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Article:

Bishop, S. (2020) Algorithmic experts: selling algorithmic lore on YouTube. *Social Media + Society*, 6 (1). ISSN: 2056-3051

<https://doi.org/10.1177/2056305119897323>

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Algorithmic Experts: Selling Algorithmic Lore on YouTube

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Social Media + Society
January-March 2020: 1–11
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DOI: 10.1177/2056305119897323
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Abstract

This article considers the growing influence of self-styled algorithmic “experts.” Experts build valuable brands, accumulate notoriety, and piece together careers by selling theorizations of algorithmic visibility on YouTube to aspiring and established creators. They function as intermediaries between sanctioned YouTube industries and the agency of cultural producers. Expertise is developed through research, strategies, and theories to help content creators mitigate platform-specific risks, particularly the risk of algorithmic invisibility. Experts develop entrepreneurial self-brands and position themselves as YouTube’s adversaries, performing “experiments” ostensibly to reveal or translate hidden algorithmic signals or correct “misleading” information. However, ultimately, they teach creators to be complicit with YouTube’s organizational strategies and business models. Studying algorithmic experts reveals insights into how new media producers negotiate platform visibility, but also speaks to long-standing questions about how the management of risk in cultural industries shapes symbolic production. I draw on a 3-year ethnography of YouTube industries to illustrate how experts interpret and instruct in how to become algorithmically (and advertiser) compliant on YouTube. In addition, I highlight their broader role as de facto producers and gatekeepers for aspiring and existing content producers. Meritocratic logic flows through experts’ outputs—meaning expertise is limited to individualized and patchwork solutions that do not address the significant socio-economic inequalities that are still inherent on social media platforms.

Keywords

algorithms, optimization, YouTube

This article considers the growing influence of self-styled algorithmic “experts” who build brands, accumulate notoriety, and piece together careers by selling theorizations of algorithmic visibility on YouTube to aspiring and established creators. Their work broadly fits within the understudied “search engine optimisation” industry (SEO). Part consultants—part inspirational speakers—experts evangelize about YouTube creators’ potential for empowerment and visibility through the successful negotiation of the platforms’ algorithms. Experts publish articles and videos, and lead lectures and workshops at high-profile industry such as VidCon. The algorithmic expert is particularly worthy of attention as they curate microcelebrity in their role as intermediaries between sanctioned industry and the agency of cultural producers. Experts often have strong links with gaming cultures. Recent work has demonstrated how such cultures are invested in meritocracy, based on a belief that “the powerful have displayed more skill and invested more effort” which “[magnifies and excuses] any structural inequalities among players” (Paul, 2018, p. 28). Similarly invested in meritocracy, experts advertise how their research, strategies, and theories could

help *all content creators* mitigate the risk of algorithmic invisibility. With time and effort algorithms can be *won*. In addition to treating the algorithm as a game, experts fetishize an ability to conduct experiments and generate ostensibly “objective” data on how the YouTube algorithm *works*. However, in practice, algorithmic expertise often takes the form of algorithmic lore: a mix of data-informed assumptions that are weaved into a subjective narrative. Experts view themselves as YouTube’s adversaries, as they claim to reveal ostensibly hidden algorithmic signals. However, there is a tension here, as experts’ work often teaches creators to be complicit with YouTube and its business models. This article concentrates on two U.S.-based algorithm experts: Matthew Patrick and Matthew Gielen, studying their pedagogical outputs across platforms between 2015 and 2018.

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In the context of this article, algorithms are defined as the codified step-by-step processes implemented by YouTube to afford or restrict visibility through the platform architecture. Technically, algorithms and algorithmic recommender systems “sort, manipulate, analyse, predict” (Willson, 2017, p. 3). They lay out the guiding processes for mechanical problem solving and decision making. Through automated processes algorithms assign relevance to media objects, or they deem them irrelevant, as “attention is drawn to some things at the expense of others” (Just & Latzer, 2016, p. 9). For some, the difficulty in becoming algorithmically recognizable is that proprietary algorithms utilized by platforms are “black boxed,” or that their inner workings are obscured or hidden from view (Pasquale, 2015). Bucher (2016) valuably critiques the absolutism of this metaphor, pointing out that there are often a spectrum of methodologies and sources of information available on algorithmic operations. Insights, snippets, and scuttlebutt on the workings of algorithms tend to surface in occasionally surprising ways (Seaver, 2017). However, it remains true that there is a severe degree of uncertainty for those producing content for YouTube. Full-time YouTubers are receiving increased media attention as they struggle to keep up with the whims of the platform. To take one example, British vlogger Emma Blackery told *The Observer* “there are so many people who quit their full-time job because they were doing well enough to support themselves. Then the algorithm changes and suddenly they can’t support themselves any more” (Stokel-Walker, 2018). This statement highlights the precarity of building a career contingent to platforms. Vloggers offers an arguably niche example of political economic changes in content creation and distribution, yet an interrogation into intermediaries (such as algorithmic experts) is widely applicable, as becoming visible according to platforms’ specific contexts is increasingly salient for all cultural producers.

