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# The Golden Ratio of Algorithms to Artists? Streaming Services and the Platformization of Creativity in American Television Production

Annemarie Navar-Gill

## Abstract

In this article, I examine how and why "platformization" was initially made sense of by writers in the American television industry. As streaming platforms entered the production space and became important homes for the commissioning of longform television content, they sought to build brand images as places that were both "data-driven" and characterized by work cultures of "creative freedom." At least for a time in the mid-2010s, they succeeded in selling this conceptual link to the professional culture of Hollywood television screenwriters. Drawing on fieldwork and interviews from 2017 as well as a longer ranging analysis of trade press, I identify those features of the production culture established at major streaming platforms that forged the somewhat counterintuitive notion that "being data-driven" created an environment of greater "creative freedom" in the mid-2010s. However, these were the very early days of streaming platform production cultures, and norms began to crystallize, it was these very same features that began to undermine creative comfort with streaming platforms.

## Keywords

streaming platforms, television production, datafication, storytelling, SVOD Originals

## Introduction

At the Tribeca Film Festival in 2014, WNYC Public Radio hosted a panel discussion on "Stories By Numbers," themed around a contemporary anxiety facing Hollywood television as it learned to navigate the digital world. Upstarts like entertainment tech company Netflix and digital giant Amazon were entering the world of original television production and distribution, boasting "data-driven" approaches to risk reduction and creative supervision, and they were touching a nerve in the American television industry. David Simon, creator of HBO's *The Wire*—long a vocal critic of every internet-era urge to live-tweet, recap, and binge TV content—was one of the panel's headliners. He cautioned that surrendering television to these data-driven tech companies would lead to "paint by numbers storytelling" and an overcrowded content landscape filled with derivative content produced by predictive modeling based on past behavior (WNYC, 2014). Although particularly crotchety, he was not alone, as a number of prominent television writers, executives, and critics had recently expressed similar anxieties while watching tech's play for television production.

Just 3 years later, however, this conversation had changed. When she left her longtime home at ABC Studios for a new overall deal at Netflix, prolific writer-producer Shonda Rhimes cited the platform's appeal as "a clear, fearless space for creators" (Andreeva, 2017). Later, she elaborated that, without content restrictions or ratings, the streaming service offered "a clear landscape to do whatever I want" (Littleton, 2017). Amazon, meanwhile, was creating original content with a focus on highlighting "TV auteurs" like Jill Soloway, who created its flagship *Transparent*. At Hulu, a third major digital TV distributor in the U.S. market whose complex ownership by traditional media companies somewhat belied its more unique technological innovations (see Sanson & Steirer, 2019), a more "boutique" Originals brand had emerged (Sandberg,

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2017), featuring high-profile projects like *The Handmaid's Tale*, which became the first streaming series to win Outstanding Drama at the Emmy Awards in 2017. In contrast to earlier anxieties that suggested the entrance of these tech companies into the production space would subjugate artists under the rule of math, these later developments imply a far more creativity-centric model. Yet all three managed to maintain their brand images as data-driven, technologically innovative disruptors while cultivating ones as creative havens.

This article is concerned with the way that this linkage between notions of "creative freedom" and "being data-driven" played out in the culture of professional Hollywood television screenwriters. An overt connection between the two is somewhat peculiar, intuitively working against both common and scholarly understandings of the work of analytics and prediction. But this is exactly what came to exist in the cultural imaginary of Hollywood television writers, at least at a particular moment in time when streaming platform production norms were still in an early, experimental phase. I am not, here, particularly concerned with the "reality" of data as a form of governance over the creative process or the lack thereof at streaming platforms (although I touch on the ways it is real versus merely branding in places). My primary interest, rather, is in the ways that working professionals made sense of these suddenly dominant entities in their sphere. When I invoke the idea of "being data-driven" here, I use this phrase as a shorthand for the beliefs about what that means held by the television writers whose stories I analyze rather than as a declaration of any company's practices. To be clear, these firms do make key decisions about programming based on data analysis. Their leveraging of user data to micro-manage distribution to individuals through recommendation systems is just one clear differentiating factor that helped create a superior user experience and amass a substantial percentage of television audience attention in a short time (Lotz, 2016, 2017). The particular relationship between data and the creative process, however, has been more mysterious (and intentionally so).

In the mid-2010s, however, the prevailing conventional wisdom among Hollywood television writers was that the data-driven nature of streaming platforms was an affordance that helped these companies offer greater creative freedom than legacy television organizations did. Here, I identify the operational features of doing creative work at streaming platforms which helped create this link between two seemingly opposed concepts as platforms established themselves in the original content space. However, these same features also created the very information asymmetries and power imbalances that set up conditions for the link between data and creative freedom to erode as the economic norms of streaming production increasingly solidified, with platforms' definitions of successful series coming into clearer focus.

