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JCMS: Journal of Cinema and Media Studies, Volume 60, Issue 1, Fall 2020, pp. 158-162 (Article)

Published by Michigan Publishing
DOI: *https://doi.org/10.1353/cj.2020.0071*

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Algorithmic data processing has transformed commercial media audience research from behavioral measurement based on limited data to behavioral prediction based on information glut. Today's streaming media giants like Netflix and Amazon employ teams of engineers who design AI-enabled algorithms that scour this glut of user information, discerning behavioral patterns that they use to group subscribers into countless "taste clusters." Based on this clustering, the algorithms recommend content to subscribers while also guiding program production and acquisition practices.[1] Ultimately, the engineers who design algorithms really aren't sure how they work, and, as scholars have shown, the algorithms aren't necessarily effective at predicting audience taste preferences.[2] Regardless, algorithmically derived taste clusters shape a range of practices in the contemporary media industries. In this essay, I examine some of the implications of algorithmic audience modeling on the fundamental questions of race and media scholarship.

The best guess is that algorithmic processing and prediction do not take into account demographic features like race and ethnicity.[3] It is not that they misrecognize

1 Timothy Havens, "Media Programming in an Era of Big Data," *Media Industries Journal* 1, no. 2 (2014), http://dx.doi.org/10.3998/mij.15031809.0001.202.

2 Will Knight, "The Dark Secret at the Heart of AI," *MIT Technology Review,* April 11, 2017, https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/; and Neta Alexander, "Catered to Your Future Self: Netflix's 'Predictive Personalization' and the Mathematization of Taste," in *The Netflix Effect: Technology and Entertainment in the 21st Century*, ed. Kevin McDonald and Daniel Smith-Rowsey (New York: Bloomsbury Academic, 2016), 81–97.

3 Jason Lynch, "Netflix Thrives by Programming to 'Taste Communities,' Not Demographics," *Adweek*, July 29, 2018, https://www.adweek.com/tv-video/netflix-thrives-by-programming-to-taste-communities-not-demographics/.

Timothy J. Havens, "Algorithmic Audience Modeling and the Fate of African American Audiences," *JCMS* 60 no. 1 (Fall 2020): 158–162.

or under sample nonwhite viewers, nor that they poorly predict these viewers' taste preference. Rather, demographic characteristics seemingly are *not even represented* in algorithmic processing. As such, recommendation algorithms are the perfect tool for an industry seeking to become post-racial.

I say that race is "seemingly" not represented because, given the proprietary nature of these algorithms, very little is known about how they work. Numerous scholars have begun algorithm "audits," where they bombard a platform like Netflix with a range of requests and see how the recommendation algorithm responds.[4] Others have examined the public statements of engineers and executives who work for streaming platforms for clues about how the algorithms work.[5] However, to my knowledge, no one has audited streaming algorithms to examine whether they take into account demographic characteristics like race. The likelihood that demographic information is not used in algorithmic processing is reinforced by public statements made by Netflix executives that, as Evan Elkins shows, consistently claim that their taste cluster analysis does not include demographic information about subscribers.[6]

Audience measurement has been a long-standing issue among activists and scholars interested in the connections between media and racial justice, particularly African Americans, because of measurement's direct impact on what kinds of shows get produced and who gets hired to work on those shows as writers, producers, and actors. As early as 1977, the US Commission on Civil Rights' report *Window Dressing on the Set: Women and Minorities in Television* observed that the broadcasting industry's reliance on gross ratings points, or the percentage of Nielsen homes watching a particular channel or show, made it tough for non-mainstream (including nonwhite) content to get through the production development process.[7] In the fallout from this report, Nielsen began over-representing Black households as a percentage of their panels in an effort to more fully represent their cultural tastes.[8]

As the 1980s and 1990s progressed and the networks began to lose viewers to cable, they started to focus more on 18- to 49-year-old white audiences. Since then, as Herman Gray argues, the networks have tended to think of African American viewers as political subjects capable of causing turmoil rather than as economic subjects worth targeting with relevant programming. This shift created a predictable programming cycle that recurred multiple times in the 1980s and 1990s as scholars and activists decried the absence of Blacks and Latinos in prime-time series. The networks responded by temporarily adding more diverse series and characters but inevitably dropped them due to poor performance among the 18- to 49-year-old white viewers. One such cycle occurred at the end of the last millennium, when Fox canceled a number of shows popular among African Americans, such as *Living Single* (1993–1998), *Martin* (1992–1997), and *New York Undercover* (1994–1999), as it shifted

4 Maria Eriksson, Rasmus Fleischer, Anna Johansson, Pelle Snickars, and Patrick Vonderau, *Spotify Teardown: Inside the Black Box of Streaming Music* (Cambridge, MA: MIT Press, 2019).

