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# Imagining Publics through Emerging Technologies

*Jannie Møller Hartley and Anna Schjøtt*

## Introduction

When first announcing the new personalization feature in 2011, Denise Warren, senior vice president and chief advertising officer at the New York Times Media Group and general manager at NYTimes.com, stated in a press release: ‘With a Web site as broad and deep as NYTimes.com, we are always looking for new ways to help our readers find news of interest beyond the sections they read most’ ([The New York Times Company, 2011](#)). This initial problem framing shows how the *New York Times* (NYT) is setting the stage for personalization, with references to both a problem – the ever-growing web – and a beneficiary – the reader. The solution, of course, was the personalization of the online news site. In short, personalization is an umbrella term that describes the use of a range of algorithmic systems to provide individual recommendations to readers based on their past reading behaviour, thus producing a personalized news feed (see also [Chapter 6](#)). We argue in this chapter that personalization represents another evolutionary step in the use of audience measurement technologies, as these projects are founded in a desire to better utilize existing audience data to serve the public (see, for example, [Bodó, 2019](#)).

From 2017 and onwards the NYT took several steps to increase the use of recommender systems and personalization algorithms. The increasing introduction of more personalized features on the site would, according to the NYT publics editor at the time, Elisabeth Spayd, make the NYT move away from the news as a monolithic entity towards being something more ‘bespoke’ and ‘responsive’ to its audiences. Spayd explained her position to the readers of the NYT in an article on the public editor site:

Picture a home page where the dominant spots on the screen show the big news and feature stories, but much of the surrounding content is tailored to your own interests.

More limited experiments are already underway. News alerts, among the primary uses of personalization right now, may be different depending on a particular reader's location. On the home page, there's a customized box called 'Recommended for You' that lists articles Times data shows you haven't yet read.

But these are small lab tests compared with the plans editors have for a next-generation New York Times, one that shifts from monolithic to something more bespoke. (Spayd, 2017)

Since then, the *NYT* has continued describing the development and increasing implementation of new features in blog posts, on the public editor site, on its help page on personalization and via interviews featured in articles published on other news sites. In these different statements, the *NYT* highlights the role and benefits of these algorithmic technologies. Personalization was believed to be on one side the solution to ever growing amounts of content online, while on the other side also a way to increase or at least not challenge the democratic role of news. Interestingly, the personalization efforts of the *NYT* happened in dialogue with readers and many of these comments displayed a rather different opinion and interpretation of the value of personalization. Several of the articles published by the *NYT* regarding personalization received highly negative responses from their readers in the form of 422 replies posted in the comments sections of these articles, with the majority being posted in relation to the one written by Spayd. With her supportive stand for the idea of personalization, she was perceived as betraying her role of holding the publication responsible for conducting itself in the proper (democratic) way as a news organization. In these comments, the idea of personalization was completely rejected, seen as inappropriate and even dangerous for democracy – a rather different story than the one of a brighter personalized future for news. Many of these comments expressed this sentiment through rather colourful language, such as the one posted by an anonymous reader in response to Spayd's article:

'Personalized' news? What a dreadful idea! I already assiduously avoid reading the 'Recommended for You' articles the Times suggests because I resent the implication that I do not know enough to select articles I want to read. Am I now to be forced to stop reading the Times altogether in order to avoid its pre-digested pablum? I'm elderly, but I can still chew my own mental food! (Spayd, 2017)

This comment and Spayd's vision of a brighter personalized future help to highlight the conjunctures of what we argue is a discursive battle of legitimation: a battle over the future of news, its democratic role and the publics it serves.

In this chapter, we use the *NYT* as an illustrative case to demonstrate how emerging technologies, in this case personalization, serve as catalysts in the (re)imagining of the audience and the role of the press, as cultivators of publics – and vice versa how (re)imagined audiences are used to legitimize the need for technological change. To advance this argument, we draw on Bryan Pfaffenberger's (1992) concept of 'technological drama', to frame the discursive battle that unfolded between the *NYT* and its readers, where both attempt to define the meaning and implications of the technology. By analysing the drama over the personalization of *NYT* we illustrate the relations between the imaginaries of publics, the role of the press and emerging technologies. This allows us to take a step back and historicize the relation between the imaginaries of audience and technologies as well as critically discuss how newsrooms in their attempts to define and legitimize their use of emerging technologies engage in processes of reinventing themselves discursively and in turn re-constructing publics as personalized.

In the following, we first expand on the theoretical framework, presenting the concept of technological drama in more detail and discussing how following such dramas in the news context allows us to bridge two previously separated perspectives on imaginaries: literature on audience construction through imaginaries and technological/sociotechnical imaginaries. In doing so, we illustrate the dialectical relationship between these imaginaries, in which technological imaginaries work as 'communicative drivers of transformation' (Møller Hartley et al, 2021) inducing the (re)imagination of the audience or public (including their relation to the press) and vice versa. Following this, we outline the relevance of the *NYT* as a case and our methodological choices. With this foundation in place, we venture into the midst of the unfolding technological drama and explore the countering imaginaries of the publics and press and how these imaginaries are discursively produced. The chapter then proceeds to historicize this argument by dissecting existing literature on audience imaginaries and constructions. From this, we distil three phases, where publics and the role of the press have been imagined differently on the basis of the audience measurement technologies of the time. Hence, the overall argument of the chapter is that the (re)imagining of publics happens in tandem with the imaginaries of emerging technologies such as measurement systems and currently personalization algorithms. Thus publics are and have been constructed in a constant interplay with technologies, the social imaginaries of the role of the press and the datafied realities of the press system.