## Methods

This article is based on 8 months of fieldwork in Los Angeles and New York done in 2017 and a supplemental discourse analysis of the trade and popular press from 2010 to 2019. It comes from a larger project examining the emergent roles of technologies of algorithmic culture in Hollywood television's production cultures (Navar-Gill, 2019). In 2017, I attended industry events and conferences, made visits to offices, and attended dozens of social and networking events with industry professionals in which topics related to technological change and working conditions were a frequent topic of conversation. Of the 54 in-depth semi-structured interviews I conducted for the larger project, 12 are particularly relevant here as interviews with writers currently or previously employed by Amazon, Hulu, or Netflix (although some, particularly those associated with Netflix, asked to be interviewed on background only and not quoted or paraphrased in the final research project). I also quote one writer unassociated with a streaming platform but who nonetheless helped explain the coalescing mythology in the profession at large about what it *meant* to work for them.

Importantly, the interview subjects here are not brand-name showrunners but rather average working television screenwriters at a variety of levels. While some have created their own show in the past, none have been a showrunner or creator for a streaming platform. Rather, they have had the experience of working "on staff" for series distributed by these organizations. None of the writers I interviewed—who ranged from staff writers (the lowest-rank Writers Guild of America title) to co-executive producers (the second-highest formal title; however, there are other informal hierarchies that mean this designation has a large power variance in practice)—had, at the time of interview, an opportunity to create anything for a streaming platform, although they shared a relatively consistent imaginary of what this promised as a possible future. While showrunners get the bulk of the attention both in the press and in scholarship, a significant impact of platformization on the organization of American television has been a major expansion in the number of writers' room jobs, albeit an expansion in employment opportunity that has come with declining compensation for average working writers. Fees have stagnated, and the content expansion that began with cable and accelerated with the internet normalized season orders from 6 to 13 episodes a year instead of the standard 22 of the broadcast era, a combination substantially reducing base pay. As Henderson (2014) notes, these changes have created something of a class system within television writing, with a great deal of resentment between higher paid writers who feel creatively freed by such shifts and lower paid writers who feel economically squeezed by them. As such, the working experiences of this population are significant and often under-considered.

In addition to fieldwork and interviews, I collected trade and popular press materials related to original content

production and development at Amazon, Hulu, and Netflix for the period from 2010 to 2019. This secondary data set allowed me to contextualize my findings from the field in 2017 within longer range industry discourses, fill in gaps (in particular the perspectives of the well-known showrunners and top-level executives my interview data does not get at), get a higher level view of the scene, and follow up on developments since I left the field.

### Platform Economics and Creative Incentives in American Television Production

The penetration of digital platforms into cultural industries has broadly transformed many of their operations (Nieborg & Poell, 2018). However, it is necessary to think about the platformization of cultural industries in terms of the specificities of particular industries, each of which has its own particular quirks, and blends platform logics with a different existing set of operational norms, values, and logics. The dynamics of platformization in American television production are structured by somewhat different conditions than other media industries that are currently confronting these challenges. The landscape of significant firms is very different, particularly as "legacy" media conglomerates develop their own streaming platforms. In this industry, Netflix looms particularly large as a transformative organization, while Amazon and the ever-increasing number of offerings such as Hulu and Disney+ from traditional media organizations round out the field.

Although transformative, platformization has changed economic arrangements in television production in a different way than other industries. The shape this has taken is one that has the potential to incentivize creative production differently. The "multi-sided market" configuration described by Nieborg and Poell (2018) and Helmond (2015) is not (in general) how this has played out in television (Evens, 2010). The U.S. commercial television industry was historically structured as a two-sided market with viewers paying the television network with attention on one side and advertisers paying for access to that attention on the other. The entry of streaming platforms into the mix has been as likely (if not more so) to inspire variations on this two-sided arrangement and make one-sided markets more prominent as it has been to introduce multi-sided dynamics. Streaming platforms have retained the industry's traditional practices of gatekeeping, distributing carefully selected and commissioned content. However, they have shifted the financial practices of doing so (Lotz, 2019).

