind has fashioned ever more advanced technological affordances for sending news and other messages faster and farther.

The optical telegraph was proof of concept for the electrical telegraph, which co-occurred with the groundwork for the telephone that would replace it. Modern computers were presaged in the ancient Antikythera mechanism and millennia later, in Charles Babbage's Analytic Engine (Bromley, 1982). Babbage's device as reincarnated in 1945 as room-sized ENIAC, the world's first programmable digital computer (Haigh et al., 2016). It reincarnated in the 1950s as the world's first personal computer (Nielsen, 2017), and on and on. As before, so now ... and beyond, to rephrase a bit of Hermetic wisdom (see Principe, 2013).

There also is the pattern of deploying technology in the service of newsmaking. Technology has certainly changed newsmaking, but it has not displaced the fundamentals of the process. For example, journalists adapted their newswriting to suit the electric telegraph as a new distribution platform. They shortened their stories and wrote more to the point because telegraph companies charged by the word. "Gone were the old flowery circumlocutions that characterized the earlier period" (Phillips, 2012, p. 84).

The telegraph also brought immediacy to the news (Blondheim, 1994) by allowing journalists report back to their newsrooms from distance locales. Yet journalists still engaged in the newsmaking fundamentals. They gathered facts and processed them into units of news content.

In time computers replaced the old-tech typewriter, pencil and paper ways of writing and editing news content. The inter-web and social media gave journalists new tools for finding and verifying information, contacting sources, and delivering content to audiences. Yet journalists still engage in the fundamentals of newsmaking.

Decentering for Forecasting

In the North-South critique, the forecaster may be hard pressed to find a workable framework for future-casting digital journalism as a diverse global phenomenon. Mitchelstein and Boczkowski's (2021) summary of the critique follows the center-periphery frame from World Systems Theory (Wallerstien, 1974) and Dependency Theory (Toye & Toye, 2003). Both hold that the colonizer's capitalism and the macrostructural accoutrements of it continue to lock formerly colonized countries into perpetual states of quasi-development and under-development.

By extension, the center-periphery frame makes the vestiges of colonial capitalism a centerpiece explanation for how the South's digital journalism is treated by the North's research and research publications. However, with such a macro-level explanation, the meso- and micro-level diversities of newsmaking get lost. For the forecaster, decentering digital journalism from the critique brings them out.

Definition

It is always good to start with a definition that outlines the contours of the phenomenon of interest. For digital journalism, definitions number in the dozens (e.g., Duffy & Ang, 2019; Perrault & Ferrucci, 2020), and among them, Zelizer's (2019) is one of the more straightforward and pragmatic. "Digital journalism," she writes, takes its meaning from both practice and rhetoric.

Its practice as newsmaking embodies a set of expectations, practices, capabilities and limitations, reflecting a difference of degree rather than kind. Its rhetoric heralds the hopes and anxieties associated with sustaining the journalistic enterprise as worthwhile (p. 349).

Practice, for this study, is the embodiment of the human capital that journalists hold as their knowledge, skills and abilities (KSAs). It is a universal construct; we all hold human capital, but we vary in the specificity of it, how much we hold of it, how we acquire it and how we deploy it. Yet how we deploy that capital varies by all possible combinations of conditions.

Newsmaking is the unfoldment of journalistic practice. It is a process, and the how and why of it varies. For this study, newsmaking is a series of actions that mirror Shane's (2003) model of entrepreneurship.

First, journalists discern potentialities of "news" in their unique social environments. Then, they define some potentialities as worthy of pursuit, and then gather and analyze relevant information. Then, they process that information into discrete content units of text, sound and image, and then package them together for delivery to audiences. Delivery—operating printing presses and broadcast transmitters and uploading content to the inter-web and social media—may or may not involve journalists. It depends on the news outlet's size, among other factors.

The acts in newsmaking have a baseline universality in the discovery of raw information and its processing into an artifact called "news." But the acts vary by the unique cultural contexts in which newsmaking occurs. Zelizer's definition acknowledges that by describing the expectations and limitations of newsmaking as "reflecting a difference of degree rather than kind."

If we take "kind" to mean the baseline universality of newsmaking, the degrees of difference can be quite vast. Walking newsmaking through three theories helps to visualize the degrees—and decenter digital journalism from a strict North-South perspective.

Theory

First, Feenberg's (1999) critical theory of technology connect the "digital" of newsmaking to the unique cultural contexts that inform it. Feenberg argues that any technology is more than its essential "functions and raw materials" (1999, p. viii). At a deeper, non-essentialist level, it is a social construct. The idea for it, its design, manufacture (raw materials) and the uses (functions) to which it is put are inevitably shaped by "socially specific contextualizing variables" (p. xiii).