## Conceptual frame: (re)imagining publics and technologies

The notion of ‘imaginaries’ is often traced back to the work of Charles Taylor (2004) and his concept of ‘social imaginaries’. He defines these as the way ordinary people engage in imaginaries of their social surroundings, producing ‘common understanding that makes possible common practices and a widely shared sense of legitimacy’ (Taylor, 2004, p 106). As such, imaginaries are the ‘background understandings’ that guide our everyday actions and common practices (Taylor, 2004). Over the years, this concept has also been used to explore the imaginaries related to audiences of news and technologies. Thus, multiple scholars have explored how journalists and editors have historically imagined different ‘audiences’ or ‘publics’ and defined the role of the media in relation to these imagined audiences (Gitlin, 1980; Ang, 2002; Coddington, 2018; Nelson, 2021). Furthermore, scholars have explored how journalists and editors negotiate newsworthiness in relation to specific idealized imaginaries of the audience (see, for example, Ang, 2002; Willig, 2010; Anderson, 2011; Møller Hartley, 2011). As Schudson (2011) argued, ‘the news media do not find and respond to an existing audience; they create one’ (p 168). Similarly, Ien Ang (2002) has highlighted that audiences are discursive constructs, neither predefined nor static.

Scholars (predominately from the field of Science and Technology Studies) have equally explored the imaginaries of technologies or sociotechnical systems. The concept of imaginaries has, for example, recently been utilized in the analysis of the everyday imaginaries that users of social media have of algorithms (Bucher, 2017), or to explore the counterimaginaries of datafication produced by those who are critically affected by datafication processes (for example, the fear of surveillance) (Kazansky and Milan, 2021). Patrice Flichy defined technological imaginaries as ‘the collective, shared visions about technology, which amalgamate intentions and projects as well as utopias and ideologies’ (2007, p 366). Later, Sheila Jasanoff (2015) also highlighted the need to understand ‘how, through the imaginative work of varied social actors, science and technology become enmeshed in performing and producing diverse visions of the collective good’ (2015, p 11). The last part of the quote highlights the connection between technological imaginaries and what in our case is the normative understanding of ‘good’ journalism, which includes imaginaries of who the public is and the responsibility of the press towards them. Therefore, we use the term ‘imaginaries’ as an overarching heuristic to describe both the ways in which technologies and publics and their relation to the press are discursively constructed by different actors.

In this chapter we apply Bryan Pfaffenberger’s (1992) notion of a ‘technological drama’ to structure our initial analysis of the introduction of

personalization at the *NYT*. Pfaffenberger uses this notion to describe how ‘design constituents’ (in our case the *NYT*) must engage in ‘technological regularisation’ which is the process of discursively constructing a social context for the technology. The ‘impact constituents’ (in our case the commenters) who become (re)constructed via such discourses can resist this construction via countersignification processes, as they provide an alternative interpretation of the technology. The technological drama in its essence is, therefore, comprised of a series of ‘statements’ and ‘counterstatements’ in which this discursive battle unfolds, where both parties attempt to persuade each other about a particular way of ‘reading’ the technology (Pfaffenberger, 1992, p 285). While Pfaffenberger does not link the drama to the notion of imaginaries, we argue such dramas are occasions where these imaginaries become more clearly outlined in discourse.

Analysing the technological drama over the personalization of the *NYT* allows us to see how the *NYT* via public statements constructs a social context for personalization, by drawing on certain imaginaries of the technology, the landscape it is part of and the intended audience. By engaging with the counterstatements offered in the comment section, we can explore how different and countering imaginaries guide how the readers in turn interpret the technology. By exploring both, rather than simply one side of the drama, we highlight the political nature of such discourse. In discursively constructing the technology, these actors shape how the technology is more widely understood and legitimized. In taking this perspective, we highlight how the imaginaries of technologies and the construction of publics are deeply intertwined and should be analysed not separately but together, paying attention to their dialectic relationship.

The *NYT* is a good case for explicating this dialectic relationship because it has long been considered one of the most prestigious and well-respected news outlets producing quality journalism and it is a stronghold for journalistic integrity. Further, the *NYT* was one of the first to embark on and experiment with personalization of news on its sites, which meant it was among the first to define how personalization could be beneficial for news.

The *NYT* was also one of the very few media organizations that have been as open in explaining and communicating to the users, which makes it ideal for this empirical illustrative case study. The drama also becomes particularly interesting here, as the readers of the *NYT* are known to be some of the most elitist readers in the world and a global readership, who also, as previously shown, take upon themselves the role of ‘press critics’ when they comment, particularly on pieces by the public editor (Craft et al, 2016).