Studying algorithmic experts reveals insights into how new media producers negotiate platform visibility, but also speaks to long-standing questions about how the management of risk in cultural industries shapes symbolic production. The central question of this article is therefore twofold: what are the practices and logics of these algorithmic experts, and how do they perform expertise and sell visibility by decoding ostensibly proprietary algorithms? I begin by outlining the theoretical trajectory from Bourdieu’s (2000) work on cultural intermediaries, examining how this has been applied to cultural industries more broadly, and link it to algorithmic optimization. I then outline my methodology, before introducing the two algorithmic experts, their brand development and a snapshot of their work. I consider these experts’ processes of legitimization, the gendered performances of algorithmic experts and the gendered nature of their expertise. I then examine how meritocratic logic informs their outputs. To make sense of the way that intermediaries advise on content production necessitates a look at

how expertise is developed, and how it is crossed with experts’ structural relationships and lived experiences.

Developing and Selling Expertise in Cultural Industries

Many of the scholarly analyses of YouTube’s commercial ecosystem thus far have focused on layers of “thickening management” in support of ostensibly individual content creators (Lobato, 2016, p. 349). Particular attention has been paid to the multi-channel network (MCN), a scalable third-party model that supports creators with cross-promotion, advertising, brand deals, and analytics in return for a percentage of their advertising revenue (Cunningham et al., 2016; Lobato, 2016; Vonderau, 2016). Critics have commented on the range of activities undertaken by MCNs, but point out that they are often “*extensions* of existing media work,” drawing from established positions such as talent management, media buying, and marketing (Lobato, 2016, p. 353). Algorithmic experts form a distinct component of this ecosystem: They frequently consult within intermediary organizations. Yet, the algorithmic experts discussed in this article hold individual forms of microcelebrity (Senft, 2008), self-brands (Marwick, 2013), and entrepreneurial self-presentations rendering them worthy of their own investigation.

Algorithms, in a curatorial role, meld with actors including programmers and users and function as part of a “process of intermediation” for cultural products (Morris, 2015, p. 450). *Algorithmic experts* are an important part of this intermediation process. First, the concept of the intermediary is worth outlining briefly here. In *Distinction*, Bourdieu writes [intermediaries] “have invented a whole series of genres between legitimate culture and mass production . . . assigning themselves the impossible and therefore unassignable role of divulging legitimate culture—in which they resemble the legitimate populisers” (Bourdieu, 2000, p. 325). According to this definition, the cultural intermediary functions as a self-assigned broker between production and consumption. Intermediaries hail popular culture as desirable for dubious audiences by way of various social and symbolic capitals. Bourdieu asserts cultural intermediaries ensure that “the petit-bourgeois spectators know they have no need to be alarmed: they can recognize the ‘guarantees of quality’ offered by their moderately revolutionary tastemakers who surround themselves with all the institutional signs of cultural authority” (Bourdieu, 2000, p. 326). The cultural intermediary thrives when situated within media devoid of a cultural inheritance: YouTube is a *new* media industry, the algorithmic expert inscribes legitimacy to cultural forms for the “petit-bourgeois,” namely a group of reticent established media organizations, cultural producers, and brands. In their self-assigned critical role, experts fill a distinct gap in informing what is considered legitimate cultural production on YouTube. Bourdieu’s conception fits how algorithmic

experts are entrepreneurial in their recognition of gaps, and legitimized through both their proximity to industry, and their ability to perform gendered, classed, and raced styles of expertise and entrepreneurship (Marwick, 2013).

Historically the intermediaries that “proliferate in the space between production and consumption” have been understudied (Negus, 2002, p. 502). Particularly in moments of risk and uncertainty, organizations turn to intermediaries working with “hard data . . . facts figures, statistics” which are heavily involved in the “construction of what is to be ‘commercial’” (Negus, 2002, p. 506). These actors work with data, following the so-called logic of the market, but they are also informed by “value judgements and cultural beliefs” (Negus, 1999, p. 88). The mix of the “softness” of subjectivity with hard numbers is reminiscent of “organizational common sense” within media organizations (Havens, 2014, p. 40). Havens argues that often “taken-for-granted” organizational understandings about audience preferences, and what symbolic products “sell” are a powerful “industry lore” that shapes media landscapes (Havens, 2014, p. 40). Crucially, lore is based on “interpretations” used to temper risk in these industries. Lore makes symbolic production manageable (Havens, 2014, p. 43). Some have argued that individuals’ decision making processes are being over-ridden by processes of data-driven creativity, namely the use of “algorithms” to make decisions about what culture gets made and promoted (Hallinan & Striplas, 2016). However, this article calls for attention to *algorithmic lore*, or how the subjective decision-making practices of human intermediaries continues to play a significant role in even ostensibly algorithmic symbolic production. Algorithmic lore captures how experiment data, theorization, and assumptions are weaved into a narrative on how algorithms work, and used as advice on how to successfully produce content.

