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## Personalization of News

*Neil Thurman*

### Abstract

The development of interactive, networked, digital communication allowed news to be personalized to individual users at scale and with unprecedented speed and efficiency. From modest beginnings in the pre-Web era, news personalization has increased in volume, sophistication, and reach, not least because of social networks, in particular Facebook. This increase has prompted a mixture of reactions, some optimistic about the effects on individuals and society, and others less so. Some research indicates that we have not—yet—become especially enclosed within echo chambers or filter bubbles that isolate us from alternative viewpoints and common experiences. However, concerns persist, especially about the content curation role of social networks with their increasingly user-centric personalization algorithms. It may be that traditional news providers, more so than social networks, will provide—within an increasingly personalized information environment—the common set of experiences and exposure to challenging viewpoints required in well-functioning systems of free expression.

### Keywords

customization; echo chambers; filter bubbles; fragmentation; personalization; recommender systems; selective exposure; user profiling

The development of interactive, networked, digital communication allowed messages to be personalized to individual receivers at scale and with unprecedented speed and efficiency. It did not take long for some news providers to make use of these developments and launch services that offered news personalized to the tastes of individual audience members. News personalization had, however, been imagined many decades before the availability of the enabling medium. Just as people had anticipated human flight before the Montgolfier or Wright brothers actually took to the air, the idea that an individual's informational needs could be met accurately, swiftly, and economically predates computer networking. Writing in 1889, Jules Verne and his son Michel imagined, 1,000 years hence, a system of *telephonic journalism* whereby subscribers would be free to listen only to news of their

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own choosing, able to "give attention to one editor and refuse it to another" (Verne & Verne, 1889).

In fact, it took far less than 1,000 years for versions of the Vernes's fantasy to materialize. News personalization surfaced on Internet dial-up services and proprietary networks a mere century later. An early example was USA Today Sports Center (PR Newswire, 1989), an online subscription service that offered personalized news on teams and players. Since then, the number, sophistication, and reach of personalized news services have increased hugely. These increases have prompted a mixture of reactions, some—in the manner of the Vernes's—optimistic about the effects on individuals and society, and others less so.

Many forms of media—both off- and on-line—can be made personal through the choice of outlet and of particular stories within. The advent of new media platforms—such as the World Wide Web and satellite television—increased the breadth and depth of media content and the speed and ease with which consumption choices could be made. However, selecting an outlet and stories therein is not—many would argue—true personalization. Rather, personalization requires outlets to differentiate between consumers in terms of which stories are presented, when, and with what prominence. How this is done, in broad terms, is captured in this definition of news personalization:

A form of user-to-system interactivity that uses a set of technological features to adapt the content, delivery, and arrangement of a communication to individual users' explicitly registered and / or implicitly determined preferences (Thurman, 2011).

This definition makes an important distinction between explicitly registered and implicitly determined preferences. Explicit personalization relies on individual consumers to make choices about the information they would like to see or, indeed, avoid. Implicit personalization does not require individuals' explicit input on an ongoing basis, but rather uses data collected, for example on the individual's browsing history.

Some of the earliest examples of personalized news emanated from traditional news providers such as *USA Today* and predated the World Wide Web. As the Web superseded proprietary networks, news providers' personalization projects became both more common and more ambitious. There is limited research on the forms—and prevalence—of their personalization offerings. However, longitudinal studies of the online editions of a sample of large, legacy news providers in the UK and US showed that, by

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2009, all carried a considerable variety of tools to tailor stories to their users' interests. These included personalizable email newsletters, RSS feeds, and SMS alerts; home pages that could remember readers' content and layout preferences; and *My Pages* on which users could choose which of hundreds of different news feeds they wanted to include and in what order. In addition to filters such as these that operated only on a user's command, news was also being personalized automatically, without readers' explicit input. Examples included *Geo-targeted editions* personalized to users' locations (Thurman, 2011).

Subsequent research has shown continued development in the ways in which such news providers personalize content, with some functionalities—such as Web-based My Pages—falling out of favour, and others being introduced to serve the growing audience segment that uses smartphones for news consumption, and on the back of the increasing size and interoperability of social networks. For example, by 2010 users of WallStreetJournal.com, NYTimes.com, Telegraph.co.uk, and WashingtonPost.com could choose to receive recommendations based on the behaviour of their Facebook friends (Thurman & Schifferes, 2012).