The concrete empirical material is comprised of published articles by the *NYT* regarding its efforts to personalize the site (articles, info sites, blog posts and articles by the public editor, a role that no longer exists) as well as articles

in which employees at the *NYT* have spoken about these initiatives in other media outlets (in this case, Nieman Lab). A total of 9 documents have been included in this part of the analysis (Garber, 2011a, 2011b; The New York Times Company, 2011; Spangher, 2015; Bilton, 2017; Spayd, 2017; Hassan, 2018; Coenen, 2019). All comments posted in relation to articles directly published by the *NYT* (comments were present on four articles) make up the other part of the empirical foundation, which in total, amounts to 422 comments. Both articles and comments were identified and downloaded in the spring of 2020 and have been inductively and iteratively analysed, with a focus on identifying the underlying imaginaries of the audience and technology of personalization and how this in turn constructs the public and the role of the press.

### **A technological drama unfolds: personalizing the *New York Times***

In the introduction of this chapter, we already highlighted how the *NYT* presented personalization as the solution to what is referred to as a ‘real-estate’ problem (Coenen, 2019). As Senior Data Scientist at the *NYT*, Anna Coenen, writes in a blog post: ‘The New York Times will publish around 250 articles today, but most readers will only see a fraction of them’ (Coenen, 2019). Personalization is presented as a solution to this information overflow as it can support *NYT* readers by ‘refining the path our readers take through this content’ (Spangher, 2015). We see here how the technology is imagined in relation to the current mode of distribution – the online news format – which does not have the same restrictions as its predecessor, the printed paper. This mode of distribution is imagined to be problematic for the user as they are now tasked with navigating much larger amounts of content than in the past. Thereby, they construct the problem to be solved as one of technological catch up, where personalization is simply a way to adapt to a new mode of distribution. Implied in this definition of the problem and solution is also a construction of the audience as needing help with this task, as being unable to navigate this amount of content by itself.

The value of personalization is also placed in relation to a changing media environment and more directly in relation to the changing behaviour and expectations of the audiences. As Spayd (2017) stated in her article: ‘Americans are used to their world being customised around their needs.’ She emphasizes how the newspaper, therefore, must become an organization that ‘treats readers like individuals, with unique habits and preferences’ (Spayd, 2017). Here personalization becomes imagined, not only in relation to the current mode of distribution by the *NYT* but also in relation to how other actors in the media landscape, such as Netflix or

Facebook, who are distributing their content in personalized ways. This further adds to the construction of personalization as a technology aimed to catch up with distributional trends in the media landscape. Beyond this, personalization is also imagined through a specific imaginary of the audiences, namely as individuals who, through their media consumption, have become accustomed to customization. The imaginary emerging through these statements then, on one side, constructs a user/public in need of curating assistance, but on the other constructs the audiences as being composed of individuals who have unique preferences. Personalization is, via this discourse, constructed as a technology able to deliver the solution to both these changes.

More so, it can enable readers to become acting subjects who, as product design director [Norel Hassan \(2018\)](#) wrote in a blog post, gain ‘more control over their experience with The Times’. Personalization is, through this imaginary of technological empowerment, also challenging the historic role of the media as paternalistic (see, for example, [Anderson, 2011](#)), by handing more control and choice back to the users. By constructing an autonomous and competent patient through the act of choosing, the press mimics the liberal ideal of choice as a democratic act, similar to what Anne Marie Mol has shown to occur in the health system ([Mol, 2008](#)). Interestingly, this liberal idea was strongly connected to the idea of the omnibus press, where part of the task of the reader was to navigate their own way through the paper (see, for example, [Tuchman, 1978](#); [Schudson, 2011](#)). [Fred Turner \(2015\)](#) has described how in the post-Second World War period, this type and ideal of individual choice and navigation was deeply intertwined with ideas of the competent and democratically minded citizen. The imaginary of personalization as enabling control, via ease of navigating the news, both utilizes this idea of choice as something valuable, but also stands in contrast to how choice has been connected to ideals of the democratic citizen of the past. Personalization is imagined to make choices easier, rather than forcing the users to navigate the ever-growing amounts of content, which induces a (re)imagining of the audience, who are constructed ever more as media consumers (with preferences, expectations and needs) (see, for example, [Ang 2002](#); [Willig, 2010](#)).

This construction becomes even more apparent when looking at how this user control is enabled by personalization and how user activity is framed by the *NYT*. In an interview relating to the initial launch, Marc Frons, the Times’ chief technology officer for digital operations, told Nieman Lab: ‘To me, no matter what the model, the more people who read and are engaged with your website or your digital products, the better. ... So, the recommendation engine just fits into our overall strategy of increasing user engagement’ ([Garber, 2011b](#)). In this statement, Frons highlights how the technological solution does not matter as long as it can produce engagement.



