

Algorithmic Audiences, Serialized Streamers, and the Discontents of Datafication

ANNE GILBERT

Abstract

This article addresses streaming television platforms' reliance on algorithms, serial narratives, and user interfaces and the effect of these strategies on the television viewing audience. The datafication of television means that opaque, proprietary computational processes play a significant role in the television that gets made, in steering viewing to particular series, and in reshaping the identity of the viewing public. User interfaces, data tracking, seriality, and algorithms have thus far proven inadequate for navigating the vast databases offered by streaming platforms. In practice, these systems off-load work to viewers and actively create obstacles to the formation of a collective viewing experience. Algorithmic audiences are trained to be sequential, isolated viewers, whose work of watching occurs in labor-intensive ways.

Keywords: algorithms, streaming television, seriality, audiences

In April 2021, Netflix launched its newest feature: their “Play Something” button became an explicit promise to do “all the work for you,” for those times when we “just don’t want to make decisions.”¹ Play Something, beta tested as a “shuffle mode” for Netflix’s vast library of content, selects a series

1. Cameron Johnson, “With Play Something, Netflix Does All the Work for You,” About Netflix, April 28, 2021, <https://about.netflix.com/>, <https://about.netflix.com/en/news/play-something-netflix-does-the-work-for-you>.

or film to recommend. If users aren't interested in that one, there's even a few more play-something-else options.

Despite the fact that it was initially only available to viewers accessing Netflix from a television and its recommendations turn out a notable number of in-house productions, Play Something is a notable departure for streaming interfaces because it represents a shift from the promotion of abundance as streaming platforms' defining characteristic. When Disney+ was preparing to launch in 2019, the company touted its thousands of familiar and beloved titles—and promised that, with Disney+, they would remain at users' fingertips rather than being removed to the “vault.”² HBO Max, Paramount+, and Peacock all recently launched platforms with advertisements that emphasize the deep libraries and exclusive content that give viewers the ability to watch whatever they wanted, whenever they want to see it. Play Something, however, makes it apparent that the promise of abundance does not always speak to audience desires.

Given streamers' reliance on algorithms and seriality as strategies for organizing and navigating their content databases, this article considers the effect on television viewing audiences negotiating these systems. Algorithmic audiences steered, via technology and narrative aesthetics, to particular options that obstruct viewers' ability to form a collective audience. While algorithms promise agency and customization, they effectively demand more work of users, transferring onto viewers the labor of curation, evaluation, and selection that were once the task of television channels' gatekeepers and programming practices. Algorithms of streaming television are not neutral mirrors that reflect the will of their users, but rather they impose themselves, crafting that will and shaping identities.³ The result is a

2. Julia Alexander, “Disney Is Ending Its Vault Program, Giving Disney+ a Huge Boost in the Streaming Wars,” *Verge*, March 7, 2019, <https://www.theverge.com/2019/3/7/18254942/disney-vault-streaming-service-plus-animated-live-action>.

3. Jonathan Cohn, “My TiVo Thinks I’m Gay: Algorithmic Culture and Its Discontents,” *Television & New Media* 17, no. 8 (December 2016): 675–90, <https://doi.org/10.1177/1527476416644978>.

diminishing of the power of niche audiences leaving viewers as isolated as they are individualized.

Algorithmic Television and Its Audience

Reliance on algorithms as both a promotional and practical tool has been ingrained into the practices of streaming from its very start: In 2009, Netflix offered \$1 million to a team that could build the service a better algorithm to make recommendations based on viewing history in its much-hyped Netflix Prize. While many cultural contexts obscure or deemphasize the reliance on algorithms, so as to not invite too much scrutiny on how they might shape choices or make decisions,⁴ streaming television interfaces feature their algorithmic organization front and center. Streaming television was built on the assertion that a high-profile, effective, targeted algorithm is the key to creating long-term user demand.

Algorithmic television promises its audience access to personally selected content from a vast library,⁵ agency to navigate and schedule a viewing experience with a content database, and a sophisticated user experience that caters to individual taste. Netflix in particular has been very proud of the quantity and detail of their user data and the ways in which this represents a break from the traditional monitoring methods available to legacy television. Current Netflix co-CEO Ted Sarandos, discussing the level of tracking possible for streaming television, notes, “We have insight into every second of the viewing experience. I know what you have tried and what you have turned off. I know at what point you have turned it off.”⁶ This viewing data formed the basis for

4. Blake Hallinan and Ted Striphas, “Recommended for You: The Netflix Prize and the Production of Algorithmic Culture,” *New Media & Society* 18, no. 1 (January 2016): 118, <https://doi.org/10.1177/1461444814538646>.

5. Amanda D. Lotz, *Portals: A Treatise on Internet-Distributed Television* (Ann Arbor, MI: Maize Books, 2017).

6. “Interview with Ted Sarandos,” Carsey-Wolf Center at UC Santa Barbara, 2012, https://www.carseywolf.ucsb.edu/wp-content/uploads/2018/02/Interview_Ted-Sarandos.pdf.