Sociological work on consultancy demonstrates that expertise is underpinned by neoliberal logics and “mediated through mechanisms that provide evidence that [experts’] services are a rational choice for the responsible individual” (Prince, 2014, p. 749). In this model, the responsible and rational subject engages with experts. Entrepreneurial independent YouTubers exist within insecure and precarious creative economies. Engaging with consultants and experts makes up one of the many sites of uncompensated and valuable “aspirational labour” (Duffy, 2016) that must be engaged with, in pursuit of unreliable future success. In turn, the label of “expert” is fraught and dynamic, ultimately tied to existing cultural power inequalities (Osborne, 2004; Pickard, 2009; Prince, 2014). This article speaks to two strains of power inequality that are at the root of algorithmic experts’ formation and practice. First, I examine how expertise is procured and co-constituted through experts’ lived experience. Returning to Bourdieu, it is key that access to the label of expert is bolstered by symbolic and social capitals. Second, I consider the underpinning logics of meritocracy, that work to disavow the effects of structural and cultural inequality,

toward focusing on the attainable nature of individual success.

Processes of Optimization on Platforms

YouTubers are invested in becoming visible via YouTube’s algorithms and seek expertise on how to render themselves “algorithmically recognisable” (Gillespie, 2017, p. 2). This practice also falls under the umbrella of “platformization” or how cultural industries are becoming increasingly “platform dependent” and commodities “contingent,” meaning they are informed by platform architectures and data, and cultural products “open to constant revision and recirculation” (Nieborg & Poell, 2018, p. 2). I will attend to contingency as a logic that runs through algorithmic experts’ outputs: Content creators are advised to be in a constant of testing and refining outputs, to capture more eyeballs. Algorithmic logic is a central tenet of platformization as “content developers are progressively orienting their production and circulation strategies towards recommendation, ranking and other end-user facing algorithms of major platforms” (Nieborg & Poell, 2018, p. 6). On YouTube, this logic shapes the topics discussed in videos, genres engaged with, video lengths, titles utilized, video thumbnail design, and organization of speech.

Traditional media intermediaries offer assurance that expensive cultural products will profit in unpredictable markets. Algorithmic experts can be thought of as search engine optimizers (SEO), intermediaries who similarly sell an assurance of visibility within algorithmically organized platform ecologies (particularly search engines). SEO suggests the economic necessity of search visibility, as industry research indicates the first page of Google receives 95% of web traffic (Shelton, 2017). Organizations relegated are at risk of poor visibility and impacted profits, and because of this there have been search engine optimizers as long as there have been search engines (Gillespie, 2017; Halavais, 2009; König & Rasch, 2014). SEO consultants and organizations assure they can “structure and refine the web pages of their client so they appear high in the results ranking for an appropriate search query” (Van Couvering, 2004, p. 18). However, Google releases limited information or advice on how to rank highly, and actively discourages techniques used to “game” its algorithm. In their own SEO guidelines, Google (2019) advises webmasters focus on improving site usability, noting that there are “no secrets that’ll automatically rank your site first in Google.” Similarly, the YouTube Creator Studio guidelines advise not to focus on algorithmic optimization: “instead of worrying about what the algorithm ‘likes,’ it’s better to focus on what your audience likes instead” (YouTube, 2019). If platforms claim that there are no hacks to algorithmic visibility, how do those working outside of these platforms claim, and profit from, their own strains of algorithmic expertise?

Algorithmic expertise goes beyond coaching audiences for algorithmic visibility, toward developing sustainable

careers in content production. Cultural products supposedly made visible *for algorithms* (rather than audiences) are often punished by platforms or platform-based communities. An illuminating example is Bucher's (2018) analysis of the YouTube Reply Girls, a group of women who in particular "used their cleavage baring bodies as thumbnails to drive traffic" to their own videos on YouTube between 2011 and 2012 (Bucher, 2018, p. 128). As the YouTube algorithm (at the time) simply rewarded clicks and eyeballs, the Reply girls successfully attained millions of views through their instrumental use of the algorithm. However, as Bucher (2018) points out, other users on YouTube were incensed by this tactic, which was widely viewed as spam. The Reply Girls had crossed a line. In a public response YouTube "went on to significantly change its algorithm," valuing the average time watched (watch time) over the amount a video been clicked or commented on (Bucher, 2018, p. 131). Breasts for clicks were no longer a sustainable business model.

The example of The YouTube Reply Girls is often invoked by algorithmic experts as a teachable moment that supposedly evidences a clear line between optimization and spam. During one video, MatPat informs viewers how YouTube changed their algorithm because of The Reply Girls "users quickly gamed the system through boob thumbnails . . . so YouTube were like hey maybe this isn't a good way to determine good versus bad" (FBE, 2017). MatPat's argument here is entrenched in the idea that images of breasts, as they are used strategically for clicks, are an indisputably poor form of content. Experts, then, are not only invested in teaching users how to "win" at the YouTube algorithm, but their lessons and feedback are intertwined with moralistic judgments about what is *good content*. It taps into long-held assumptions in misogynistic online spaces that women are unfairly able to use their sexuality to get ahead (Massanari, 2017). The relationships between experts and androcentric cultures will be discussed in the following analysis. For now, it should be pointed out we should not limit analysis to algorithmic optimization on YouTube, but in their role as de facto producers and gatekeepers for YouTube

