

the term globalization emerged and became prominent in the field of media and communication.

Chapters of this section deal with the theory of development, communication, and modernization. Here the focus is on the use of media as a tool for bringing about change in society—from the dominant top-down approach of modernization theory to the bottom-up participatory approach of development. The uses of ICT for development have become a new phenomenon, and media scholars and practitioners have given it enough attention to explore this telecommunications approach for development. However, there is a strong critique of the monopolization of these ICT companies. mostly from the developed world like the US. This has resulted in the corporatization and commercialization of the media landscape at the global level, which has influenced the geopolitics of the world. The dominant powers like the US and now China have created a new geopolitical tension. While the role of the media has been considered important in bringing about change in society, in the changed landscape imported or foreign media has been seen as a tool reinforcing the dominant ideology of big corporate companies. This is called "media imperialism" or "cultural imperialism." It explains the political economy of the media and its power relations. This criticism led to the emergence of the concept of the participatory approach to media and communication for development. Technological advancement has given rise to new platforms for communication and allowed citizens to connect with information more easily.

This is an interesting book, which explains how the field is characterized by a continuity of critical concerns in relation to power, influence, and domination; media user empowerment and exploitation; and social and sustainable development and democratic conditions, as well as geopolitical shifts, in a global context.

Allie Kosterich.

News Nerds: Institutional Change in Journalism, Oxford University Press: New York, 2022; 184 pp.: \$99.00. ISBN: 9780197500354

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The last decade has seen remarkable changes in how journalism is both created and consumed. While digital technology's impact on journalism did not begin in the second decade of the new millennium, the pace of this change accelerated. Social media platforms have become prominent arbiters and distributors of news content. Search engines direct audiences to coverage of important events. Computational advances and increased data access have allowed journalists to tell more data-driven stories. Web analytics play a significant role in determining what stories are highlighted. Combined, this digital transformation has had profound implications for journalism work. In her engaging new book *News Nerds*, Allie Kosterich examines the emergence of a new digital role within journalism, a role that has not displaced traditional journalism but has augmented established approaches to the craft.

Kosterich outlines that the role new nerds play varies but a common thread 'is a driving force to produce news more effectively and efficiently by harnessing the power

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of technological advancements such as the growth and accessibility of big data, computing technologies, networked devices, and mobile and social platforms' (p. 3). Given this, news nerd roles have typically included data journalists, developers, web analytics specialists, and social media producers.

Kosterich's work features innovative methodological approaches that illuminate how news nerds emerged, both at an organizational and individual actor level. Incorporating employment network analysis, textual corpus-based research, and interviews with digital journalists, *News Nerds* presents various fascinating data-backed case studies illustrating news nerd evolution in the journalism industry. *News Nerds'* well-thought-out Data and Methods Appendix provides an invaluable blueprint for researchers that might want to expand on Kosterich's work.

To explain how the emergence of news nerds has affected the journalism industry, in Chapter 1, Kosterich introduces the concept of institutional augmentation. An adaptation of traditional theories of institutional displacement, Kosterich develops a framework that helps illustrate how news nerds have not replaced traditional journalists but have augmented their work. This augmentation framework focuses on four features which are explained throughout the book: (1) precipitating jolts, (2) experimentation and evaluation, (3) legitimization, and (4) diffusion.

The emergence of news nerd roles did not occur in isolation, both internal and external factors played a considerable role in disrupting established journalism practice as explored in Chapter 2. Throughout the study period of 2011–2020 news organizations, particularly newspapers, saw significant declines in overall revenue and staffing levels. In addition, this period saw the emergence of big data and innovative computational approaches, which provided new storytelling opportunities. Throughout this decade, social media platforms reshaped how journalism content reached audiences, which led to social change as audiences increasingly turned to digital devices such as smartphones to engage with news content. These economic, technical, and social precipitating jolts saw established news organizations experiment with news nerd-focussed work as well as the development of digitally native news organizations such as BuzzFeed.

This experimentation was visible throughout the early 2010s via movements towards integration of news nerds into journalism work, as explored in Chapter 3. This integration brought about shifts in traditional newsroom departmental boundaries and the development of an intrapreneurial focus which saw the creation of digitally focussed labs. Kosterich argues evaluation of news nerds gained visibility during this period, as made clear by the increased prominence of news nerd topics at journalism conferences starting in 2012.

To truly augment traditional journalism roles, Kosterich argues that news nerds had to gain legitimacy within the profession. As explored in Chapter 4, news nerds gained three forms of legitimacy throughout the last decade: moral, pragmatic, and cognitive. Moral legitimacy is gained through integrating something new into an established practice, and Kosterich explains that this was made evident in the case of news nerds by including news nerd-related training into journalism school curriculum. Pragmatic legitimacy was gained through the recognition of the economic importance of news nerd roles. Several interviewees highlighted how their news nerd work resulted in significant increases in website traffic for their news organizations. Cognitive legitimacy came from an increased

external awareness of news nerd roles, as evidenced through increases in press coverage of news nerd work and consistent award recognition.

Kosterich explores how news nerds diffused through the news industry in Chapter 5. She argues that this diffusion comes from a mixture of specification, justification, and objectification. Kosterich's research demonstrated that news nerds' work was frequently justified as crucial to addressing institutional challenges, revealing the clear presence of specification and justification. As outlined, diffusion also occurs through objectification, and with news nerds, this objectification comes through the increased visibility of the news nerd community as seen through news nerd-specific conferences, meetups, and online communities.

Summarizing her argument in Chapter 6, Kosterich reiterates that news nerds have not displaced traditional journalists and are not a fleeting fad. The emergence of news nerds has updated and augmented journalism work, allowing for the coexistence and intermingling of these new and established roles. This collision of journalism forms is not without its challenges, and *News Nerds* concludes with valuable considerations for journalism practitioners.

Journalism leaders must consider how inherent newsroom power structures might stifle collaboration and experimentation. Kosterich sees an increase in business literacy as a way to ensure that news organizations will be open to accepting innovative new journalism approaches. Sustainability of news nerd roles is also reliant on increasing transparency of hiring practices and compensation, and also ensuring clear job descriptions are available. In addition, the journalism industry must ensure that the news nerd community reflects that diversity of the audience it serves, as Kosterich's research has shown there remains an unequal gender and racial distribution among news nerd workers.

News Nerds serves as a compelling document of how computational work has evolved over the last decade in the journalism industry. Kosterich provides a well-researched and accessible case for how news nerd work is both an extension and augmentation of traditional journalism work. While touched on briefly in both Chapter 3 and Chapter 5, a possible area of further research could focus on how news nerd work has or could affect smaller news organizations. As Kosterich outlines, news nerd work often requires significant financial and labor resources, which could prevent smaller newsrooms from working in the space. Could a form of digital divide be fostered between organizations that do and do not have the resources to embrace news nerd work? Kosterich also outlined that her employment-based research was focussed on the New York City area, and it would be interesting to see if these employment patterns replicated themselves in other locations. News Nerds is a must-read for newsroom leaders grappling with how computational change might affect their workforce, and provides an inspirational blueprint for researchers who wish to study the impacts of technological development.