Netflix's recommendations that are "based on actual content viewed and the searching/browsing patterns of users,"⁷ the data-backed algorithms meant to produce more targeted recommendations and therefore greater customer satisfaction.⁸ From the start, streaming television promoted the personalization, control, and convenience available to viewers as their "innovation."⁹

In reality, however, streaming television effectively off-loads much of its labor directly onto audiences—the work of selecting, scheduling, and curating programming, for example, is as much a demand for labor as it is an affordance of the system. The organization of each streaming interface¹⁰ and the sophisticated (and obfuscated) algorithms at work on each platform should theoretically ease audiences' workload, but instead of providing relevant, on-point recommendations and meaningful curation that cut through the clutter, streaming algorithms merely present endless options that the viewer must sift through themselves. Jonathan Cohn refers to this failure of algorithmic recommendations as a burden of choice: the fatigue of evaluating whether a one-size-fits-all algorithm is making a valid and worthwhile recommendation, and of selecting which of the endless recommendations to choose even as they offer diminishing satisfaction the longer the list gets.¹¹ Rather than simply creating opportunities for its audiences, algorithmic television makes demands, cultivating a perpetual sense of dissatisfaction with the process, meaning viewers are most likely to notice when algorithms get things wrong rather than when they make a meaningful recommendation.¹²

7. Alison N. Novak, "Narrowcasting, Millennials and the Personalization of Genre in Digital Media," in *The Age of Netflix: Critical Essays on Streaming Media, Digital Delivery and Instant Access*, ed. Cory Barker and Myc Wiatrowski (Jefferson, NC: McFarland, 2017), 163.

8. Hallinan and Striphas, "Recommended for You."

9. Novak, "Narrowcasting."

10. Mel Stanfill, "The Interface as Discourse: The Production of Norms through Web Design," *New Media & Society* 17, no. 7 (August 1, 2015): 1059–74, <https://doi.org/10.1177/1461444814520873>.

11. Jonathan Cohn, *The Burden of Choice: Recommendations, Subversion, and Algorithmic Culture* (New Brunswick, NJ: Rutgers University Press, 2019).

12. Cohn, *The Burden*.

Streaming television is what happens when legacy television¹³ embraces algorithmic culture. The affordances of streaming platforms, as well as those streamers' reliance on serialized narratives and prestige programming, are the result of cultural work that is increasingly being taken on by computer processes.¹⁴ Algorithmic culture likewise offers—and demands—changes in its viewers: audiences within an algorithmic television culture are repositioned as users, bearing an expectation of agency and an identity that is beholden to data footprints rather than demographics.

According to Ted Striphas, algorithmic culture encompasses the “many ways in which human beings have been delegating the work of culture—the sorting, classifying, and hierarchizing of people, places, objects, and ideas—to data-intensive computational processes.”¹⁵ It represents a paradigm shift in television, from “user-controlled surfing” to “algorithm-controlled sorting,”¹⁶ one in which audiences are produced through data rather than cultural participation.¹⁷ For television in particular, consequences of the integration into algorithmic culture are profound: television is increasingly organized as a database when previously it was organized as a schedule,¹⁸ thus displacing time, linearity, and flow from how viewers approach the medium, and instead shaping a viewing experience with opaque systems of navigation, data tracking, and interfaces.

13. Amanda D. Lotz, *We Now Disrupt This Broadcast* (Cambridge, MA: MIT Press, 2018).

Lotz uses the term to encompass the distribution of television on episodic and linear programming schedules as well as the practices of financing, production, and viewing that marked both broadcast and cable television eras.

14. Ted Striphas, “Algorithmic Culture,” *European Journal of Cultural Studies* 18, nos. 4–5 (August 2015): 395–412, <https://doi.org/10.1177/1367549415577392>.

15. Striphas, “Algorithmic Culture,” 396.

16. Mark Andrejevic, “The Twenty-First-Century Telescreen,” in *Television Studies after TV: Understanding Television in the Post-Broadcast Era*, ed. Graeme Turner and Jinna Tay (London and New York: Routledge, 2009), 36.

17. Sarah Arnold, “Netflix and the Myth of Choice/Participation/Autonomy,” in *The Netflix Effect: Technology and Entertainment in the 21st Century*, ed. Kevin McDonald and Daniel Smith-Rowsey (New York: Bloomsbury Academic, 2016), 50.

18. Derek Kompare, “Reruns 2.0: Revising Repetition for Multiplatform Television Distribution,” *Journal of Popular Film and Television* 38, no. 2 (2010): 82, <https://doi.org/10.1080/01956051.2010.483353>.

Streaming television addresses its audience as new media users who are both active participants in the consumption of television and beneficiaries of the wealth of options and agency afforded them by these platforms. Algorithmic television promises to alleviate the limitations of legacy TV, its “endless scroll”¹⁹ offering the illusion of infinite choice to counter the one-at-a-time constraints of linear channels, and the frequent absence of breaks for commercials or to select further episodes so as not to disrupt the endless content flow made possible by access to subscription databases.