Methodology

Experts work within tech-adjacent employment, seen as "entrepreneurial" and "creative" (Duffy, 2016; Gill, 2002; Neff et al., 2005). This work is highly gendered: Its valuation of hard data is explicitly distanced from *soft* feminized social media labor (Duffy & Schwartz, 2018). The most visible algorithmic experts are overwhelmingly male. At VidCon 2018, the five sessions aimed at creators about algorithmic optimization were exclusively run by men. This project is informed by a 3-year ethnography of YouTube industries. During this time, I did not encounter branded algorithmic expertise by women; this may not demonstrate such content does not exist, but could speak to its visibility or popularity.

This article considers the self-branding strategies, instructive content, and workshops led by two popular U.S.-based algorithmic experts between 2016 and 2018. They were selected for their audience reach, links with the YouTube industry, and their conscious self-branding as *experts*. First, MatPat, or Matthew Patrick, is the face of The Game Theorists, a YouTube channel with 11,014,692 subscribers.¹ The channel is branded as the thinking persons' gaming analyses; it also hosts videos on the YouTube algorithm, each with millions of views. MatPat is a public speaker with an expertise in the YouTube algorithm and runs a consulting business, Theorist Media. Second, I consider Matt Gielen. In 2016, Gielen achieved notoriety through this publication, "Reverse Engineering The YouTube Algorithm: Part I" in industry journal TubeFilter (2016), alongside co-author Jeremy Rosen. Gielen has also parsed the success of this article into a public speaking career and a YouTube consultancy, Little Monster Media. Both have been chosen as they are legitimized on the fringes of mainstream cultural industries through their work with traditional media: MatPat with Viacom, and Gielen with the BBC and Conde Nast. Furthermore, both are featured speakers at YouTube-sponsored conventions such as VidCon, an "online video" convention and conference, which in 2017 hosted 30,000 people at its Anaheim-based event, and holds European and Australian franchises.

The current moment brings with it increased challenges for content creators on YouTube, alongside exigent requirements for algorithmic optimization. Content saturation, crossed with several high-profile scandals causing advertisers to (at least temporarily) withdraw advertising dollars, has led to the culmination of a long process of demonetization, colloquially known as #adpocolypse. It was thus imperative to track the response from algorithmic experts to mediated algorithmic events, or events of high press and televisual attention to YouTube's algorithmic events, variations, and breakages. As Abidin (2017) puts it, "the rhythms of digital ethnography peak and trough according to the static and stasis of the Influencer industry," requiring the ethnographer to "be attuned to the cultural and platform norms and taboos of the ecology" (p. 3). Online research is a "messy web" that refuses the fictitious binary between "online" and "offline" analysis, instead field sites are "clusters or intensities of things of which both localities and socialities are elements" (Postill & Pink, 2012, p. 124). This point is evidenced by this article's objects of analysis, which include content published on social media platforms, public speeches, filmed or audio recordings of the latter which were then published on the aforementioned social media platforms. I draw from archived and categorized screen grabs and field notes from video and ancillary content, and taken during participatory practice at several algorithmic-hacking workshops. I also interviewed Gielen as part of my fieldwork.

Developing and Selling Expertise: Processes of Legitimization

Algorithmic experts have dependent, yet critical and elastic, relationships with YouTube, which are tied to the logics of self-branding and uneasy processes of legitimization. Self-branding is defined as “using advertising and marketing terminology to describe aggressively a set of skills and tasks in a catching and appealing way” (Marwick, 2013, p. 184). In this vein, expertise is often calcified through explicitly criticizing YouTube, or by positioning YouTube and its employees as ignorant, or even malicious. In our interview, Gielen observes that he is able to pick through YouTube’s guidance and determine what statements are true: “they put a lot of information, some of it misinformation, as they are wont to do.” Such assertions are self-branding strategies utilized to demonstrate these are the guys who “know more about YouTube than YouTube.” MatPat states that he has poached business from YouTube’s own consultants, who are now paying to employ *MatPat*’s company instead. He asserts “the challenge of it is these ‘experts’ from YouTube are going out and spreading misinformation from their own platform,” arguing that corporations trust him more because they understand that data are his livelihood and his passion (FBE, 2017). This statement draws heavily from performed authenticity, namely consistency with a sharp moral edge, an important logic of self-branding. As a person, rather than a corporation, MatPat’s motivations are positioned as *more pure*. Authenticity, in this strategic sense, “is always defined against something else” (Marwick, 2013, p. 249).