5 See, for instance, Mark Andrejevic, *Automated Media* (New York: Routledge, 2020); Ed Finn, *What Algorithms Want: Imagination in the Age of Computing* (Cambridge, MA: MIT Press, 2017); John Cheney-Lippold, *We are Data: Algorithms and the Making of Our Digital Selves* (New York: New York University Press, 2017); and Blake Hallinan and Ted Striphas, "Recommended for You: The Netflix Prize and the Production of Algorithmic Culture," *New Media & Society* 18, no. 1 (2016): 117–137.

6 Evan Elkins, "Algorithmic Cosmopolitanism: On the Global Claims of Digital Entertainment Platforms," *Critical Studies in Media Communication* 36, no. 4 (2019): 376–389.

7 Commission on Civil Rights, *Window Dressing on the Set: Women and Minorities in Television* (Washington, DC: ERIC Clearinghouse, 1977).

8 Hugh Malcolm Beville, *Audience Ratings: Radio, Television, and Cable* (Hillsdale, NJ: Lawrence Erlbaum Associates, 1988).

its programming focus to young white men.[9] for poor overall ratings, followed by political agitation on the part of African American and other minority-based political groups, which led to a brief surge in minority programming. [3

The history of African American media activism regarding audience measurement has thus been somewhat piecemeal but occasionally effective. Today's algorithmically created taste clusters pose a much greater existential threat to African American television audiences than Nielsen's rating practices ever did. Although the Nielsens may have homogenized African American audiences under the rubric of "Black households" and struggled to measure their preferences effectively, they did at least recognize African Americans as a valid taste community, unlike algorithmic audience research.

The industrial shift toward algorithmic taste communities challenges a fundamental tenet of scholarship in race and media, including Black media studies—that, at some level, African Americans share cultural tastes that are not reflected in network television. I want to be careful here to clarify that I am not arguing for a monolithic view of Black cultural tastes, nor am I suggesting that those tastes do not often intersect with those of other racial groups, including whites. Indeed, most audience members dip in and out of multiple taste cultures each day. Still, the idea that African Americans have some degree of shared cultural sensibility has a long tradition in African American studies.[10]

In order to combat the dangers that algorithmic audience data analysis poses, I propose a new research agenda for the study of race and media, one that can (1) demonstrate the empirical validity of racialized taste cultures, (2) audit whether and how those communities are recognized by streaming media algorithms, and (3) propose alternative algorithmic practices that can better recognize a fuller range of racial and ethnic taste communities. The purpose of this agenda is not to argue for fine-tuning algorithmic research so that it better predicts nonwhite viewers' preferences. As Neta Alexander has argued, the idea that any algorithm could ever predict future tastes is an illusion.[11] Instead, I hope to force streaming platforms, through as many avenues as possible, to at least *consider* nonwhite viewers' tastes when production, distribution, and acquisition decisions are made. This is essentially the same research agenda that race and media scholars have always had, but the strategies for forcing such acknowledgments have changed.

Efforts to demonstrate that racial groups share cultural sensibilities and tastes are common across literary studies, music, and even cinema, but television studies has no such tradition. Moreover, the handful of studies that do address such issues have focused on situation comedy because, for decades, African American characters, themes, and creative talent were largely relegated to that genre. The past ten or fifteen years have seen a vast expansion of African American talent and themes

9 Herman S. Gray, *Cultural Moves: African Americans and the Politics of Representation* (Berkeley: University of California Press, 2005).

10 To give just two of the best-known examples: W. E. B. DuBois identified "double-consciousness" as a central approach to the world that was evident across a wide range of black popular culture. See W. E. B. Dubois, *The Souls of Black Folk* (New York: Penguin, 1903). Also, Henry Louis Gates Jr. drew on the West African parable of the "signifying monkey" to argue that the rhetorical practice of "signifyin'" is a central cultural attribute of African American literature and culture. See Henry Louis Gates Jr., *The Signifying Monkey: A Theory of African-American Literary Criticism* (New York: Oxford University Press, 1988).

11 Alexander, "Catered to Your Future Self."

into historical dramas, police dramas, and melodrama.[12] African American television criticism needs a set of theoretical concepts similar to other fields that can identify the persistence of particular aesthetic strategies across decades and genres. This type of scholarship decidedly moves away from analysis of representation, as Alfred L. Martin Jr. calls for in the introduction to this In Focus section, as well as forms of criticism that focus exclusively on social discourses. What I am arguing for here is a deeper understanding of "Black televisuality"—an examination of the *practices* of programming Black-cast television.

Similarly, more scholarship in African American fan and audience studies is needed to further demonstrate the viability of African American taste communities. Fortunately, this work is already underway among scholars such as Racquel Gates, Alfred L. Martin Jr., Beretta Smith-Shomade, and Kristen Warner.[13] Still, more research is needed surrounding those elements of popular television series that appeal to differently racialized taste communities, like Sut Jhally and Justin Lewis's classic study of Black and white fans of *The Cosby Show*.[14] Streaming services are awash with series featuring a wide array of racial and ethnic groups, and careful examination of why different groups respond to certain programs would provide a good basis for further examining racialized taste communities in television and the appeal of diverse programming for nonwhite viewers. In addition to television series, some streaming services may have racially distinct profiles themselves, and it is worth exploring how the functional and aesthetic aspects of the streaming interface might speak to differently situated taste communities.