Algorithms were supposed to be the finely tuned, personalized means of navigating streaming services’ database of plenty. If each platform’s interface indicates the norms and priorities of its creators,²⁰ then the emphasis on recommendations and curated selections that runs across services illustrate the reliance on algorithmic organization as a defining trait for streaming television. Nearly all major streamers feature curated suggestions and “recommended for you” categories in positions of significance on their browsing interfaces. They frequently disincentivize targeted searching for specific titles by making the search function difficult to find or navigate on many device menus. Hulu is prone to auto-play new titles with recommendations based on past viewing history, and Disney+ has a landing page that offers multiple channels with suggestions headed with “Because you watched . . .” Streaming interfaces promote browsing among recommended titles and, ideally, a “discovery” of new content.

The experience afforded by each platform, however, is quite different. Individualized recommendations and scheduling make the algorithmic audience a fragmented one, the consequences of which I will take up directly in a later section. The agency promised to audiences effectively means more work, but with little actual control. As an illustration, when it first began producing original television, Amazon’s pilot season foregrounded

19. Mike Van Esler, “In Plain Sight: Online TV Interfaces as Branding,” *Television & New Media* (May 20, 2020): 3, <https://doi.org/10.1177/1527476420917104>.

20. Stanfill, “The Interface as Discourse.”

its promise of agency. The platform released pilots and asked viewers to vote for which should receive a full season production. But, as Cory Barker notes, Amazon did not detail how these votes might actually affect their programming decisions: “Amazon convinced thousands of viewers to watch its content and provide their minor—yet not unmeaningful—labor and then chose not to reveal any specific information about the effect of this labor.”²¹ Amazon touted the control that streaming television could provide to viewers but did not guarantee they would actually do so.²²

The customized viewing experience promised by streamers’ highly sophisticated algorithms has likewise failed to fully materialize. In practice, recommendation systems steer users toward certain options, often to owned original content²³ or to content that most benefits larger corporate directives, such as international titles to help build a demand for a global library or recognizable content from legacy television meant to anchor a new streaming service. This steering creates a circular, algorithmic logic:²⁴ television platforms’ interfaces guide viewers toward specific titles; viewers select that content; this then prompts the algorithm to continue to guide users toward that content and others like it.²⁵ The result is that streamers’ recommendations are often considered unhelpful²⁶ or irrelevant. Collecting data on how streaming audiences arrive at something to watch, Nielsen found that already familiar programming and personal recommendations from friends are the primary sources from which viewers find something to watch on their service of choice; the recommendation of algorithms only comes in at number six.²⁷ Algorithmic audiences are, in fact, more likely to

21. Cory Barker, “‘Great Shows, Thanks to You’: From Participatory Culture to ‘Quality TV’ in Amazon’s Pilot Season,” *Television & New Media* 18, no. 5 (2017): 453, <https://doi.org/10.1177/1527476416667817>.

22. Barker, “‘Great Shows,’” 446.

23. Van Esler, “In Plain Sight.”

24. Cohn, *The Burden of Choice*.

25. Van Esler, “In Plain Sight.”

26. Cohn, *The Burden of Choice*.

27. “The Nielsen Total Audience Report: Q3 2018,” Nielsen, 2019, <https://www.nielsen.com/us/en/insights/report/2019/q3-2018-total-audience-report/>.

watch something that has been recommended by a friend, that they have seen mentioned in traditional media, or that has cultivated a cultural buzz²⁸ than they are to select a show based on a streamer's recommendation.

Algorithmic television's promises for its audiences—personalization, agency, a customized viewing experience—have rarely been realized. Algorithmic processing is proprietary, private, and profitable, and as a result, audiences often have to take streamers' words that it is successful. As they have advanced and proliferated, many streaming services have stepped back from the rhetoric of personalization and agency promised to audiences. While most streaming platforms offer “for you” content suggestions, these are often balanced by other recommendations based on popularity, user trends, and themed collections. This type of organization is slowly replacing algorithms as platforms' proprietary solution for effectively navigating the abundance of content presented by streaming television. As a result, algorithmic audiences provide labor without agency, generate data without customized recommendations, and navigate the vast libraries of streaming television in ways that are structured by corporate goals rather than algorithmic reasoning.

Datified Seriality

If algorithms represent the primary means by which streaming television is technologically organized, then seriality is the most significant means of structuring its aesthetics. Streamers consistently produce serial narratives that cluster programming into larger, more accessible content blocks. Netflix has been thus far most consistent in its adherence to releasing entire seasons at once, though Hulu, Disney+, and HBO Max all distribute some shows this way, others in weekly episodes, and some in periodic drops of two or three new episodes meant to be

28. Marika Lüders and Vilde Schanke Sundet, “Conceptualizing the Experiential Affordances of Watching Online TV,” *Television & New Media* (2021), <https://doi.org/10.1177/15274764211010943>.

viewed sequentially. This commitment to both narrative seriality and an organizational seriality produces a system of streaming television that conditions its audience to watch sequentially, as a binge, and in ways that are easy to quantify, irrespective of whether viewers may find it isolating and unfulfilling.