Social media platforms are not, of course, merely enablers of personalization for third parties; they also personalize content, including news, on their own applications. Users of social networks have always received distinct streams of content, initially based on their own explicit choices about which accounts to follow and, subsequently, further personalized by networks' algorithmic determinations of what should be prioritized. Although much of what appears on the largest social network—Facebook—is not, by most definitions, news, Facebook's reach, the volume of content it carries, the time its users spend on the platform, and its use of personalization as the central content selection mechanism mean that it is responsible for far more news personalization than any single dedicated news publisher.

At many news publishers, decisions about which news stories are prioritized are still mostly made by editors operating—more or less—within the norms of established journalistic standards. Facebook's News Feed algorithm, however, has different priorities. Research indicates that input factors such as engagement (comments, likes, clicks, and shares), the relationship between the receiver and the source, and users' interests are more important than, for example, the quality of the content or its social significance (DeVito, 2017). Michael A. DeVito says that, as a result, Facebook's story selection values depart radically from traditional news values.

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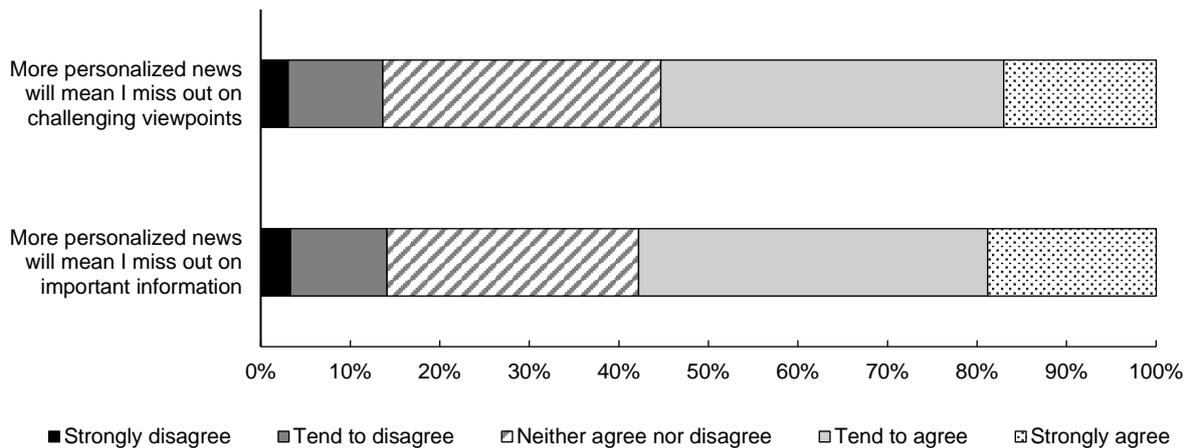
Given the influence and determinations of personalized platforms such as Facebook, concerns about the consequences of personalized news have revived, fuelled by discussions about whether social media platforms were sufficiently balanced in the information they provided their users during the 2016 US presidential election and the Brexit referendum. An important pre-revival critic was Cass Sunstein (2001) who maintained that a properly functioning system of free expression should ensure that people are exposed to content they haven't selected themselves as a guard against cultural fragmentation and extremism, and who also stressed the importance of the media providing citizens with common experiences that would function as a social adhesive (p. 8-9). In his 2007 revision of *Republic.com*, Sunstein (2007) wrote about the impossibility of people possessing considered perspectives on important issues such as terrorism and climate change if they confined themselves in echo chambers of their own making. The phrase *echo chambers* resonated widely as a convenient shorthand for the ways in which technology might be allowing individuals to shut out certain voices and amplify others.

Sunstein predicted that some users would have trouble designing their own "communications universe" but that this would be no impediment to the creation of such an environment, because one could be "designed for them ... with perfect accuracy" (2007, p. 3). The idea that personalized communication universes would be created for users, rather than commissioned by them, was central to Eli Pariser's (2011) *The Filter Bubble*. Pervasive filtering would, he argued, result in users missing out on many sources of information and in a concentration of control over what they see (p. 218). Like Sunstein's echo chamber, Pariser's *filter bubble* concept resonated widely in the decade in which his book was published.