The quote further illustrates another imaginary of what personalization is to solve, namely, continued user engagement at a time when many news outlets are struggling to introduce sustainable business models in the online news landscape. The users are imagined as being ‘knowable’ via their data and as calculable subjects whose preferences can be calculated, as data engineer at the *NYT*, Alexander Spangher, describes: ‘we were able to calculate preferences in less than one millisecond per reader, enabling us to scale to all registered users’ (Spangher, 2015). This imaginary of the audiences as knowable through data and calculated preferences produces a different construction of the audience – namely as aggregated data point optimized towards producing engagement. In Chapter 6 we further explore this datafied and personalized construction of publics in the process of developing these personalized systems.

While the audiences’ preferences have taken centre stage in the public statements by the *NYT*, there is also an emphasis on how the new vision of personalized news will not make the editor obsolete, but rather will ‘complement’ their practices (Coenen, 2019) and remain ‘supplements to major events and stories’ (Spangher, 2015). Hence, the imaginaries of the personalized news system entails a doubleness, similarly to that pointed out by Ang (2002), as the *NYT* is both imagining the audience-as-market (aggregated data to produce engagement) and the audience-as-publics (citizens to be informed). Personalization is seen as complementary of an orientation towards ‘the public’ rather than as mutually exclusive. This complementary nature was highlighted by Anna Coenen, who stated that personalization would only be used ‘to select content where manual curation would be inefficient or difficult’ (Coenen, 2019). Again, personalization is presented – not as interfering – but as supplementing the current practice of news distribution. Also exemplified in this quote by Spayd (2017): ‘The goal, in other words, is to surface subjects tailored to the individual readers, without depriving them of a sense of a shared experience. Or without the readers feeling they aren’t receiving the same hierarchy of news values as they once did’ (Spayd, 2017). We therefore see how the press’ relationship to the public is imagined to be ‘both and’, being both true to the more classic notions of news as producing a shared public sphere and being democratic in new ways, namely by giving the users more choice.

In the remaining part of the chapter we return to characteristics of this reimagined audience and role of the press, which emerges through the imaginaries of personalization, and how this has changed over time. What we want to highlight with this short analysis is how the *NYT* as ‘design constituents’ of personalization through its statements draws on certain imaginaries of the technology and the intended audience to legitimize personalization. Pfaffenberger (1992) argues the design constituents will often create myths to support this legitimation, and here these myths are present in the concrete imaginaries of personalization as relieving users of

having to deal with ‘information overload’ and better catering for this new breed of users whose expectations are radically different than in the past. In these statements, the dynamic relation between audience and technological imaginaries in constituting each other emerges, as imagined technological and audience changes are foundational for legitimizing this transformation of the news. In dissecting these imaginaries, we also see how the *NYT*, in drawing on these imaginaries, is essentially reconstructing the audience and the role of media in society, as the audience becomes constructed as individuals ‘knowable’ and ‘engagable’ via data and empowered via choice and control, while the media becomes constructed as remaining a democratic institution through its ability to balance individual choice and provide a shared experience.

### **The users: printed utopias and personalized dystopias**

We now turn to the ‘counterstatements’ offered by the ‘impact constituencies’ – the comments and the users – which are aimed to delegitimize the technology via providing alternative interpretations of the technology. In many of the 422 comments posted by the readers, personalization is immediately dismissed as a solution, as it threatens to impoverish the *NYT* to a degree that, as highlighted by O’Donnel, might mean the beginning of the end for news as something of value in society:

My subscription and interest in the *NYT* is not about what I want to hear but about what you have to say. I find it increasingly challenging to get a full perspective on an issue in our upside down media culture and *NYT* had been a valued resource. Your plans to filter content to what you think I want to see and hear is a very very, and very, bad decision and perhaps the beginning of the end of a great newspaper. (Comment by O’Donnel, [Spayd, 2017](#))

O’Donnel and many other readers find it important to know what other *NYT* readers know – to have a form of shared knowledge and to be addressed as a collective. In their responses, the commenters offer a counterimaginary of what the press system should do and in turn construct themselves as ‘(democratic) publics’ as opposed to ‘(personalized) individuals’.

When analysing the comments, it stands out that the printed paper as a curated product remains the measuring stick, and that according to the readers of *NYT*, the publics traditionally served by the physical printed newspaper cannot be cultivated by personalization algorithms. As commenter Donovan from New York City writes, ‘This sounds awful! Please *NYT* also give online readers the option of seeing a digital copy of the printed paper. Call it “*NYT* Classic View”’ ([Spayd, 2017](#)). This counterimaginary is expressed by many

commenters through the plea for an ‘opt-out’ solution that will, as Donovan highlights, allow them to view the paper in its original (printed) form. Tom Rieke from New Zealand writes, ‘No thanks. For five or six months each year, I am far away from a shop that sells the printed New York Times, so I read the “paper” on the web with an online subscription. Real news from real writers and editors’ (Spayd, 2017). He uses quotation marks to illustrate the lesser quality of online news as a representative of the printed news. But his comment also makes a differentiation between ‘real’ writers and editors in opposition to algorithmic editors. Here, the printed paper is imagined as inhabiting the ‘real’ and ‘human’ in opposition to the personalized site, which places the human and machine as ultimate opposites. As such they almost reintroduce the myth of the editor as the ultimate democratic taste-maker, which over the years has been highly nuanced in research with studies of the importance of routines (Tuchman, 1978) or the spatial layout (Gans, 1979) in deciding the news flow. Personalization is imagined as opposing this ideal as an agent that unpleasantly removes the magic of the editorially curated and democratically oriented printed paper. The tension between news as profitable business and cultivator of democratic publics has always been present, but here we see how the counterimaginary among the *NYT* users draws heavily on an understanding of news as democratic. Unlike in the statements from *NYT*, where this tension could be relieved by the technological design of the algorithm, they are by users imagined as incompatible.