When Netflix began creating original narrative television in 2013, it borrowed aesthetic and brand strategies from premium cable channels, in particular from HBO.²⁹ This meant the streamer worked to set itself apart from legacy television while mimicking some of its most successful elements; most notably, its narrative structures. Original streaming television content produced predominantly adheres to what Jason Mittell calls “complex TV,”³⁰ in which the episodic is balanced with the serial, as some events wrap within a single episode while story lines, characters, and events might also play out across multiple episodes or seasons. Though this kind of complex seriality did not originate with streaming television, these platforms are particularly well-suited to it. Seriality and narrative complexity predict and encourage binge-watching,³¹ aligning with most platforms’ continuous play modality and always-on archiving capabilities to invite audiences to understand streaming television narratives as ongoing and virtually continuous.

The binge model of streaming—a full season of television, available at all at once, unpolluted by breaks, promotions, or other paratexts—might be considered a “pure” television text,³² unavailable on legacy systems. Legacy television balances episodic story lines with longer, multiepisode arcs in order to please multiple stakeholders. Television history is rife with examples of struggling shows negotiating the tension between fans and writers who desired

29. Michael L. Wayne, “Netflix Audience Data, Streaming Industry Discourse, and the Emerging Realities of ‘Popular’ Television,” *Media, Culture & Society* (2021): 1–17, <https://doi.org/10.1177/01634437211022723>.

30. Jason Mittell, *Complex TV: The Poetics of Contemporary Television Storytelling* (New York: New York University Press, 2015).

31. Lüders and Sundet, “Conceptualizing the Experiential,” 5.

32. Tanya Horeck, Mareike Jenner, and Tina Kendall, “On Binge-Watching: Nine Critical Propositions,” *Critical Studies in Television: The International Journal of Television Studies* 13, no. 4 (December 2018): 500, <https://doi.org/10.1177/1749602018796754>.

the complexity and depth offered by serial narratives and television executives who wanted episodic stories in order to bring in new viewers each week. Streaming platforms solve these issues structurally and aesthetically: grouping episodes, seasons, and programs together in their database enforces a seriality of viewing, and these interfaces direct users to the beginning of a narrative to track popularity, completion rate, and rewatching. In other words, there is no effective midseason “joining” of a serial narrative already in progress, as streaming’s metaseriality works in support of narrative seriality, thus solving the balance issue that plagued legacy programming. In relying on continuous seriality, streaming television can secure viewership for future seasons while also providing the background necessary to appeal to new viewers.

Perhaps the clearest indication of streaming television’s commitment to seriality can be found in Netflix’s release (and subsequent rerelease) of *Arrested Development*’s fourth season. *Arrested Development* began as legacy television, airing three regular seasons of thirty-minute episodes on FOX before being cancelled in 2006. Netflix rebooted the program for a long-awaited fourth season that dropped in 2013. Season four was structured very differently: fifteen episodes, of varying lengths, that told events of the same time period from different characters’ perspectives before tying back together. Marieke Jenner argues that in this release of *Arrested Development*, “Netflix seems to also ‘teach’ its audiences how to watch Netflix.”³³ Jenner is primarily concerned with the bingeable nature of *Arrested Development* in this format, relying on fan practices and DVD box-set aesthetics to “demand more attention from viewers through its narrative structure”³⁴ and rewarding binge-viewing with intricate narrative callbacks. I would also argue that Netflix was teaching its viewers to trust its interface and rely on sequential viewing. Technically, season four of *Arrested Development* did not need to be viewed in a precise order, as the episodes told stories that effectively took

33. Mareike Jenner, “Is This TVIV? On Netflix, TVIII and Binge-Watching,” *New Media & Society* 18, no. 2 (2016): 8, <https://doi.org/10.1177/1461444814541523>.

34. Jenner, “Is This TVIV?,” 10.

place simultaneously. The commitment to organizational seriality effectively overruled this narrative choice, however, as Netflix's autoplay feature makes it difficult to elect to watch episodes in any order but the one given. This helped train audiences to value playback sequence over narrative seriality—a practice that was ultimately rewarded with a new version of season four.

In advance of the release of the show's fifth season in 2018, Netflix dropped "Season Four Remix—Fateful Consequences." Gone were the fifteen character-focused episodes, and in their place were twenty-two episodes with a standard length and more traditional episodic structure that bounced between characters and story lines and reordered narrative events into chronological order. Series creator Mitchell Hurwitz admits that recutting the season was done, in part, to make it more able to align with the needs of the syndication market.³⁵ But the *Arrested Development* remix also illustrates the value of seriality, both organizational and narrative, in streaming television: now that audiences have grown increasingly accustomed to watching all at once, in order, chronology and seriality are valued more than narrative innovation.