Experts advertise their unique positioning to access “hidden” information about the YouTube algorithm. Here the tentacles of the “black box” sprawl outwards. Algorithmic recipes are positioned as *deliberately concealed* through a mix of ignorance and sabotage. Publicly available information is also represented using these strategies; experts have released “translations” of the algorithmic signals outlined in an article published by YouTube’s engineers entitled “Deep Neural Networks for YouTube Recommendations.” This article was originally presented at the 10th ACM Conference on Recommender systems in 2016, and it is published and retrievable online. However, experts describe their processes of “discovering” the article somewhat surreptitiously. One algorithmic expert salaciously mentioned during a lecture I attended that he was sent the article by an informant, within an anonymous message. MatPat suggests he came across the article by “trawling through the bowels of the Google research website” (The Game Theorists, 2017). Although the experts are remitting information directly from Google in this case, it is through their own (ostensibly unique) expertise and legitimacy that they have attained access to the information, and through their own flair and self-branding strategies that they present it.

Algorithmic Experiments and Tests

This section will discuss the tests used by algorithmic experts to legitimize their expertise. However, experiments are not the only stalwarts of algorithmic experts’ content, which is often made up of a pulpy-mix of data science, psychology, and brash salesmanship. Theories from biology and psychology are often invoked to underpin and justify algorithmic advice. During a talk on thumbnails, Gielen informs the audience that yellow is a preferred color for video thumbnail design because yellow “hits the cones . . . the red and green cones in your eyes get triggered by yellow.” Similarly, MatPat pulls from the work of developmental psychologist Jean Piaget and Stanford Professor Robert Sapolsky to explain how clickbait “works” (The Game Theorists, 2016b). Cherry picking scientific theories to explain popularity on YouTube can be viewed as a hyper-focused and individualized approach to algorithmic theorization. Very rarely is YouTube’s business model more broadly investigated or critiqued, for example, the role of advertiser pressure. Neither are more sociological elements considered for users choosing certain videos over others, for example, the high societal value of whiteness, able-bodiedness, and hegemonic attractiveness. Rather, algorithmic experts’ content operates in a meritocratic framework, assuming that creators have an equal chance to become visible to a number of equally receptive clinically “raw” humans. Experts develop tests to solve hypothesis from channel data they have access to, in addition to their own YouTube channels. Tests are commonly drawn from processes of reverse engineering, defined as “examining what data are fed into an algorithm and what output is produced” to determine its ‘recipe’” (Kitchin, 2017, p. 24). Experts and their colleagues monitor input, for example, how often a YouTube channel produces a video, video length, titles, and themes, and examine the output, namely, how much attention and engagement it gathers on YouTube.

The potential to experiment on algorithms are discussed using excitable talk. An example is the podcast “The Algorithm Hour” hosted by the founders of the popular YouTube Channel, the Fine Bros, on which MatPat was a guest. Producer/host Rafi Fine enthusiastically waxes lyrical on research methods he plans to use. Fine describes his plans to build five specialist ghost channels, designed to exclusively watch Fine Bros content and then monitor how frequently Fine Bros content is promoted. He excitedly proclaims “someone’s job is going to be to make those channels and watch those videos!” (FBE, 2017). Following excited squeals about this test, MatPat posits a test that he has been hoping to run, in which he would ask his audience to unsubscribe from his channel, and re-subscribe, to measure how the “freshness” of subscribers impacts views. However, algorithmic experts’ income is (ironically) contingent on maintaining good stead with YouTube. The tests experts can actually perform are severely limited as many

would engender reducing their channel visibility, or that of those they manage. MatPat's idea is met with gasps and "ooos" from the podcast hosts: that MatPat is willing to jeopardize subscribers, a significant capital on YouTube, is shocking. However, MatPat admits that he has "never had the balls" to conduct this test and unsettle his relationship with YouTube. The specific and niche excitement performed on this podcast fits with raced and gendered stereotypes of geek culture, discussed in the following section.

Ties With Geek Culture

In geek cultures, whiteness and maleness connote intelligence, computational ability, and expertise in programming. In the following interaction, MatPat and the Fine Bros are excited (or "geeking out") about testing the YouTube algorithm:

"The tests are like so geeky . . . I wanna be like, oh why can't YouTube build a simulator?"

"Like, YouTube should build a like algorithm simulator. They should build an algorithm simulator . . . Some of the gamers will make games . . . no, no we make the algorithm game." (FBE, 2017)

The Fine Brothers and Matpat are clearly tickled by their dream toy—an algorithm simulator. Their self-aware observations of the very niche nature of this desire, that it is "odd or weird," speaks heavily to geek stereotypes, particularly as they cross gaming culture (Massanari, 2017, p. 4). Specialized knowledge here is fetishized and valorized in a vein that necessitates positioning against the invisible mass of YouTubers who supposedly do *not care* about this topic, possibly against their interests.