One way that financial arrangements have shifted is the "cost-plus" model of financing, which was popularized by Netflix but later adopted by Amazon and other entrants into streaming production (Lotz, 2019). Where a television network used to pay a production studio a licensing fee for the right to air a series that did not cover the costs of production

but allowed the studio to retain ownership of the program and the right to any second-run profits, the cost-plus model means that they pay more than full production costs, but also obtain rights to the work, limiting future windows from which creatives can profit. This shift seems like it could have an impact as an incentive structure for creative production, although it is uncertain what shape that might take, as Lotz (2019) writes,

> One could reason that cost-plus financing would encourage greater creative risk-taking because creatives and production companies are guaranteed to emerge without deficits, but such a supposition would be far more compelling if backed with evidence. We might also suppose that talent most motivated by financial gain and that can command market power would be less likely to ply their trade for services that use cost plus financing. (p. 12)

The particular economic arrangements at each one of these companies are different. There are similarities between Amazon and Netflix, which not only both use cost-plus financing but both are concerned with building international catalogs as their aim is to build global internet-distributed television networks (Lobato, 2019). As Sanson and Steirer (2019) note, Hulu is often left out of broader scholarly conversations about streaming platforms in television because it lacks global aspirations and—due to its complex ownership structure—complicates rather than streamlines the production and distribution process. However, its model of local aggregation offers something distinct, particularly for television creatives, because it does not assume content ownership, leaving secondary distribution windows open and providing a different model of financial incentive alongside other affordances of the streaming production experience.

### Datafied Feedback, Professional Expertise, and the Case of Creativity in Hollywood Television

In light of platformization dynamics, today's cultural products are subject to constant modulation in response to datafied user feedback. Across industries, reliance on this type of feedback tends to be understood in ways that seemingly make it incommensurate with cultural ideas about artistry and creative freedom. In professions where artistry, creativity, and tacit expertise are central to the field's identity, analytic data technologies such as those employed by major television streaming services tend to be viewed as undermining these skills and values. For instance, writing about casino game design, Schüll (2014) notes that "as the task of staying 'close to the consumer' is increasingly delegated to analytic technologies, the artistry and tacit know-how of traditional game development are losing their central role" (p. 144). Similarly, Caplan and boyd (2018, p. 1) use the example of the Facebook algorithm's influence on the news industry to suggest that data-driven/algorithmic technologies can

"induce similarity across an industry" by creating administrative mechanisms that structure the prioritization of information through coercive, mimetic, and normative pressures. Reliance on these technologies, they argue, leads to industrial homogenization and the reduction of space for creative experimentation as decision making is delegated to algorithms and processes like A/B testing. Homogenization is, perhaps more than any other idea, in direct opposition to what we think of as "creativity," which is bound up in notions of experimentation and play.

Television differs slightly from the aforementioned news and slot machines in that creativity, particularly creativity as articulated to notions of artistic distinction, is central. In the American television industry, the dynamics of platformization have played out in ways rooted in specific aspects of the medium's cultural history. As Johnson (2014) argues,

> industry professionals understand their work and lay claim to specific kinds of identities and cultural capital by taking up positions in relation to their audiences, situated within specific sociocultural shifts that alter the way audiences are imagined and understood. (p. 51)

Today's television writers work in an environment in which the way that audiences are imagined and understood has evolved in relation to both new technologies and shifts in television's cultural cachet, which have allowed them to publicly claim the identity and cultural capital of "artists" in a way that their predecessors did not. Datafied user feedback would seemingly threaten this.

American television's cultural position was historically that of a popular medium, unsophisticated, and set in opposition to "higher" forms of culture (Gray & Lotz, 2011). Industrial formations of the network era, including the dominant audience information regime of the Nielsen ratings, created and reinforced this perception. In the network era, the three major broadcasters competed over and split a mass audience between them, with their ability to draw and charge advertisers directly tied to the proportion of the Nielsen ratings they were able to win. Quantity was the audience's most salient dimension, and the pursuit of quantity shaped programming strategies and content. The most desirable forms of content were those that were broadly appealing and unlikely to alienate any audience segment. An audience imagined through this lens was one understood to have bland taste, positioned in opposition to ideals of artistic merit and creativity (Johnson, 2008). Furthermore, the industrial practices the three major American broadcasters used to draw audiences were characterized by similarity and inter-network imitation (Levine, 2007). Thus, while network era television writers were as central to the production process as today's are, the market imperatives and audience information of the time limited their cultural status as artists and creators (Banks, 2015).

As cable and eventually internet distribution made the competition for audiences more complex, fragmentation provided the opportunity for the industry to reconfigure its notions of desirable content, a move that dramatically transformed the cultural status of writers. Aiming at more specific audiences shifted television's cultural position, diversifying both the types of texts that could be produced and the industry practices that created them (Lotz, 2014, 2018). During the resulting boom in scripted television content from the late 1990s onward, the medium acquired new respectability. An increased perception of the television text as something that was "authored" was key to this transition of television as a worthy art form (Mittell, 2015; Newman & Levine, 2012). In this environment, television writers acquired a substantially different cultural position, becoming seen as artistic figures with authorial credibility (Banks, 2015).