The example of *Arrested Development* also highlights that streaming television's reliance on seriality serves well the data, algorithms, and user interfaces that define the medium, but it does not necessarily serve its audiences. The complex seriality favored in streamers' original content privileges audiences who are invested enough to sit through each episode and attentive enough to track the careful doling out of complex narrative information.³⁶ However, Derek Kompare argues for the value of "banal" television, watching (or rewatching) shows whose purpose is to be comforting and "habitual, rather than entertaining."³⁷ In the context

35. Denise Petski, "'Arrested Development' Season 4 Is Getting a Remix," *Deadline*, May 1, 2018, <https://deadline.com/2018/05/arrested-development-season-4-remix-release-mitch-hurwitz-1202380474/>.

36. Mittell, *Complex TV*.

37. Derek Kompare, "The Benefits of Banality: Domestic Syndication in the Post-Network Era," in *Beyond Prime Time: Television Programming in the Post-Network Era*, ed. Amanda D. Lotz (New York: Routledge, 2009), 56.

of streaming television, banality might refer to soothing or mindless re-watching shows familiar from legacy television. Sitcoms like *The Office* and *Friends* were immensely popular on Netflix, to the extent that each was eventually pulled from the platform in order to anchor new streaming services (Peacock and HBO Max, respectively). These shows are less serialized than many streaming originals, adhering more closely to the episodic structure demanded by legacy television. At the same time, the user interfaces of the streaming platforms maintain the sequence order of each program's episodes, even if not demanded by the narratives themselves. On most streamers, it is difficult for users to circumvent the technological steering toward sequence and seriality and to watch out of order or even select a particular episode.

Streaming television adheres to sequential playback for its programming, regardless of the level (or lack) of seriality in the narrative. This type of technological seriality offers an opportunity, similar to algorithmic certainty, for streamers to mitigate some industrial risk. Much like franchises and sequels for film, subsequent seasons of a serial narrative are known entities and can therefore benefit from familiarity and investment with each subsequent release. Continuing serial story lines can also assure producers of viewership for future seasons and encourage binge-viewing by obviating the need for algorithmic recommendations between episodes. However, despite the affordances it provides to producers and platforms alike, the seriality of streaming television can be rigid and unhelpful for audiences.

The emphasis on data and user interfaces offers an ideal environment for serial storytelling. Serial complexity builds and rewards viewers' knowledge over time but simultaneously disciplines those audiences into viewing television episodes strictly in order because user interfaces are so oriented to simply resume playback. Streaming interfaces generally steer viewers to original serial narratives rather than to banal, comfortable favorites, prioritizing the primacy of the algorithm over audience tastes.

Users Are Not a Collective

Streaming television promotes particular behaviors in its audiences, the algorithmic organization demanding labor and participation, even as the serial aesthetics promote linear binge-viewing. But most significant are the audience practices that algorithmic television inhibits. The datafication of streaming television represents a new way of knowing the audience: as points of information within a technological sphere, as predictive rather than explanatory,³⁸ and, importantly, as individuals rather than a mass. In this environment, the technological limitations and industrial practices together erect obstacles that make it difficult for audiences to collectivize and for fans to activate.

Television audiences have been fragmenting for years; the same characteristics that define streaming television and its interfaces also have helped to push along this trend. Platform interfaces and reliance on both algorithmic recommendations and highly serialized narratives mean that most users are watching their own version of television. Though streamers might overstate the customization of their recommendation algorithms, the work performed by users to scroll, select, and organize a content database into a de facto playlist does result in a highly personalized viewing experience. Long-form, serialized narratives and on-demand content catalogues also encourage individualized viewing; in fact, Justin Grandinetti contends that the binge-watching prescribed by many streaming platforms and a sense of audience community are inherently mutually exclusive.³⁹ Additionally, the asynchronous nature of streaming TV means that viewers are watching their own thing on their own time. Whereas legacy television's adherence to a fixed schedule forced a sense of communal viewing among audiences

38. Eran Fisher and Yoav Mehozay, "How Algorithms See Their Audience: Media Epistemes and the Changing Conception of the Individual," *Media, Culture & Society* 41, no. 8 (November 2019): 1176–91, <https://doi.org/10.1177/0163443719831598>.

39. Justin Grandinetti, "From Primetime to Anytime: Streaming Video, Temporality and the Future of Communal Television," in *The Age of Netflix*, 11–30.

on a large scale, Marieke Jenner notes that discussion of contemporary television has moved to social media on a basis that is ad hoc at best: “The viewer of algorithmic television is one radically alienated from . . . so-called ‘water-cooler’ television,”⁴⁰ leaving these audiences with a sense of isolation rather than a shared cultural experience.

The isolation of streaming television is perhaps most profound when viewers attempt to overcome its structures of separation. Television fans have regularly come together when the fate of a favorite show is threatened, making use of technological, communication, and commercial strategies to mobilize their communities to make their voices heard and attempt to affect industrial change. Though these campaigns are often not successful—presumably, every canceled television show could be someone’s favorite—the ones that do mark a return of a show from the brink of cancellation are notable enough to fuel future efforts. In the context of legacy television, particularly ad-supported television, these campaigns make commercial sense: television networks cancel programs that are not financially successful, so making a concerted show of dedication throws a light on the size and depth of audience interest. As a result, “save our show” campaigns frequently make use of petitions; viral hashtags; testimonials; meet-ups or conventions; trade and public advertisements, particularly based in Los Angeles; letter-writing or email drives; and other public-facing measures that draw on collective action and draw attention to their strength of community.