MatPat asserts that many YouTubers have limited understandings of the algorithm "because we are creative types, and very few are actually data driven or able to see the numbers and see the charts and translate it." However, asked if *he* considers *himself* a math nerd MatPat replies with mock-incredulity: "of course . . . of *course* I'm a math nerd!" There is a very specific style of content creator that is positioned here as caring about data. The podcast host and their guest are dressed in Zuckerberg-style gray T-shirt uniforms as they wax lyrical about math, closely approximating gendered stereotypes and myths of Silicon Valley's entrepreneurs (Duffy & Schwartz, 2018; Marwick, 2013). This serves as the opposite of the authenticity, performed intimacy and emotion work that characterizes the self-brands of female bloggers, vloggers, and Instagrammers. However, popular female vloggers *do* conduct tests to understand algorithmic visibility. They do so by utilizing very specific and feminized logics, for example, they leverage and sustain intimate connections with their fans by requesting their help. A common approach is the use of secondary platforms and

applications such as Twitter or Instagram to survey how many of their audience have been served their content on YouTube. For example, beauty vlogger Rachel Levin, requested support: "tweet me pictures of your subscription boxes from like 12 PM today if you're subscribed to me" (Levin, 2017). This tweet returned 41 fan image replies, with some tangential from the initial request, for example, "It's my birthday," and many people translating Levin's announced time into their own time-zone. Fans textually replied regarding a lack of the video, for example, "I never got a notification."

These outputs may not be legitimized as they do not utilize "touchstones of nerd identity," namely "computer skills and media fandom" (Kendall, 2011, p. 512). MatPat's slickly produced videos on YouTube algorithm particularly merge these two themes, often using niche references to illustrate his points. For example, the indie games franchise *Five Nights at Freddy's* is often invoked using the unpleasant sounding acronym "FNAF." Gielen also uses this franchise as an example, dropping a shorthand term, "Five Nights," into his lectures. This is a very specific cultural reference, interpellating a very specific culture around the enigmatic gaming franchise. MatPat's videos on the YouTube algorithm are also scattered with "geek" centric memes that draw from distinct online cultural spaces. One example is the frequent use of the "LOL guy meme," a grim MS paint drawing which originated on the /b/ Random board on 4chan (Knowyourmeme.com, 2011). While apparently banal, this meme holds particular meanings for those who engage with these symbolically white and androcentric spaces (Phillips, 2015). The use of masculinized "geek" iconography arguably underscores representations of just *who* is seeking information on the YouTube algorithm, who would be interested in accessing these insights.

Geek culture on YouTube is closely aligned with gaming and online gaming ecologies, which are characterized by "hetero-masculinities" (Maloney et al., 2018, p. 1698) in which the "gender gap remains stark" (Maloney et al., 2018, p. 1704). For example, algorithmic experts directly conflate success on YouTube with gaming expertise. In one video, MatPat points out that YouTube is like a game: "it does have a leader board" (The Game Theorists, 2014). Making a similar point during a lecture at VidCon, Gielen suggests "it's not a surprise that some of the biggest creators in the world are video game creators because the skillsets to be great at video games really apply to online video development." The relationship between algorithmic prowess and gaming arguably has a "gatekeeping" function, underpinning the designation of legitimate expertise on the algorithm (Kendall, 2011, p. 5016). Moreover, they taps into specific logics of meritocracy within games and gaming cultures. Gaming scholar Christopher Paul has pointed out that gaming logics rest on meritocracy. He points out that "assessment and adjudication of a player's skill" are often viewed as fair measure of ability and self-management (Paul, 2018). The direct link between

algorithmic expertise and gaming skill fails to account for inequalities built into algorithmic design. It also does not capture the significance of other (feminized) content spheres such as beauty and fashion (Rapp, 2016), family vlogging (Abidin, 2017), and toy unboxing (Craig & Cunningham, 2017) on YouTube. Furthermore, we may ask whether gamers have skills that speak to the YouTube algorithm, or whether YouTube promotes gaming videos as they have the ability to draw invaluable “prime time,” or privileged white, male, audiences, who often prove tricky for advertisers to access (Meehan, 2006, p. 318).

Experts position their advice as objective. It is important to recognize, however, that data sets overwhelmingly align with hegemonic masculine themes. Illustrative channels used by MatPat include male-fronted gadgets, animals, and skateboarding channels (The Game Theorists, 2016a). Similarly, Gielen’s work is based on the data from Channel Fredarator, a niche animation channel (TubeFilter, 2016). These data sets are arguably drawn from a very specific corner of YouTube, one that is symbolically white and male. Although experts are invested in their “claim on objective truth,” which will be discussed more closely in the following section, I argue here that data are subjectively selected and bias unaccounted for, representing a “very particular subset” of potential data, namely YouTube’s audiences (boyd & Crawford, 2012, p. 669). I do not want to suggest that the algorithmic impact of these particular channels is not worth studying, or that women and people of color do not make up some of their audiences. However, it is significant that even commercial feminized outputs, such as beauty, are excluded. When these experiments are promoted in videos and at events such as VidCon as representing “the algorithm,” this arguably underserves swathes of marginalized YouTube users. Claims and insights may prove incorrect or difficult to extrapolate for parenting vloggers, those vlogging about their experiences of disabilities or making content on lesbian, gay, bisexual, transgender, and questioning/queer LGBTQ+ themes, to name a few genres outside of these niches.