When dynamics of platformization and datification initially intersected with this shift, they tended to be anticipated as a threat to artistic identity. In part because programming directed by the dictates of audience information had been constructed as antithetical to artistic distinction during the network era, many writers approached the access to audiences afforded by the digital era with uneasiness, seeing it as a threat to this only recently acquired cultural credibility. The anxious discourse around data reached its high point in the period surrounding the release of Netflix's *House of Cards*, a program whose relationship to data was intensely mythologized in often misleading ways that suggested the program had been "designed" by algorithm (see Smith & Telang, 2016). At the core of the discourse at this point in time was that the notion of data-driven storytelling would result in sameness and repetition across the industry. FX Network President John Landgraf, for instance, suggested that "Data can only tell you what people have liked before, not what they don't know they are going to like in the future" (Carr, 2013). Landgraf's sentiment indicates a belief that truly gifted creatives are able to come up with new creative ideas in a way that cannot be captured by predictive modeling based on the past. But just a few years later, the dominant interpretation of streaming service production culture among television writers was, as one of my interviewees—who had no experience working at a streaming show, but had absorbed beliefs about what it was like from her general professional zeitgeist—put it, "streaming platforms just treat writers and creators better." At that moment in time, "being data-driven" was seen as an affordance that enabled creativity.

## Ignorance is Creative Bliss? Five Features of Streaming Service Production Culture That Built the Link Between Data and Creative Freedom

In some significant ways, the anxious perspectives on data were animated by ignorance and uncertainty about what companies like Netflix—just entering the business—were actually going to "disrupt," but they resonate with broader notions that rationalization and optimization in cultural

industries reduce the opportunity for creative risk-taking. The shift in perception toward seeing "being data-driven" as an affordance that enabled creative freedom can partially be characterized as the inevitable outcome of streaming platform productions becoming less novel and thus the industry at large developing better literacy about their practices, in the sense that they *do not* use audience data to micro-manage writers' rooms. It is also the result of careful discursive positioning and information control on the part of streaming platforms. During my 2017 fieldwork, five features of streaming platform production culture seemed to be driving the linkage between "being data-driven" and "creative freedom" in the cultural imaginary of television screenwriters: *data siloing, making success personal, the greenlighting process, the elimination of televisual syntax*, and *the performance of deference to Hollywood norms and values*. These features, however, use the notion of creative freedom to establish a very uneven information/power exchange that set the stage for this link to crumble as the norms of streaming production matured.

### Data Siloing: Viewer Information as Don't-Need-To-Know

The adjustment of the discourse about data's role in the creative process was in many ways enabled by the tight information control that streaming platforms established around their data practices both externally and internally. These companies have notoriously kept their user data close to the vest; "another curious quirk of subscriber-funded portals has been their tendency to closely guard data about viewership— even from those creating the shows they distribute" (Lotz, 2017). Although streaming platforms know everything about how many, when, where, and how users access their original content, they do not openly feed that information back into the production process. My interviewees spoke, in fact, about how there was *less* "data" informing their day-to-day work than they were used to. In addition to the obvious absence of ratings, one writer noted that on her previous job at a cable network, they presented the writers with an extensive packet of audience research each season to let them know what they believed was and wasn't working. Hulu, however, provided absolutely nothing. As an executive I spoke with coyly suggested, invisibility is not necessarily absence: "Of course," data analytics factor into the notes they give because "with access to the amount of information we have, it would be stupid not to use it." But that doesn't mean highlighting it.

Among television writers I spoke to, the dominant interpretation of this culture of data secrecy was that it was "freeing." Their sense was that if a streamer was happy with the performance of a series on the basis of viewership numbers or whatever other data points they were interested in, they would signal it by ordering more. This was largely seen as liberating because it meant there was not even the temptation

to become overly invested in ratings at the expense of storytelling; a common refrain among both my informants and the top-flight talent making deals with streaming platforms is the disavowal of having *ever* cared about ratings, often couched in language reinforcing the idea of television storytelling as artistically pure. For instance, of her Netflix deal, Rhimes said,

> I have never paid attention to ratings because I can't control them, and ratings can never control the story. I couldn't base my story on what the ratings were, so why should I pay attention to those numbers? What I like is that now I don't have to work at a place where people believe it could be helpful for me in some way. (Adalian, 2018a)

By completely siloing data and creative functions apart from each other, even concealing basic information like how many people watch programming, streaming platforms can maintain control over the narrative about how data and creative practices interact.