The importance and almost nostalgic imaginary of the editor stands out in the way commenters see personalization as a betrayal of the editors and the newspaper. JB from San Francisco writes:

The editors are abnegating their most trusted task – curating the news to focus on what is most important in the world. I read the Times because I believe that its editors bring me the news of the day – not the news that an algorithm thinks that I would like to see. (Spayd, 2017)

Others describe how they subscribe because they ‘trust the Times editors to decide what is important’ (Spayd, 2017) or how they ‘use the institution [ie the *NYT*] as a filter of the world’s noise’ (Spayd, 2017). The commenters’ wording choices of ‘trust’, ‘abnegation’ and ‘institution’ reveal how editorial selection is highly intertwined with a certain imaginary news through this editorial selection having a unique role in the media landscape. This unique role is highlighted by several commenters who fear that personalization will ultimately change the identity and role of news. ‘I pay for a subscription for a reason: the judgement and experience of the editors and writers that make this paper great. Don’t try to be Facebook or Twitter. Be the New York Times and do it right’, writes Chris G from New Haven (Spayd, 2017). As

with the statements by the *NYT* we see how the relating media landscape is used to support the technological imaginary, but here to the opposite effect – namely to express the need to stay distinct rather than mimic other (social media) actors by introducing personalized distribution. The danger of personalization is further imagined via continued references to the almost mythical tale of ‘filter bubbles’, which became part of the public debate after the introduction of the concept by Eli Pariser in 2011 who directly connected it to the personalized feeds on social media. Nancy Lederman from New York comments, for example, that ‘Isolating Times readers in individual interest bubbles surely rates as the most regressive idea ever’ (Spayd, 2017).

The counterimaginary of personalization is also tied to a differently imagined audience of news, which can be detected in the fear of filter bubbles and individualization. The public for the commenters remain a shared collective and news a ‘communal experience’, as one commenter notes (Spayd, 2017). It also becomes apparent in the way the commenters feel insulted by the proposition of needing help navigating. As Bruce Kaplan from Portland writes, ‘[w]e are capable of reading and finding and understanding the news that they present without it being pre-chewed for us’ (Spayd, 2017). The imagery of having food ‘chewed’ emphasizes patronization and is seen as an attack on the readers’ competence, as Elb from New York emphasizes: ‘it’s counter-productive to insult the intelligence of your readers’ (Spayd, 2017). What comes to the foreground in these comments is an imagined audience that is much closer to the post-Second World War ideals of the independent citizen of liberal democracies connected to the omnibus press, as previously described. Here the part of being a ‘reader’ is the ability and competence to navigate and choose – and if this is taken away, what is left is not really a news reader. Rather you will end up with a radically different reader, as an anonymous commenter writes: ‘If you spoon feed your articles to lazy readers like pablum to an infant you end up with an ill-informed, ignorant and docile populace’ (Spayd, 2017).

To return to Pfaffenberger’s (1992) argument, this reinterpretation of what audience is produced by the different modes of distribution becomes an example of ‘countersignification’, in which the commenters who feel their competence as readers is under attack provide an alternative frame to understand the technology in which their understanding of themselves as audiences of *NYT* is not harmed. This alternative frame is not taken out of thin air, rather the image of readers turning into herded sheep who are unable to make up their own minds on important matters is also reminiscent of the narrative that emerged with broadcast TV, where the fear of producing ‘couch potatoes’ was a key part of the debate (Bolin and Forsman, 2002). As a result, they reinterpret the concept of the control offered by personalization, changing it to a narrative of being *more* controlled rather than *in* control. This they view as a threat to democracy through the control gained by evil

social media algorithms and bots, who will result in readers being ‘herded like on Facebook or Twitter and the bots that control them’ (Spayd, 2017).

Via this countersignification, they also construct an imaginary of the public as composed of democratic citizens who should be educated by the news rather than ‘just’ engaged by content. Democratic responsibility is placed on the shoulders of the reader, who should and do make an effort to read things they do not normally have an interest in (see also Møller Hartley and Pedersen, 2019), as for example illustrated by this quote by Paul Rosovsky from Queens:

Whenever I travel to another city, the first thing I do in the morning is buy a copy of the city’s local paper, to review it cover to cover, to get a sense of what they consider important and how they cover it. (Even sports, which I could not care less about). (Spayd, 2017)

By placing emphasis on individual competence and responsibility rather than preferences, the imaginary of the public bears a closer resemblance to the traditional construction of the audience-as-publics (Ang, 2002; Willig, 2010). What is interesting is the strong ties between the audience construction and the mode of distribution, namely the printed paper.