The Subjective Nature of Algorithmic Lore

Algorithmic experts are invested in promoting their findings as factual and scientific. The key to understanding the YouTube algorithm is represented as a purely datafied issue, one that can be solved, as MatPat puts it, through “good old number crunching” (The Game Theorists, 2016a). The over-reliance on data visualization in this genre is seemingly parodied within this video, in which plethora of colorful bar charts, line graphs, and scatter plots whirl and spin across the screen to punctuate phrases such as “delve into the mind of the machine.” The video utilizes “growth charts” to illustrate its points, an animated luminescent lime green snaking upward to highlight key findings as they are narrated by

MatPat. Similarly, the thumbnail design for a promotional video of Matt Gielen’s workshop, hosted on the VidCon YouTube channel, depicts Gielen resplendently “holding” a photoshopped blue and green graph, as white scatter charts and diagrams pop in front of a midnight blue background (VidCon, 2017). Connotation: *science*.

Data drawn from various methods are ultimately meshed with personal opinions and value judgments to form an advisory algorithmic lore. This lore is visible in an interaction I observed between an algorithmic expert and a convention attendee. In this expert’s talk on “hacking the algorithm,” a young woman stood up to call attention to her question, explaining that she runs a science-themed YouTube channel. When she first started, her content had reached an even-gendered audience; however, now her channel had grown, and the audience was 90% men. She was frustrated: How could she optimize her content to reach more women? The expert was clearly uncomfortable, “ahhh . . . I don’t know . . . I mean, women aren’t as interested in science, you know? I don’t really know what to tell you.” The attendee sat down, disappointed and annoyed. I was confused. Not only has it been pointed out that social media platforms (prompted by advertisers’ targeting needs) are “demographically obsessed with gender” (Bivens & Haimson, 2016, p. 5), this expert discussed in his *own lectures* that demographics data, including gender, influences how content is served to audiences by YouTube’s algorithm. This example reveals how experts’ outputs and theories are shot through with individually and culturally informed assumptions, theories, and understandings of algorithms and audience behavior.

However, much is made of the objectivity of processes; MatPat switches up his usual video sign-off “but hey that’s just a theory” to more directly call attention to scientific nature of his claims: “now remember, that’s just a theory, *a YouTube theory based on data*” (The Game Theorists, 2016a), and in a second video “but hey, that’s just a bunch of facts that I translated from the Google Engineering Paper to help my fellow creators” (The Game Theorists, 2017). MatPat is permitted to speak on this topic, because he believes he is legitimized as an expert through this research. For MatPat, speaking about these experiences through the language of subjectivity promotes a “tonne of misinformation that spreads as no one bothers to look at the data” (The Game Theorists, 2016a). He frequently critiques creators who criticize the algorithm, as he sees it, inaccurately. He claims “crying wolf” about algorithmic de-promotion “does so much damage” (FBE, 2017). The timing of point coincided with a backlash against YouTube for LGBTQ discrimination in “restricted mode.” Marginalized LGBTQ users were emotive, or angry, which means their points were ideologically dismissed by those who favor “logic.” Examining the algorithm purely through the lens of “logic” does away with users’ very real affective and experiential ties to their data and visibility. As Negus observed, intermediaries who work with “hard facts” are often turned to in moments of

risk, but by attending exclusively to data ignores how “broader social divisions are inscribed into and become an integral part of business practices, informing what are often assumed to be basic commercial decisions” (Negus, 1999, p. 176). Indeed, there are many experiences of the YouTube algorithm that cannot be done justice by data that show sanitized pathways to visibility. They are unable to capture the “racist and sexist stereotyping and misrepresentation” that are prevalent within search and recommender algorithms (Noble, 2018, p. 69).

Although MatPat’s caution against “speculation” may be well meant, it falls within a fetishization of data in which “subjectivity . . . is viewed with suspicion,” that ignores how data and its selection, interpretation, and use are *always* subjective (boyd & Crawford, 2012, p. 667). One chart published by Gielen shows video views in relation to video length (TubeFilter, 2017). The data are illustrated through hundreds of concentrated speckles of blue, red, gold, and white against a black background. This chart is used to emphasize that optimum visibility on YouTube is achieved by making videos that are between 10- and 13-min long, the distinctly colored dots measuring views attained at 1, 2, 7, and 30-day ranges. It is noticeable that the content, author, or themes are not visible in this rendering. These illustrations, and algorithmic expert output more broadly, are deeply invested in “meritocratic discourse” (Littler, 2013, pp. 52-53). By representing all YouTube videos as colored spots on a graph, creators’ identities and lived experiences are ultimately erased. Moreover, the implication is that they ought not to matter. These data seek to illustrate the potential for visibility into a set of easy to follow steps or hacks. Attention or inattention is explained through video length and topics, but do not take into account nationality, race, class, or gender as they stratify and shape visibility in YouTube’s ecology.

Risk and Control and Standardization

The final section of this article will highlight how advice given is overwhelmingly complicit with YouTube’s needs: Optimization teaches content creators how to fit within the contours of visibility on YouTube, which is in turn informed by advertisers’ desires and their organizational strategies.