### Making Success Personal: Proxy Strategies for Understanding Performance

The information vacuum left by these cultures of data secrecy gave writers the sense they could judge their work's success according to their own personal qualitative "metrics." Absent the type of information through which they are accustomed to evaluating series performance, they develop a variety of proxy strategies for getting a sense of how their programs are being received. These may involve—among other things— browsing social media, reading reviews, and monitoring the online think piece ecosystem. There are a variety of ways that writers take this information and use it to benchmark their understanding of a series' performance. However, what is important about these strategies is not their particulars, which are highly individualized, but rather the idea that they align with writers' self-concepts better than quantitative measures of audience size. As a co-executive producer from Hulu's *The Handmaid's Tale* noted, "It's weird not knowing how the show is doing, but *I feel it's doing well*. It's starting a cultural conversation" (emphasis added). For her, getting people to talk about sociocultural issues and having what she perceived as some kind of political impact was a more personally significant barometer than the absolute number of people watching. She elaborated that working for broadcast and cable networks, you had to pay attention to ratings, whether you cared about them or not, because industrial structures forced them as a standardized measure of success. Without them, she could evaluate that on her own terms according to whether the series seemed to be meeting her creative goals. Being kept in the dark about—or perhaps protected from—viewership data gives writers the ability to judge success by whatever it is that matters to them, be it winning an Emmy, getting a good spot in *New York*

*Magazine*'s "Approval Matrix," or having women cosplay your show's signature dystopian uniform at statehouses around the nation in protest of legislation restricting abortion rights. Significantly, however, although they might have felt like it during a time when streaming services were incentivized to let shows run longer, these proxy strategies were not the same as actual metrics of success.

## The Greenlighting Process: Visions of Data as Enabling the Oddball Imagination

Perhaps more than any other aspect of data's place in streaming service operations, the role that it plays in the greenlighting process at streaming services has been deeply and inaccurately mythologized. From the notion that Netflix uses data and algorithms to "design" programming to Amazon's "democratic" Pilot Season, which used viewer feedback as part of the process of deciding which ideas to take to series, the imaginaries around these processes have been rife with misconceptions. Streamers have been content to let these notions persist for the sake of maintaining their images as innovative disruptors (Barker, 2017; Evens & Donders, 2018; Smith & Telang, 2016). Within the imaginary of working TV writers, however, ideas about what "being data-driven" enables in terms of series development are simpler: it allows them to tell stories that conventional "industry lore" (Havens, 2013) would not support by demonstrating the existence of unconventional audience niches. The business models of streaming platforms can potentially support unusual content because stories that appeal to audiences who were not considered economically viable in an advertiser-driven marketplace can be valuable under other business models (Lotz, 2017).

Reliance on industry lore about what audiences are viable in decision making can reduce risk-taking, often, as Havens (2013) points out, with side effects that reinforce problematic exclusions. Industry lore reproduces in ways that are not necessarily based on empirical evidence but rather gut feelings and personal experience. Data offer the potential of evidence-based arguments for discarding such conventional wisdom and acknowledging the existence of previously underserved audiences, which can be creatively freeing and potentially lead to more diverse representations and unusual storytelling practices. While the details of these greenlighting processes are rarely discussed, the basic idea is that with their population-level information about viewing behavior, streamers can identify audience intersections that defy intuitive prediction—as Netflix Chief Content Officer Ted Sarandos told *Variety*, "You wouldn't guess that people who like Bob's Burgers also like American Horror Story" (Spangler, 2018). At times, this might enable an oddball passion project considered inviable by traditional industry lore. If outside of industry, the idea that algorithms and data can somehow "design" series concepts is a core mythology, inside, the notion that data can offer the missing piece

preventing a gestating idea from getting off the ground holds some power as a piece of magical thinking. For instance, one interviewee told me that data

> allows me to take the risk of focusing an adult animated sitcom on a female perspective because . . . data puts the wind in my sails and allows me to think. . .it's different, people don't normally do this, but there's enough information out there to merit me taking this risk.

Of course, it is important to note that my informants were not developing shows at the streaming platforms where they worked in writers' rooms; rather, they imagined this as a potential future. And despite the economic hits that the group of non-superstar writers are taking as a result of platformization, my interviewees were unconcerned about this dynamic, willing to bank on increased possibilities of creative freedom in the future.

Beyond the fact that this is a promise that will likely come to fruition for few, there is another thing creatives do not tend to note when they interpret data's role in getting projects greenlit as a creatively enabling aspect of working for streaming services. To make arguments about the existence of unusual audience niches, you need access to the data. Without it, you can only benefit from it on the streaming service's terms, when an executive chooses to reveal evidence for a particular niche appeal exists. And, as Christian (2018) notes, confirmation of these practices is diversifying representation or talent behind the screen is more scant than one might expect.