As also illustrated in the previous sections, we see how the imaginaries of technologies and audiences are tightly interlinked. Commenters construct themselves as democratic collectives and personalization as the antithesis of these ideals. This counterimaginary is, interestingly, also produced by relating personalization to the transformations of the broader media landscape. However, here the imaginaries draw on the dystopian tales of personalization (for example, filter bubbles and uninformed audience) and the distinction between news and these other media actors in the landscape. We included this alternative interpretation of personalization to both illustrate how dialectical relations between technological and audience imaginaries can be detected on both sides of the drama, but also to highlight the political nature of such discourses of legitimation. The counterimaginary that emerges via the comments illustrate how the *NYT* is carefully crafting a story of personalization that enables it to maintain its identity and purpose of news, which the users fear being destroyed by the same technology.

In the following, we use the *NYT* case as a springboard, to explore how this dual construction of audiences and technologies can be traced back to different technologically enabled modes of distribution.

## **Historization of the technology–audience constructions**

Unfolding the technological drama helps to immediately connect specific technological and audience imaginaries with certain constructions of the

public. Further we see how new technologies require the renegotiation and, to some extent, replacement of existing audience constructions; replacements that are contested by employing existing, almost nostalgic, ideals of the press as cultivators of those publics and its distribution technologies, such as the printed newspaper format. Interestingly, we can observe that such nostalgic imaginaries have been present throughout history, often situated between dystopian and utopian tales of emergent technologies highlighting the discursive battles around the introduction of new technologies, in general, and measurement technologies, in particular.

*The printed press: publics constructed as unknown democratic collectives*

The interplay between media professionals' imaginaries of their audiences and the measured behaviour of those audiences is nothing new, and can be traced back to the first wave of newsroom ethnographies from the 1950s to the 1970s (Breed, 1955; Tuchman, 1978; Gans, 1979). However, much of the early work on audience imaginaries has, with a few exceptions, been largely understood in the literature as independent of the emergent technologies and from the production side of journalism (audiences imagined by media professionals). This, of course, is because as ethnographers observed the everyday routines of the newsrooms, the measurement tools and analytics of the time were not seen as important in many of these newsroom studies; they were seen as tools of marketing with a marginal effect on editorial policies. However, as discussed, other technologies were seen as guiding routines of newsmaking (for example, the telephone or limited format of printed paper).

As Gans (1979) highlighted in his seminal work, the journalists at the time had very little actual information about their readers or viewers and tended to reject feedback from the audience, but there still was a constant awareness of this imagined audience, which influenced the daily work in the newsroom. The journalists and editors, for example, had a tendency to 'overestimate' their imagined audience and attempt to avoid the risk of 'writing down' to them, which the journalists assumed the audience would recognize and be upset by (Gans, 1979, p 239). Warren Breed, in his study of social control in the newsroom, conceptualized these imaginaries of the audience as a 'policy', which he described as 'being in the walls': 'Every newspaper has a policy, admitted or not' (Breed, 1955, p 179). Thus, how the media imagine their 'publics' is a silent part of the (unwritten) policies in a given organization and tied to constructed ideals of the audience, not always representative of the 'actual' public (Gans, 1979). In Todd Gitlin's newsroom ethnography, he, in opposition to Gans, notes that the journalists tended to have 'a low opinion of the audience's knowledge and attention span' (1980, p 267). These low opinions of the audience 'usually derive from editors' and reporters' immediate work and social circles', thus giving little

explanatory power to the audience images of the marketing departments (Gitlin, 1980, p 267).

What we can derive from this previous literature is that publics in the era of the printed paper are imagined via the ideals of the printed paper as a democratic product, but also that these imaginaries were highly based on the editors and journalists' own ideas (for example, people they knew) of their audience. These imaginaries included both over- and underestimations of the audience capabilities and their need or want to be informed, and were less tied to concrete measurement technologies but rather to more implicit policies or ideals. This era was a time when the ideal of the omnibus press was strong (Schultz, 2007), an ideal that strived to provide the readers with many different and balanced, neutral viewpoints. The ideal was originally aimed at enlarging the audience of newspapers and increasing advertising revenue, but, as discussed earlier, also resembled the ideals of an appropriate citizen in liberal democracy (Turner, 2015).