Matt Gielen promises to reveal “The Secret to Getting More People to Watch Your Videos” during a talk at Vidcon 2017, later uploaded to Vidcon’s YouTube channel. In the video, he advises streamlining content on one topic, to have “one value proposition for your audience . . . it’s a page on a single topic if you want to prosper” (VidCon, 2017). Gielen suggests boiling down YouTube content to a very specific, recognizable, consistent theme. Consistency underpins the logics of self-branding for online entrepreneurs and influencers, but also has long history within cultural production, particularly understood in tandem with the stubbornness and stability of genre within creative production. For example, Meehan demonstrated how television production companies

are impelled to “tried and true” formats, producing a “slight twist” within a stable genre (Meehan, 1986, p. 451). Focusing on music industries, Negus points out how “ongoing dynamic genre practices continually confront their translation into codified rules, conventions and expectations” (Negus, 1999, p. 28). These examples illustrate how intermediaries and intermediary organizations work to stabilize cultural production into genres, informed by understandings of audience desires and perceptions of salability. Gielen’s positioning as an intermediary, as he advocates production within a single value proposition, should be recognized in a similar vein. He encourages production within calcified genres: a gaming, toys, beauty, movies. As outlined in the first section, “expertise” is often framed as cunningly gained without YouTube’s permission: Algorithmic experts’ self-brands are valuable because they claim to provide YouTube’s secrets. Yet the advice given by Gielen here is complicit with advice given by YouTube. Creator Academy, a resource provided to aspiring creators, suggests YouTubers make their content “clear and representative,” adding “consistency is key” (YouTube, 2018).

Experts also suggest that content creators “optimise” their content for holidays and peak consumption periods, for example releasing specialized content for Christmas, Halloween, and Black Friday, explicitly drawing from these keywords, themes, and titles. Speaking on the value of optimizing YouTube content for seasonal topics, MatPat wryly observes “it’s the end of August, and so we have to start doing back to school [content], because all the advertisers are putting their money into back to school . . . and that’s how you get these super trends” (FBE, 2017). Arguably these ideas are not new, and operate at a distinct level from algorithmic signals or design. Media schedules have long been tied to seasonal topics and tropes, privileging busy marketing periods (Schmidt, 1997). It is interesting then, that algorithmic experts frame such information as algorithmic, when seasonality within the fabric of all advertiser-funded media. This move “fetishizes” the algorithm, and data-related expertise (Crawford, 2016), yet the ideology of advice is ultimately *not* disruptive or based on data from original experiments. Rather, this advice speaks to algorithmic lore, or stabilizing logics, designed to manage risk by homogenizing content, fitting within set genres and ascribing to the logics of marketing calendars.

Conclusion

In 2019, even creators with strong viewer bases have reported dwindling revenues (Stokel-Walker, 2018). Yet, the mythology of the career of “YouTuber” remains powerful; there are boot camps, non-profit schemes, and private initiatives encouraging young creative workers to pursue a creative career on YouTube (MediaTrust, 2017; Wiseman, 2014). The Girl Guides have now launched a “vlogging” merit badge (Girlguiding, 2019). Ultimately YouTube is becoming more

saturated with hopeful content creators looking to make an income on the platform, and visibility and payment are increasingly scarce and coveted. Media studies scholars have observed that, in such periods of high risk and volatility, the role of intermediaries (particularly those working with “stable” and “objective” data) become popular and productive (Havens, 2014; Negus, 1999). Bourdieu’s (2000) concept of cultural intermediaries also demonstrates how cultural and symbolic capitals are leveraged by the entrepreneurial expert to justify their existence in new industries. In this vein, it is clear that algorithmic experts utilize self-presentational strategies from hegemonic “geek” subcultures to underpin expertise. They draw heavily from meritocratic logics that normalize a “permanent state of competition,” where winners and losers are explained by talent and strategy (or a lack thereof) (Littler, 2013, p. 55).

Experts’ outputs are informed by objectivity, signposting toward data and experiments, illustrated with graphs and charts. Such a performance advertises how generating income on YouTube can be simply optimized by any participant; posting videos at set times, at advised lengths, on advised themes can ensure success. However, my research has also attended to the subjective nature of algorithmic expertise, or algorithmic lore. Experts coach creators on how to fit within platform desires: These lessons are mixed with moralistic and subjective judgments about what is *good media* or *good content*. Judgments advertised as expertise, about whether women watch science videos, or why gamers are popular on YouTube, are particularly troubling as expertise is taken up widely. MatPat’s videos have millions of views, sessions at conventions are popular, and both offer individual consultancy that are aimed at brands and creators. The popularity of algorithmic experts speaks to how neoliberal logics of individual responsibility encourage rational subjects to engage with experts and a meritocratic logic sustains that anyone can make it if they engage the right expertise, and work hard enough. Yet, I have demonstrated that the advice from experts relies on narrow data and patchwork solutions that do not acknowledge or address inequality on YouTube, which continues to sustain significant barriers for creators from diverse nationalities, racial backgrounds, and sexualities. Further work is needed to examine the spiraling intermediaries, consultants, and experts who co-produce and advise content production for platform ecologies—and to ask questions about how this informs the content we see, and how actors function as gatekeepers in cultural production.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Note

1. As of September 11, 2018.

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