Feenberg illustrates the point with a Marxist critique of capitalism. To contextualize a technology "exclusively in modern capitalist terms" (1999, p. 223) is to embed it with capitalist values and use it in service to them. Conversely, he argues it also means devaluing socialism and other anti-capitalist ways of thinking of and using the technology. In other words, the former is bad because of the latter.

If we could decenter the critique it would open up the range of social variables that contextualize technology. Goods and services have been exchanged for millennia. Capitalism as a formal concept appeared in Adam Smith's seminal 1776 book, *Wealth of Nations*, but he never called it "capitalism" (Matson, 2020). The Oxford English Dictionary (n.d.) finds the word being used in 1830-1840 as a socialist critique of the wealthy, and in its modern meaning of private ownership for profit by 1919.

Jahan and Mahmud write of the "many shades of capitalism" (p. 44) in their 2015 article for an International Monetary Fund magazine. It follows that there must be many different ways capitalism can contextualize technology—including

digitalized newsmaking. Gibson's (1979/1986) theory of affordances opens the door to that and to other factors not related to capitalism.

Second, Gibson defines "affordances" as natural resources the environment offers, and they are as useful as people perceive them to be. Take a simple stick lying on the ground. It can be used to fuel a cooking fire or stir the food cooking in a pot. It can help hold up a shelter's roof or fill out its walls or spear a fish for dinner or an enemy during war.

The stick "affords" all those uses and more, but it is the user who perceives a particular use for it. This is where diversity comes into the equation. Gibson (1979/1986) sees us all as creatures of *how* we live. He calls that our "niche," which is different from our habitat, or *where* we live. We "create" affordances when we perceive things in our habitats to be useful in some fashion to how we live.

Niches, therefore, are the locus of the global diversity of digital journalism's pasts and presents, and its many possibility-futures. There is no single way to actualize the baseline acts of newsmaking or to apply digital affordances to it. Instead, there are possibilities of several. Each is an emanation of the niche-bound sociocultural, economic and political variables that work on the journalist, audience and other stakeholders in the acts and outcomes of newsmaking.

Third, Barney's (1991) resource-based view of the firm (RBV) broadens "capitalism" as a contextualizing variable for newsmaking and moves beyond it. Barney sees the firm as made of bundles of resources that it possesses or acquires for doing its work as a business. All endeavors—wherever they may be and whatever they make—function on resources. Acknowledging that allows the RBV's "firm" to mean the corporate news group to the self-employed journalist-entrepreneur and all possibilities in between.

"Resources" are affordances of financial and human capital, brand reputation, equipment/technologies, audience/customers and all the other things a news firm requires for its work. How the firm chooses to perceive and use its resources is bound to its niche. Here, again, is a theoretic foundation for a globally diverse digitalized newsmaking.

Mapping Forecast Zones

To set the stage, forecasting is not prediction. To predict the future of human endeavors is an act fraught with risk. Foresight may be clear-ish for a short-term look ahead, but the farther out, the fuzzier it gets. Any future we predict is at its core our projection of a subset of conditions we perceive and interpret in our here-and-now time. There are lots of problems with that. For one, predictions are not immune to human nature. They can be shaped by the self-interests of the people who make them and believe them (Beaton, 2017; Housel, 2019). For another, the world is not static. It is always in flux. It is messy and busy, and always host to unexpected happenings. This all means that any future predicted is just one possibility among many (Rees, 2021; Saffo, 2007).

Therein lies the dilemma. We humans want to know what is around the corner, but it does no good to preordain what we might see or want to see. The workaround is to forecast, not predict. Forecasting looks for possibility-futures, “not a limited set of illusory certainties” (Saffo, 2007, p. 124). The forecaster takes on uncertainty by acknowledging the unexpected can and will happen, and that the probabilities of experiencing a phenomenon will vary from person to person and place to place.

A forecast needs a manageable area of focus, one that sits in its version of the planet hunter’s “Goldilocks Zone” (NASA, n.d.). Not too wide, not too narrow, but a purpose-built “just right.” The literature on digital journalism is thematically and geographically rich with possibilities for coverage zones. Indeed, digital affordances for newsmaking, like all technologies, “are neither value free, neutral nor universal, ... [They] are appropriated differently in different social contexts and by different people or organizations” (Tshabangu & Salawu, 2022, p. 6).

Capitalism Large and Small

Filtering the resource-based view through the theory of affordances opens the door to two broad coverage zones for forecaster. The proposition is that large corporate news enterprises are resource rich by dint of their size, and they can “buy” as much “digital journalism” as they perceive necessary to their survival. A corollary is that large news corporations “live” in a niche that is arguably more global than local. They are members in a “club of the big,” in other words. Regardless of whether they are homebased in the Global North or South, they all perceive resource-affordances through a shared set of capitalist values.