## Eliminating Televisual Syntax: Data, Nonlinearity, and Structural Convention

Although they have shifted in small ways over time, there have long been certain rules about how to tell television stories (Thompson, 2003). Commercial breaks meant building every episode's story to a series of climaxes and cliffhangers, while weekly airings necessitated checking on characters and storylines in every episode lest the audience forget. The 22 episode season had substantial implications for the pacing of serialized arcs, and given the need to make time for commercials, an hour really meant 51 min that gradually deteriorated down to 42 min, but every episode was the same length. What the disruption of streaming services has made clear, however, is that television storytelling developed this particular syntax as a result of a temporality emerging from a combination of distribution technology and business model. Freed from that temporality, the rules of episodic storytelling can essentially be thrown out the window.

Writers perceived the resulting flexibility of structure and mechanics as a significant opportunity for creative experimentation.[1] If episode length becomes more flexible—as one example, episodes of the Netflix comedy *Dear White People* have ranged in length from 21 to 36 min—it reduces the need

to discipline a wide range of stories, scenes, and emotions into an identical number of "beats," or story event units, giving emotions room to breathe or saving a punchline that was not essential to the forward progression of the narrative from being cut. Similarly, without commercial breaks, stories no longer need to build to five (roughly) separate artificial climaxes, instead ebbing and flowing as seems most emotionally resonant. A show that will be released all at once and likely watched several episodes at a time can have varied pacing and intensity in the structure of multi-episode arcs, or let a plotline lie for a while without feeling like it has been dropped. The writers I talked to from Hulu's *The Handmaid's Tale* knew that in the initial U.S. run of the show's inaugural season, Hulu would release the first three episodes at once, then the rest on a weekly schedule. In the writers' room, they deliberately thought about constructing those three episodes that the first two encouraged the audience to keep binging, but the third—which ended on the image of Alexis Bledel's Emily realizing she had been subjected to an involuntary female circumcision as punishment for an illicit same-sex relationship—built to a point of such uncomfortable intensity that audiences would be grateful to have a break before the next one.

To credit looser expectations around story structure and syntax to "data" per se conflates it with other affordances (particularly non-linearity and subscriber funding) of the streaming environment—not to mention the fact that plenty of other developments in television history have shifted such conventions—but what my informants were invoking was a notion about data: the idea that understanding the details of *how* audiences consume a television series can tell you something about how to build it. As one writer explained,

> Data can shape story practice. Maybe we don't need to see a character for an episode because they'll watch the next episode right after. Sure, you could have gotten there without it, but *knowing how people watch a show is creatively useful*. It allows you to figure out how to pace it, have big moments, know when you can have a quieter, slower episode, not see a major character for an episode. That's interesting and worth knowing. I would like to know. I wonder why they are so closed-handed with data . . . some things might help us make creative choices.

She expresses the possibility that there *is* a way for datafied optimization to go hand in hand with artistic expression by enabling writers to experiment further by writing a show the way people watch it. This suggestion that access to more data would enable smarter use of the flexibility that non-linear distribution affords is a fascinating perspective and one that introduces a tension into the dominant part of the idea of "data-driven creative freedom" that says it is helpful to creatives to know nothing about the audience so that they feel free to tell stories in whatever way they desire.

## Performing Deference: Hollywood in the Front, Silicon Valley in the Back

In my interviews with writers working on streaming productions, they uniformly expressed that there was minimal difference between the day-to-day experience of working in a writers' room for a traditional network and working in one for a streaming service. At a broader level, looking at shifts in the practices of streaming companies and the ways that they have discursively positioned themselves, over time, they focus less on "disruptive" elements and more on the ways their production practices are similar to existing norms of Hollywood television. In the earliest days of the Netflix Originals slate, Netflix executives were quick to attribute programming success to their data-driven environment. In early 2015, Sarandos described the mixture between data-driven decision-making and human judgment that informed Netflix's creative strategy as a "seventy-thirty mix," elaborating "Seventy is the data, and thirty is judgement. But the thirty needs to be on top, if that makes sense" (Wu, 2015). But in 2018, he flipped this ratio, claiming that "It's 70 percent gut and 30 percent data. Most of it is informed hunches and intuition," even saying that there were certainly times that Netflix executives sometimes order projects that the predictive models don't justify (Adalian, 2018b). Meanwhile, as Barker (2017) documents, Amazon reframed and ultimately moved away from the "Pilot Season" system that initially invited viewers to "Call the Shots" about what programming the platform would invest in. A distinct shift toward targeting "quality" audiences with content from "showrunner-auteurs" revealed the "disruption" of Pilot Season as largely a promotional strategy. Hulu, whose legacy media ownership structure largely prevented from it from offering the same splashy attempts to distinguish itself through "disruption," nonetheless made a pivot in its hiring practices, bringing in key executives whose resumes were established in Hollywood rather than Silicon Valley. For all three of these major players in the American streaming originals market, a retreat from publicly emphasizing their "disruptive" nature and an increased focus on the ways they were embracing Hollywood norms and values was an important step in the path toward industrial legitimacy.