Ida Willig (2010), via a detailed analysis of these policy papers, showed how audience constructions had changed over time, particularly as a result of marketing departments gaining more power in the newsrooms and implementing more explicit policies to guide the production and distribution of news. A prominent tool was reader profiles, which directly outlined who the audience was via personas. While still 'low tech', these reader profiles were based on new forms of audience analytics, new technology that entered the newsroom, and while not replacing existing imaginaries, at least helped induce new understandings of who the audience was and what it wanted (Willig, 2010). In her analysis she observes a shift in the audience construction where a new construction was emerging, namely the audience-as-consumer, which was placed in opposition to the audience-as-citizen (drawing on the previous work of Ang, 2002). From this, she concluded that there was the beginning stages in a shift from the omnibus press system that was based on an (implicit) imaginary of the readers as democratic citizens to be informed, to a segmented press system, where the reader was (explicitly) imagined as a consumer, who needed to be satisfied and whose needs and preferences matter (see Table 5.1). As one imaginary of the audience did not simply replace the other, this produced new tensions, as journalists and editors now had to balance these different imaginaries of the audience. A tension that only became even more apparent as newsrooms digitalized in the 1990s and onward, which changed the format of the news to digital formats and made even more granular knowledge of audiences available through the introduction of metrics. This development also became the specific object of ethnographic scrutiny of what this meant for newsrooms and news work, which we now turn to as we describe how this led to a construction of audience as segmented.

**Table 5.1:** Three phases of the press

	<b>The omnibus printed press</b>	<b>The digital press</b>	<b>The algorithmic press</b>
<b>Public construction</b>	Constructed as democratic collectives	Constructed as segments	Constructed as aggregated datapoints
<b>Measurement technologies</b>	Unknown audiences (sporadic surveys know to marketing)	Metrics and analytics	Artificial intelligence, personalization, machine learning and Natural Language Processing
<b>Business model transformation</b>	Text-based to audience-based model	Audience-based to service-based model	Service-based to performance model

Source: Own model, inspiration from Willig (2010)

### *The digital press: publics constructed as segmented*

In the next phase of newsroom ethnographies, following the digitalization of news, scholars increasingly focused on how audience metrics influenced editorial choices and gatekeeping processes inside the newsroom, and how new tensions arose in relation to how they catered to both what the audience wanted to know (represented in metrics) and what the journalists thought they should know (Anderson, 2011; Møller Hartley, 2013; Tandoc, 2014; Ali and Hassoun, 2019; Christin, 2020). They highlight how journalists are increasingly confronted by audiences, both in metrics and through new interactive features, such as comment sections and direct email, showing how audiences have moved into the newsroom, visible on screens across the newsroom (Møller Hartley, 2013). The introduction of interactive technologies increased the possibilities of engaging with audiences and also meant that the imaginaries of the public changed to an active, contributing one.

In a historical overview and critique of the ‘death of the mass audience’ argument, Bolin (2014) usefully linked audience imaginings to both the technological developments and changing business models that followed the technological changes. He argued that the printed press replaced the previous *text-based model*, leading to an *audience-based business model* (Bolin, 2014, p 164). Introduced by large advertising agencies, print, TV and radio worked by ‘selling audiences’ slots of commercials, and an interest in knowing not only how many copies were sold but also who was actually watching, reading or listening grew (Bolin, 2014). We see here how the audience



became increasingly a commercialized and segmented construct. This new audience-based model came with certain promises of what new media would mean and a new imagined role for the audience. For example, the promise of turning audiences into ‘producers’, a collapsing of the words ‘producer’ and ‘user’ (Bruns, 2008), essentially collapsing the boundary between media producers and media audiences. This later proved to be somewhat of a digital utopia (Domingo, 2005; Møller Hartley, 2011).

Offering a similar criticism of such a numeric understanding of audiences, Ang (2002) pointed out that television viewing, as the activity that ratings set out to measure, was a far too complex and varied behaviour to be translated by mere numbers. Borrowing examples from both the commercial and private television domains, she argued that what used to differentiate the two sectors, namely, the conception of the audience as ‘market’ in one and as ‘public’ in the other, had gradually made way for a more unified view that presented, in both camps, the audience as a collective taxonomic term devoid of any subjective peculiarities. Seen in this light, a television audience thus becomes a generic term that is as specific as ‘nation’ or ‘population’ in terms of providing information about individual behaviour patterns. Ang (2002) delivered a very detailed argumentative journey regarding the intrinsic limitations of the kind of information that ratings deliver. Methods used at the time ranged from the classic weekly diary method or the more sophisticated but also contested Peoplemeter, or even the Scan America system, which combined viewing habits with consumption patterns. Ang saw them as manifestations of ‘market feedback technology’ (2002, p 7), whose primary, if not sole, role was to provide post hoc information about the size and composition of any given audience. In this pursuit, statistics achieve the ultimate prestige – or perhaps simply an undisputed faith within television circles of providing television executives with objectifying and controlling knowledge that can be converted into an economic commodity.

What we see is how the shift to digital news induced new imaginaries of publics to emerge through the new affordances of the ‘digital newspaper’, such as the interactive affordance of commenting. New granular representations of the audience were also made available, and audience imaginaries were increasingly intertwined with quantitative representations of the public in the form of audience dashboards. Compared to the era of the printed paper, it became hard to ignore a now ever present audience, and the technologies thus both enabled but also almost demanded that journalists and editors came to terms with this new segmented and datafied audience. This led to the reimagining of publics as productive and generative, which, as Anderson (2011) argued, is a way to legitimize this new influence of the audience in the newsroom. The same dynamics of legitimation as in the *NYT* were also

present here, where certain imaginaries of the audience enabled a productive construction of the audience as consumers.