These strategies, however, become decidedly more difficult for algorithmic audiences of streaming television. Regardless of their level of investment, organizational prowess, or industry savvy, dedicated fans face significant challenges if they attempt to mobilize a grassroots campaign to save a particular television show from cancellation. The opacity of services’ proprietary algorithms, the demands of serial viewership, and the challenges

40. Stephen Shapiro, “Algorithmic Television in the Age of Large-Scale Customization,” *Television & New Media* 21, no. 6 (September 2020): 660, <https://doi.org/10.1177/1527476420919691>.

of discerning how streaming executives employ their data to make programming decisions makes it increasingly difficult for users to come together as a collective fandom.

On February 19, 2019, Gloria Calderón Kellett, the creator and showrunner of *One Day at a Time*, tweeted that she had met with executives at Netflix regarding the possibility of the show's renewal for season four. "They [Netflix] made it clear that they love the show, love how it serves underrepresented audiences, love its heart & its humor, but . . . we need more viewers. They'll decide soon. I wish I felt more confident. WHAT CAN YOU DO? Tell friends to watch!"⁴¹ Presumably, Netflix was less than impressed with the number of users who had watched the third season, which had dropped less than two weeks prior. In response to Calderón Kellett's call to action, critics wrote articles in support, hoping to encourage new viewers and to perhaps prod Netflix to renew the show.⁴²

Fans began tweeting with the hashtag #RenewODAAT, singing the show's praises and urging others to watch and recruit more people to do the same; they tweeted at Netflix; they started petitions on change.org. These efforts, however, were unsuccessful: Netflix officially cancelled *One Day at a Time* in March 2019. However, three months later, basic cable network Pop picked up the show for a fourth season, marking the first time a show cancelled by a streamer was revived on legacy television. The revival was short lived, however, and Pop cancelled *One Day at a Time* in late 2020 at the conclusion of its fourth season, citing low ratings as well as a shift in network brand identity and the global coronavirus pandemic.⁴³ When Calderón Kellett tweeted

41. Gloria Calderón Kellett, "NEWS: Met with @Netflix about @OneDayAtATime S4," Twitter, February 20, 2019, <https://twitter.com/everythingloria/status/1098336889470238720>.

42. Carolina del Busto, "Why It's Important for Netflix to Save One Day at a Time," *Miami New Times*, accessed July 23, 2021, <https://www.miaminewtimes.com/arts/save-one-day-at-a-time-gloria-calderon-kelletts-tweet-inspires-renewodaat-campaign-11093635>.

43. Will Thorne, "'One Day at a Time' Officially Over After 4 Seasons," *Variety*, December 8, 2020, <https://variety.com/2020/tv/news/one-day-at-a-time-officially-over-four-seasons-gloria-calderon-kellett-1234848942/>.

out the news of the cancellation, fans again attempted a revival, this time frequently tagging Hulu or Amazon in their pleas for additional seasons.⁴⁴ Netflix gained a reputation early in its streaming endeavors as a site of potential second chances for programs—like *Arrested Development*—that might have been poorly served on broadcast but could now find a new life as Netflix and, eventually, other streamers endlessly sought new content. *One Day at a Time*, however, indicates that fans are often at a loss for how to grapple with cancellations that go in the other direction. Who saves the show that has been canceled on cable once it's already been canceled at a streamer? They had no new strategy to try, and *One Day at a Time* was officially cancelled for good.

Just as show cancellations are only partly about popularity, so too are audience efforts to come together and intervene in programming decisions occasionally hamstrung by complex corporate involvement in streaming television. In November 2018, Netflix announced the cancellation of its Marvel coproduction *Daredevil*, despite the show's critical acclaim and presumed popularity. *Daredevil* had been the first of Netflix's Marvel series and, narratively, there were openings for the serialized story lines and characters to continue beyond its three completed seasons. While invested viewers mourned the loss of future seasons, high production costs along with the complicated intellectual property and branding strategies of a Netflix/Marvel coproduction⁴⁵ in the face of the then-imminent launch of Disney+ made the show a poor candidate for a fan-led rescue mission. Due to the specifics of the coproduction agreements, even though Netflix was not producing new *Daredevil* content, they owned exclusive rights to the characters for two more years⁴⁶—Disney+ couldn't revive *Daredevil* if it wanted to.

44. Gloria Calderón Kellett, "It's Officially Over," Twitter, December 8, 2020, <https://twitter.com/everythingloria/status/1336447639634644993>.

45. NewsDesk, "Marvel Fans Launch 'Save Daredevil' Campaign as Disney + Acquires All Rights to Show after Netflix's Dividing Ax," ExBulletin, November 30, 2020, <https://exbulletin.com/entertainment/588857/>.