But behind the scenes, the optimal performance metrics used at streaming services reveal the Silicon Valley mind-set that still underlies content decisions. Awareness of the details of these metrics have made their way into public consciousness in bits and pieces, through leaked documents (Dastin, 2018) and interviews with ex-employees (Toonkel et al., 2019), that provide pieces of a picture and likely do not tell the whole story.[2] Leaked Amazon documents reveal a significant metric called "cost per first stream," which roughly equates to the amount of money paid for each person converted to an Amazon Prime subscription by an original series (Dastin, 2018).[3] Meanwhile, at Netflix, the "efficiency score" measures the budget of the show against another important

metric called its "Adjusted Viewer Share" (AVS), which is the number of people who watched it, but with individuals weighted differently based on how high their risk of cancelation is (Toonkel et al., 2019). What differentiates these metrics from standard Hollywood performance assessments is that they are behavioral predictions firmly within the epistemology of datafication, not simple viewership measures (boyd & Crawford, 2012; Kitchin, 2014; van Dijck, 2014). AVS values a series on its ability to intercept subscribers who are on the path data shows leads to cancelation and keep them paying. Similarly, cost per first stream values a program for its ability to usher subscribers into a walled retail garden; Amazon Prime members spend well over twice what other consumers do on the website annually, and this gap has grown in recent years.

Although some of these metrics have made their way into public and industrial consciousness recently, they are not topics that streaming services want to discuss openly (in the field, I found this topic absolutely off-limits). As the piece revealing AVS and the efficiency score noted, Netflix employees avoid even using the word "efficiency" in interactions with creatives, agents, and outside studios, though the underlying idea may come across anyway (Toonkel et al., 2019). But the desire to push behavioral performance metrics out of sight while foregrounding the ways that streaming production has adapted to the existing norms of Hollywood culture is reminiscent of what Petre (2018) called "performing deference" in the context of a popular journalism analytics dashboard designing its interface and rhetoric to reflect journalistic values. The idea that they have successfully fused Hollywood and Silicon Valley practices is an essential part of the brand image (Cunningham & Craig, 2019).

### Clarifying Norms and Emerging Frictions: The End of "Data-Driven Creative Freedom"?

As much as these platforms and their productions dominate conversation about television, it can be easy to forget that the practices of "streaming production" are still very early days and many of their norms are still coming into focus. I conducted my fieldwork at a time when cancelation of a streaming service show remained a relatively rare occurrence. Later in 2017, however, there was something of a bloodbath at Netflix, with a number of shows, such as *The Get Down* and *Girlboss*, canceled after just one season. Amazon and Hulu followed suit by early the following year, axing a cadre of well-received shows like *One Mississippi* and *The Path*. These moves showed that the creative runway supposedly provided by data is far from infinite. They were also just the beginning; by 2019, Netflix was canceling shows at a similar rate to "legacy" organizations in American television, while the less prolific Amazon and Hulu were not far behind. As Lotz (2017, n.p.) predicted, although streaming services may "diminish or eliminate practices that have frustrated creatives producing for broadcast and cable, they will likely create new

practices that similarly challenge creatives." Indeed, following the pattern that (Wu, 2010) shows is typical of innovation in the American media landscape, the maturation of norms in streaming production has seen openness and creativity give way to standardization and stability. It has become apparent that data asymmetry concentrates power in ways that are ultimately more frustrating for creatives than freeing.

In the time since 2017, streaming service productions have lost their novelty and begun to solidify as a quotidian part of the Hollywood television landscape, and the narrative of a harmonious relationship between data analysis and creative has been substantially troubled by a number of developments. When Netflix offered the most detailed peek into its operations it had ever given in a lengthy 2018 *New York Magazine* cover story, it seemed like a carefully controlled glimpse behind the curtain designed to intentionally redirect some of the dominant mythologies about their brand and business—among them notions about the relationship between data and creative (Adalian, 2018b). Netflix's massive spending on original content would eventually require it to "discipline costs" (Evens & Donders, 2018, p. 77)—while Netflix is certainly continuing to spend money, there is now an internal mandate to be more cost efficient in how they do so, particularly in thinking about how programming will serve the entire *global* Netflix subscriber base (Adalian, 2018b; Toonkel et al., 2019). At both Amazon and Netflix, the imperative to build catalog content in other regions to serve the entire audience they are building around the world as "global networks" is taking precedence over niche Hollywood passion projects. And the once commonly believed narrative that a streaming platform would give a series time to develop an audience because of its value as catalog content has given way, replaced by frustrations about needing to build an audience instantly before getting swept away by the next new thing in an environment where content is constantly churning (Adalian, 2017).