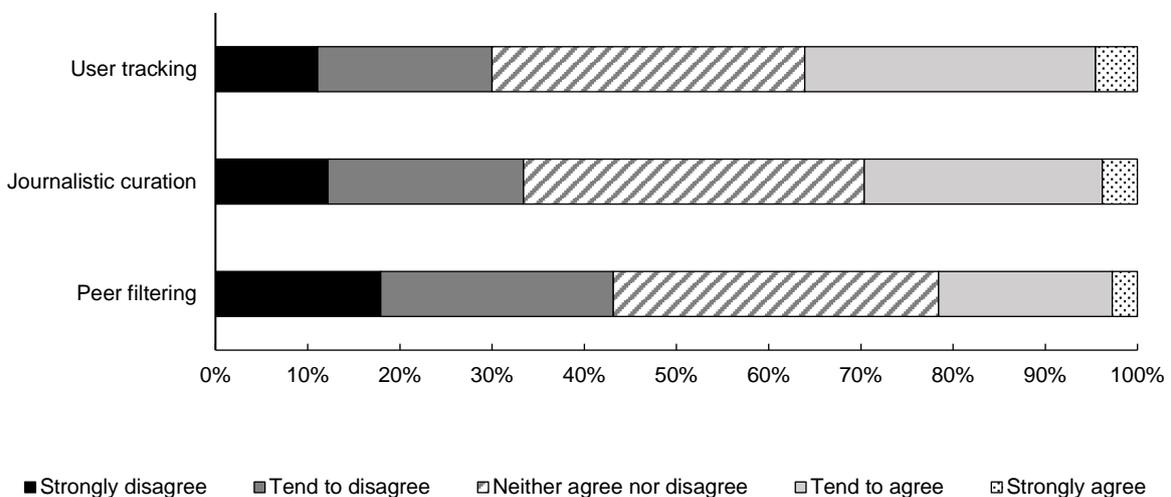
Echoes of those resonances can, perhaps, be detected in consumers' contemporary worries about the consequences of more personalized news. A 2016 survey of over 53,000 online news consumers in 26 countries found more than half agreed that more personalized news may mean they miss out on challenging viewpoints and important information, with only around 14% disagreeing (see Figure 1). However, the same survey also showed consumers had a preference for (a form of) automated news personalization over story selection by editors and journalists (see Figure 2). It seems, therefore, that, in the minds of individuals, the benefits of news personalization outweigh its risks. In making that assessment, consumers may be offering evidence that supports recent meta-analyses and original empirical studies that play down concerns about echo chambers and filter bubbles (see, e.g., Zuiderveen Borgesius et al., 2016).

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**Figure 1:** Levels of agreement among online news consumers in 26 countries with statements that more personalized news will lead to missing out on 1) challenging viewpoints and 2) important information, January 2016 (N=53,528). Source: Reuters Institute for the Study of Journalism/YouGov, Digital News Survey 2016.



**Figure 2:** Levels of agreement among online news consumers in 26 countries that having news stories selected either automatically (on the basis of own past consumption ["user tracking"] or friends' news consumption ["peer filtering"]) or by editors and journalists ("journalistic curation") is a good way to get news, January 2016 (N=53,314). Source: Reuters Institute for the Study of Journalism/YouGov, Digital News Survey 2016.



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When, in 1995, Nicholas Negroponte exhorted us to imagine a personalizable newspaper—*The Daily Me*—he put the user in the driving seat, able to “crank personalization up or down” and steer the filtering mechanisms—to, for instance, the political left or right. It has turned out that many of us are unwilling to grab the steering wheel and are certainly not willing, as Negroponte thought we might be, to pay more for smaller quantities of personalized news than for larger quantities of non-personalized news (Negroponte, 1995).

Social media platforms have profited from our passivity and parsimony and now serve a desire for effortless, gratuitous, self-focused, personalized information. The significance of their content curation role is far from clear. While some research indicates that we have not—through our own, or others’, actions—become especially isolated from alternative viewpoints and common experiences, concerns remain. These concerns are real enough for the German parliament to have launched, in March 2018, an investigation into personalized news, looking at, among other things, the associated risks, and the transparency of the mechanisms involved.

Facebook’s decision, in January 2018, to deprioritize content from brands, including news providers, in favour of posts from users’ friends and families is likely to result in an even more personalized experience for its users. Mark Zuckerberg, Facebook’s chief executive officer, has admitted that, as a consequence, fewer informative articles from the media will appear. Such content is essential to well-functioning systems of free expression. Many commentators believe that news publishers’ own outlets must take up the slack, finding ways of serving what might be an increased appetite from audiences for personalized news, while at the same time ensuring that those audiences get enough of the socially important, challenging stories that journalists are conditioned to deliver.

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## Further Reading

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## Brief Author Biography

Neil Thurman is professor of communication at LMU Munich and a Volkswagen Foundation Freigeist Fellow. He was the first faculty member in electronic publishing at City, University of London and has directed Master's programmes in Electronic Publishing and Journalism and Globalization. Neil's main research focus is on digital journalism and his work has been covered widely in the media. Neil's professional background is as an award-winning digital publisher, including at the Thomson Corporation. He is the author of dozens of publications, including *Journalists in the UK* and "Has Digital Distribution Rejuvenated Readership? Revisiting the Age Demographics of Newspaper Consumption".