46. Jennifer Bisset, "Disney's Streaming Service Can't Save Daredevil, Iron Fist and Luke Cage," CNET, December 12, 2019, <https://www.cnet.com/news/disneys-streaming-service-cant-save-daredevil-iron-fist-and-luke-cage/>.

Nevertheless, fans circulated a petition to continue the existing show or to continue the characters and stories across other Marvel properties⁴⁷ and reached out to producers, other platforms, and the show's actors to circulate their efforts.

Once the rights for new *Daredevil* content reverted to Marvel, the #SaveDaredevil campaign relaunched in full force, organizing more viral petitions, in-person events, and video campaigns meant to draw attention to the length and prevalence of *Daredevil* devotion. When the characters, and some actors, began appearing in Disney's Marvel properties—in *Spider-Man: No Way Home* on film and in the *Hawkeye* limited series on Disney+, both released at the end of 2021—fans reignited their efforts, though it became clear that the fanbase was often divided on whether they were now clamoring for more *Daredevil* or for the characters to be resurrected on in other projects more central to the Marvel Cinematic Universe. Once *Daredevil* was pulled from Netflix and dropped on Disney+ in March 2022, fan campaigns once again struggled for a cohesive point around which to activate, given the dizzying developments brought on by streamers' corporate dealings. In short, there is no playbook for how fans can activate their base to intervene in the franchise design for a major transmedia property; the serialized narrative and interconnected characters make it difficult for a fan campaign to have significant impact. At the time of publication, Marvel has not announced plans to bring back a *Daredevil* series.

Fans developed savvy strategies that made use of the practices of legacy television to both identify and champion beloved shows that are at risk for cancellation. For example, ad-supported commercial television means that fans have an additional pressure point, appealing to advertisers for financial investment because a show with low ratings might continue to air if advertisers were very interested in purchasing space. Additionally, American legacy

47. Paul Tassi, "There's Now a Petition to Bring Netflix's 'Daredevil' Back from the Dead," *Forbes*, January 5, 2019, <https://www.forbes.com/sites/insertcoin/2019/01/05/theres-now-a-petition-to-bring-netflixs-daredevil-back-from-the-dead/>.

television's reliance on Nielsen to measure viewership—and the common practice to publish ratings numbers in trade and popular presses—means that lay audiences can easily identify shows that might be underperforming and gauge how a particular program is faring against the competition. Access to this information, combined with the relatively predictable calendar for show cancellations and renewals, meant that audiences knew when to come together to throw their support to a favored show.

Few of these strategies are available to viewers of streaming television. Netflix adopted a policy of “anti-transparency” with regards to viewing data⁴⁸ based on its start as an original content producer, and other streaming platforms have largely followed suit. Even now that Netflix strategically releases limited information on its viewing numbers, they have eschewed connecting the user data to programming decisions. In 2019, Ted Sarandos explicitly said that all the data Netflix has on its viewers “doesn't help you on anything in that process” of selecting content.⁴⁹ Calderón Kellett similarly revealed that Netflix did not share numbers with her,⁵⁰ so she knew neither what the show's calculated viewership for season three was nor what numbers would have to be in order to secure a renewal. While Disney similarly releases only limited information on their viewership numbers, and *Daredevil's* viewer numbers are held by Netflix regardless, the connection between viewership and production is even more oblique, particularly as many of their other limited and recurring seasons in the Marvel universe have thus far served to drive forward interest in their film offerings. The proprietary nature of Disney's corporate strategy likewise means that fans are unable to develop campaigns that both align with long-range planning and account for quantifiable audience interest.

48. Wayne, “Netflix Audience Data,” 6.

49. Dade Hayes, “Netflix's Ted Sarandos Weighs in on Streaming Wars, Agency Production, Big Tech Breakups, M&A Outlook,” *Deadline*, June 22, 2019, <https://deadline.com/2019/06/netflix-ted-sarandos-weighs-in-on-streaming-wars-agency-production-big-tech-breakups-ma-outlook-1202636595/>.

50. Gloria Calderón Kellett, “I Don't Actually Know,” *Twitter*, February 20, 2019, <https://twitter.com/everythingloria/status/1098338138445901824>.

In addition to opaque specifics on viewer numbers, seriality likewise impedes fans' calls to action. In the case of *One Day at a Time*, fans (and producers) were unclear as to what behaviors would yield the best results; on social media, many asked if views needed to come from different profiles or accounts, or if rewatching the show might also help, and whether viewers needed to be watching the recently released season three or if Netflix would also look favorably on new viewers starting the show from the start. Since the launch of Disney+, the need for *Daredevil* to shift platforms, particularly when the potential for the initial three seasons to also shift off Netflix only recently became a possibility, was an obstacle for its activist fans; resurrecting the show in the midst of a serial narrative would be a major deterrent for the show to find new viewers in its new home.