Although the dominant discourse that streaming services provide greater creative freedom remained even after initial waves of streaming cancelations, there were also hints of what future conflicts might hold as creatives realized the operational features they valued for enabling creative freedom could be double-edged swords. A contentious early cancelation at Amazon, *Good Girls Revolt*—led to a lengthy public relations (PR) battle over whether the cancelation was motivated by metrics or a misogynist company culture at Amazon Studios (Izadi, 2017). Show creator Dana Calvo saw that the performance standards visible to her—online audience feedback, five-star ratings on Amazon, reviews, and external viewership estimates—all suggested the series was a hit, so she argued its unusually fast cancelation was reflective of the fact that Amazon Studios head Roy Price was openly disinterested in supporting productions about women (Sandberg & Goldberg, 2016). Joe Lewis, who worked directly under Price, shot back that the metrics didn't justify it; plenty of people started *Good Girls Revolt*, few

finished it (Fortin, 2017). Calvo openly trashed the idea that Amazon provided a supportive environment for creatives. When both Price and Lewis lost their jobs due to harassment allegations during the #MeToo movement, it only poured fuel on the fire. Later, the 2018 document leak suggested that *Good Girls Revolt* was in fact a particularly poor performer in the "cost per first stream" metric, a notion which had never come up in the public spat (Dastin, 2018). None of these partial pieces of the puzzle really reveal the truth.

What they do show, however, is that there is a substantial interpretive gap between the many metrics offered by the audience data that streaming platforms have and the actions that they decide to take because of them. When streaming services keep audience data out of the hands of creatives, it may give them a sense of independence during the construction of the onscreen story, but it also ensures an interpretive monopoly over the offscreen one. In the past, the Nielsen ratings offered far more limited options for narrativization than the audience data possessed by streaming platforms do, but their public nature ensured that creatives could still use what they knew about their audiences to tell a story about their program's value. Your ratings might be low, but you could argue that women 18 to 34 years from households above a certain income threshold were valuable in a way that meant looking past that initial number when it came time for renewal. Today's audience data offer far, far more in terms of opportunity to narrativize a program's value but are kept firmly in the hands of the parties who already have decision-making power. As one streaming executive told me: "If you have enough data, you can use it to tell any story you need it to."

In the moment before norms began to crystallize and the power asymmetry of their information control strategies started to come into focus, the new arrangements that platformization brought to American television production offered what seemed like a blank canvas for creative practitioners. Freed from the pressures of cultivating valuable audiences with their storytelling, a lack of information initially seemed like it created a new kind of opportunity for writers to make television without paying attention to the economic tensions of commercial creativity. But as the novelty of streaming production has worn off and the reality that this new world still has commercial performance standards sets in, this may be turning into something of an illusory arrangement, where the tradeoff of the loss of power related to the lack of access to viewership information is not worth the feelings of artistic purity it only temporarily engendered. In recent times, many writer-producers including Shawn Ryan (*Mad Dogs* at Amazon), Raphael-Bob Wakesberg (*Bojack Horseman* and *Tuca & Birdie* at Netflix, *Undone* at Amazon), and Joshua Safran (*Soundtrack* at Netflix) have publicly complained about creative experiences at streaming services.[4] Although it remains early days, and the relationships between streaming platforms and writers will continue to evolve, the uncritical belief in streaming service production culture as a superior alternative has faded.

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## Notes

1. Some critical discourse around streaming suggests the "anything goes" structure of the "10 hour movie" creatives speak of excitedly can make for frustratingly paced narratives as often as innovative work.
2. To my knowledge, there have not been any leaks about original content performance metrics used by Hulu.
3. Although I don't have a comment about "cost per first stream" specifically, my inference from an interview in which an Amazon executive characterized their content business model as a "promotional arm" for Prime is that this metric is indeed likely *very* important.
4. At Hulu, creative issues on productions from the also Disney-owned Marvel Studios have been a significant issue, but in public accounts, it is difficult to discern if the source is Hulu or the managers of the Marvel Cinematic Universe.

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