The World Association of News Publishers (WAN) is an example. Its latest *World Press Trends Outlook* survey (2023-2024) went to executives at its member newspapers and news groups in 60 countries. Among the 175 respondents, 42% were from news businesses in countries the World Bank defines as “developing.” WAN’s sample “features ... countries as diverse as Argentina, Canada, Russia, and Indonesia ... [and] some of the world’s largest media markets, including Germany, India, the United States, and the United Kingdom” (p. 4).

The firms represented by the respondents shared a “persistent drive” (WAN-IFRA, 2023-2024, p. 27) to sell more digital subscriptions and diversify into other streams of reader revenue. Advertising still was their main revenue driver. Respondents were “broadly aligned in both developed and developing markets” in their optimism and pessimism for generative AI. Most also said their employers were not ready to “tap into [AI] in the coming year” (p. 42). Still, about half (52%) of the developed-market respondents said their firms were actively using AI now. Nearly 40% of developing-market respondents said the same of their firms.

In contrast, smaller news firms in developing and developed markets are similar to the extent that in the average, they are resource constrained. The proposition is that they cannot “buy” all the digital affordances they may think they need. A corollary is that small news firms “live” in local community niches and as such, their newsmaking is diverse not just by degree but in kind as well.

Salaverría et al. (2019), for example, found that while independent digital-native news sites “from the Caribbean to Patagonia” (p. 229) use digital affordances, they struggle to survive. “These media are mostly very small business, and only a few have potential to scale. Their revenues are [as] modest,” the researchers write (p. 238). Their audience sizes and stock of resource-affordances are modest too.

Digital independents in other parts of the world deal with similar issues, the nonprofit SembraMedia wrote in a 2021 report one must know about to find. SembraMedia is a consultancy for small digital independents. In the developed economies of the United States and Canada, Kizer (2021) found that the average independent news site “operate[s] in a challenging financial environment” (p. 3) with small staffs gathered by founder-owners without much business training. In Zimbabwe, journalists “are poorly paid and these financial constraints have a bearing on how [they] conduct their professional work in this ‘digital era,’” Ndlou and Sibanda (2021, p. 17).

Still, in Nepal, digital news sites have become “a very popular medium ... [because of their] accessibility, interactivity, transparency, immediacy and inexpensiveness” (Mahaseth & Qureshi, 2021, p. 297). India has a robust media sector of digital news startups, and they see themselves as “valuable supplement(s)” to the English-language newspapers in the country’s urban centers (Prasad, 2021). In The Gambia, basic digital affordances—the internet, smartphones, social media—have diffused into the country’s newsrooms (Nnaane, 2022).

Prosocial Newsmaking

Profit-capitalism may be secondary to a news outlet’s newsmaking. In the case of *uMthunywa*, the reason for being is to preserve an indigenous language. Tshabangu and Salawu (2022) describe *uMthunywa* as “the first fully digitized indigenous-language newspaper in Africa” (p. 38). It publishes in a language spoken in southwestern Zimbabwe, and it went fully online during the COVID-19 pandemic. The researchers concluded that the paper and others like it “adopt or reject” digital affordances for newsmaking “depending on how meaningful and relevant they are to them” (p. 50). Still, they argue, the indigenous-language press must go digital to survive.

In other cases, prosocial means taking the role of community activist and offering an alternative news-information affordance. Harlow (2022) found that readers value small nonprofit digital native news ventures for “tak[ing] stances against injustice and corruption, and ... actively participat[ing] in communities and protests” (p. 1337). Her findings came from surveys of readers of seven such ventures across Latin America. In Brazil, Ganter and Paulino (2021) found readers form support networks to protect independent digital news sites and their journalists. They described it as a “positive dependence” (pp. 239–241), an example of “different models of resilience” (p. 242) against hostility toward independent digital journalists by the government and a highly concentrated corporate news media.

Digital news organizations in Indonesia, Malaysia, the Philippines and Thailand see themselves as the people’s bulwark against their governments’ cyber-authoritarianism. “They view their journalism as part of a broader movement that drives civic engagement and push towards progressive social and political change,” Sinpeng and Koh (2023, p. 257) reported.

Epilogue for Forecasting

In his 2019 review of the research Salaverría writes, “The next quarter century will likely see major technological, social and professional innovations that will continue the profound transformation of [digital] journalism” (p. 15). That makes for at least 30 separate possibility-futures. Each of the three innovations could happen or not. If any one of them does, it could be major or not. It could be transformative or not. If it is transformative, it could positive or negative, profound or something less.

It also takes a 30,000-foot view to see digital newsmaking as a global aggregate. Yet newsmaking and its use of digital affordances happens in myriad unique ways around the world over. It gets its uniqueness from the culture-bound niches in which it is formed. Some of that is a matter of North-South, but not all of it. Some of that is a matter of capitalism, but not all of it. This paper offers a novel interdisciplinary framework through which to explore the fullness of the many present iterations of digital journalism—and forecast the probabilities of its many futures.

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