Drawing on a field theoretical framework, [Jannie Møller Hartley \(2011\)](#) showed how the digitalization of journalism and the technologies that came with it did not fundamentally change the field, but radicalized some values over others. Thus, she showed how the field of news production was drawn towards the economic pole as a consequence of the prevalent measurement technologies and their direct presence in the newsrooms ([Møller Hartley, 2013](#)). In turn, this made the journalist imagine the audience as more commercially oriented and not interested in, for example, foreign news, as they were confronted with the little appeal that such stories held for users. [Møller Hartley \(2013\)](#) also observed how this created increasing dissonance among journalists, as it became difficult to maintain an image of the audience-as-public ([Ang, 2002](#)) when constantly confronted with audience-as-market through the metrics inside the newsroom. This has led to strategies of catering to multiple audiences at the same time via content, for example, by writing a popular piece that gives clicks, but then later adding a political piece that was deemed to have societal values, thus serving a public, but which receives fewer clicks ([Møller Hartley, 2013](#)). This illustrates the continued existence of multiple audience constructions, which emerge and become intertwined with new technologies. In the current 'age of datafication', these market feedback mechanisms can even construct audiences as an abstract aggregated user: a personalized public.

### *The algorithmic press: publics constructed as personalized*

To return to [Bolin \(2014\)](#), he argues that in the final phase of the digitalization of media, a *performance model* emerged, in which advertisers could pay for information about audiences, resulting in what he terms 'mass personalisation', following the rise of Big Data and algorithmic media user measurement techniques. Bolin notes though, that strangely enough, despite their finely grained measurement, the knowledge of audiences was even less social and further estranged from audiences as human beings than in the mass media era. He concludes that this development does not entail the 'death of the mass audience', as suggested in parts of the literature, but a *reconfiguring* to a mass audience 3.0: 'If the intelligence produced about the audiences in the second mass moment was an aggregated abstraction based on social characteristics, the intelligence in the era of big data is a different kind of abstraction, a commodity based in an algorithmically produced mosaic of digital information' ([Bolin, 2014](#), p 170). Balaz [Bodó \(2019\)](#) picked up some of the same tenets in his work on personalization technologies, arguing that media organizations were moving into an era of 'selling news to the audience' by employing these new models of distribution.

This point is worth dwelling on. Rather than the fear of individualization, as feared by *NYT* readers, and the impossibility of the algorithm to serve collectives, the public that the *NYT* serves is still an abstract public; now just an algorithmic abstract public, presented to journalists in the form of representations of audience behaviours on screens and backend systems, available to journalists and editors.

Within the shift to the personalized press, the market representations of audiences continue to flourish, while the imaginaries of readers as preferential beings also follow, as illustrated by the case study from *NYT*. However, a new construction of the audience also emerges, namely, one in which the reader is made up of their own produced data and is predictable, creating a changing imaginary of the press as responsive to individual readers who are continuously aggregated and recomposed via data (see [Table 5.1](#)).

## Conclusion

By unfolding the technological drama over the introduction of personalization technologies at the *NYT* and the historization of this case study, we have seen how measurement technologies have, to some extent, always played a role in altering and shifting the ways in which publics are constructed through imaginaries. Thus, the imaginaries of emerging technologies work as drivers of transformation in that they allow and invoke shifts in the imaginaries of publics, as we see with the introduction of the personalized recommendation algorithms. However, the imaginaries of technologies are too highly interwoven with new understandings of who the publics are, making the transformation a highly dialectic one. Particularly current or emerging ideas of the capabilities and expectation of the audience matter for this dialectic (ranging from the over- and underestimation of the printed press, to the now increasingly preferential readers). Mark Coddington (2018) has also argued that user perception plays a key role in which technologies are implemented in the first place. The technological drama also reveals how tensions arise with these shifts, as some actors, in this case the commenters, attempt to reinterpret the story by drawing on other (and more dystopian) imaginaries of technologies and their publics. This was also the case during the shift to digital news, where journalists experienced new forms of dissonance regarding the question of what public they were to serve.

In the context of media, we see how organizations, when describing emerging technologies, position themselves in the dialectics between audience-as-market and audience-as-publics and all the possible positions in between. Equally, we see how many of the users draw on the same dialectics in their reinterpretation of the emerging technology, but draw on alternative imaginaries of the technologies of social media (that is, filter bubbles) and

their imagined dangerous and undemocratic publics as a way to delegitimize the shift. While these counterimaginaries exist, and have continued to flourish particularly via the concerns of, for example, ‘filter bubbles’ in more public discourse, we see how the discourse on news personalization initiated by the *NYT* has crystallized over the years these imaginaries of the technology and how audiences are repeated across personalization projects. This illustrates, again, why such early discourses and the connection between technological and audience imaginaries become important to understand as political constructs, because early understandings of new technologies often become ‘harder’ and more difficult to challenge as they mature. And as David Beer (2017) has argued, these visions and imaginaries are active in shaping and pushing back what he labels data frontiers, expanding both the reach and intensity of data-led processes in the organization, whether readers want it or not. This is further explored in the [next chapter](#).

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