Platforms such as Netflix characterize their lack of explicit viewer data as central to their disruption of legacy television. Though streamers often tout their refusal to gather, much less publicize, demographic information and viewing numbers as being a "champion of creativity,"⁵¹ these practices allow streamers to calculate viewership in ways that is most beneficial for them. This position conveniently allows these companies to deflect the power they have to calculate and interpret the numbers behind proprietary algorithms and data sets. Though demographics are obviously reductive and incomplete, their absence from the profile of streaming television viewing data and recommendation algorithms is also an obstacle that limits viewers' ability to find programming that is popular with others who share tastes, interests, or identities. Streaming television makes it increasingly difficult to perform as that small group with a shared passion. Given the opacity of television's datafication, algorithmic audiences have little idea how their viewing habits affect their own recommendations, much less how they might best influence other individuals or the data on overall viewers.

51. Wayne, "Netflix Audience Data."

The practices of legacy television conceptualized its audience as members of relevant demographics, viewers who were grouped together into categories and therefore had no individual or personal identities.⁵² Algorithmic audiences are the opposite: so individualized, so personalized, that they are unable to have a shared viewing experience. Viewers still feel some degree of “pull” toward social viewing⁵³ that they attempt to address though the limited means afforded by social media,⁵⁴ but the reliance on datafication undermines the ability for streaming television audiences to effectively act as a collective.

Conclusion: Is This Netflix Backlash?

Streaming television, perhaps unsurprisingly, has done little to mitigate the negative impacts of its reliance on data and seriality as characteristics to prop up its popularity. But as these platforms lean on proprietary algorithms and proven narrative formulas to shape audiences and determine the television content that is produced, it is becoming increasingly apparent that these strategies are both inadequate for effectively organizing and perpetuating a viewing audience.

Among the most dangerous presumption of streaming television is to assert the neutrality of its algorithms or objectivity of its data. The emphasis on serial narratives privileges a narrow—but desirable—viewing audience. User interfaces are steering audience behavior so that viewer data has a predictable—and, again, desirable—outcome. But algorithms can magnify the biases that create them, and proprietary algorithms do so in ways that are unseen, but certainly felt, by media audiences.⁵⁵ In 2016, in analyzing what the Netflix Prize could

52. Fisher and Mehozay, “How Algorithms See Their Audience,” 7.

53. Lüders and Sundet, “Conceptualizing the Experiential.”

54. Grandinetti, “From Primetime to Anytime.”

55. See, for instance, Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018); Virginia Eubanks, *Automating Inequality: How High Tech Tools Profile, Police, and Punish the Poor* (New York: St. Martin's, 2017); Frank Pasquale, *The Black Box Society: The Secret Algorithms that Control Money and Information* (Cambridge, MA: Harvard University Press, 2015).

tell us about algorithmic culture, Blake Hallinan and Ted Striphas asked, “What happens when engineers—or their algorithms—become important arbiters of culture? . . . How do we contest computationally-intensive forms of identification and discrimination that may be operating in the deep background of people’s lives?”⁵⁶ Their questions illustrate the discomfort with opaque technology shaping popular culture while being subject to little oversight.

To put this discomfort in concrete terms: streaming platforms can easily justify programming decisions with (inaccessible) data that support development deals, awards campaigns, casting, and decisions on renewal and cancellation. At the same time, these decisions can also have troubling implications. In 2020, Netflix canceled or opted not to renew twenty-three television series; of these, seventeen featured women, people of color, and/or LGBTQIA+ characters in leading roles. In 2019, at least eight programs cancelled by Netflix were produced by female showrunners, including *One Day at a Time*.⁵⁷ If the data are collected based on flawed assumptions about popularity, representation, or watchability, or if algorithms do not account for the obvious discrepancies in viewership for niche programming versus broadly targeted content, this could explain a disproportionate cancellation of shows aimed at small audiences. Quantified viewer statistics do not account for loyalty, devotion, or cultural significance.

A turn away from the emerging dominance of streaming television is likely nowhere on the horizon. But perhaps there is room for an attitudinal shift in how algorithmic audiences view the seriality and abundance of streaming platforms. After all, John Cheney-Lippold argues that every flawed recommendation “reaffirms a sense of collective disbelief in algorithms’ certitude.”⁵⁸ What good are the boundless offerings of streaming

56. Hallinan and Striphas, “Recommended for You,” 131.

57. Jon Jackson, “Netflix Faces Criticism after Canceling Shows That Promoted Diversity,” *Newsweek*, October 9, 2020, <https://www.newsweek.com/netflix-canceling-women-poc-lgbtq-1537696>.

58. John Cheney-Lippold, *We Are Data: Algorithms and the Making of Our Digital Selves* (New York: New York University Press, 2019).

television if audiences cannot find among them television content that they like or that they can use to engage with friends, with loved ones, or other fans? I do contend that algorithms have thus far been insufficient tools for organizing and structuring on-demand content, at least when it comes to the effects on the audience. Streaming television is more work, offers less opportunity for interpersonal connection, is more opaque and more isolating. Algorithmic entertainment is sequential-forward, data driven, and deeply empirical. As a result, it destabilizes and, unfortunately, deemphasizes the affective practices of audience engagement.