The second and third aspects of the research agenda require an interdisciplinary research team, including partnerships with market researchers and computer scientists. A large and growing number of studies have shown that algorithmic data processing reproduces the same forms of racial bias inherent in the broader society, whether that means hypersexualizing girls of color on Google image searches or creating racist health and human services outcomes.[15] Racial bias and exclusion in recommendation algorithms can happen at different moments in the process. First, it's possible that African Americans are absent (or nearly absent) from the universe of subscribers in the first place. In 2015, Horowitz Research found that African Americans living in urban areas oversubscribe to premium television services in general but comparatively *undersubscribe* to Netflix.[16] If this remains the case today, then Netflix's algorithm would necessarily have fewer Black viewer profiles to work with and understandably might not recognize Black tastes. The extent to which different streaming

12 Timothy J. Havens, "Showtime's *The Chi* and the Surge in Black-Cast TV Dramas," *Flow: A Critical Forum on Media and Culture*, February 26, 2018, http://www.flowjournal.org/2018/02/showtimes-the-chi/.

13 Racquel Gates, "Activating the Negative Image," *Television & New Media* 16, no. 7 (2015): 616–630; Alfred L. Martin Jr., "Fandom while Black: Misty Copeland, *Black Panther*, Tyler Perry and the Contours of US Black Fandoms," *International Journal of Cultural Studies* 22, no. 6 (November 2019): 737–753; Alfred L. Martin Jr., "Why All the Hate? Four Black Women's Anti-fandom and Tyler Perry," in *Anti-fandom: Dislike and Hate in the Digital Age*, ed. Melissa A. Click (New York: New York University Press, 2019), 166–183; Beretta E. Smith-Shomade, ed., *Watching while Black: Centering the Television of Black Audiences* (New Brunswick, NJ: Rutgers University Press, 2012); and Kristen J. Warner, "If Loving Olitz Is Wrong, I Don't Wanna Be Right: ABC's *Scandal* and the Affect of Black Female Desire," *The Black Scholar* 45, no. 1 (2015): 16–20.

14 Sut Jhally and Justin Lewis, *Enlightened Racism:* The Cosby Show, *Audiences, and the Myth of the American Dream* (Boulder, CO: Westview Press, 1992).

15 Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018); and Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (New York: St. Martin's Press, 2018).

16 Horowitz Research, *State of Cable & Digital Media: Multicultural Edition*, (New Rochelle, NY: Horowitz Research, 2015).

services exhibit different subscriber bases is precisely the kind of question that market researchers are poised to help answer.

In addition, television scholars might partner with computer scientists to examine which streaming media recommendations are tailored to different racial taste communities. This is a challenging research design, involving numerous dummy accounts on various streaming services, which are increasingly savvy at weeding out such accounts. Researchers need to develop computerized bots, or "sock puppets," that mimic the behavior of different racial taste communities; collect the different recommendations that each group of bots receives; and then analyze them for differences that can be attributed to taste community differences. This would tell us whether the algorithm recognizes race as a valid category in constructing its taste communities and what the consequences of that recognition are. One of the main difficulties of this method, though, is creating bots that mimic the viewing behaviors of racial taste communities. Another option might be to develop large, automated surveys on something like the crowdsourcing site Mechanical Turk and ask that respondents to fill out their race, the streaming services to which they subscribe, and the recommendations they receive.

The final step of this research agenda is one that I've learned from collaborating with computer programmers: developing algorithms that mitigate or correct problems of racial bias and exclusion. While these are frequently the result of deliberate, if unacknowledged, commercial media policies, they can also result from unintentional ignorance. Developing algorithms that can take into account differences in racial taste communities when developing viewer profiles, acquiring or developing programming, and making recommendations can help solve instances of unintentional bias. Of course, they do nothing about intentional bias in the industry. Still, the creation and dissemination of such algorithms might shame streaming platforms that specifically bracket out certain racial taste communities by calling on them to account for their algorithmic practices.

I realize the idea that critical scholars should work to create algorithmic practices that can better surveil the tastes of nonwhite viewers might seem naive. As Herman Gray has suggested, in an era of hypervisibility and surveillance, the better tactic for racial groups that are closely surveilled and policed might be invisibility.[17] However, when it comes to streaming television, subscribers' behaviors and tastes are already surveilled; I am advocating for a research agenda that will include African American taste preferences in the programming agendas of streaming services to which these viewers are already subscribing.

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17 Herman Gray, "Subject(ed) to Recognition," *American Quarterly* 65, no. 4 (2013): 771–798.