#Gamergate and The Fappening: How Reddit's algorithm, governance, and culture support toxic technocultures

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Abstract
This article considers how the social-news and community site Reddit.com has become a hub for anti-feminist activism. Examining two recent cases of what are defined as "toxic technocultures" (#Gamergate and The Fappening), this work describes how Reddit's design, algorithm, and platform politics implicitly support these kinds of cultures. In particular, this piece focuses on the ways in which Reddit's karma point system, aggregation of material across subreddits, ease of subreddit and user account creation, governance structure, and policies around offensive content serve to provide fertile ground for anti-feminist and misogynistic activism. The ways in which these events and communities reflect certain problematic aspects of geek masculinity are also considered. This research is informed by the results of a long-term participant-observation and ethnographic study into Reddit's culture and community and is grounded in actor-network theory.

Introduction

In 2014, a spate of anti-feminist action and harassment highlighted the ongoing problems that women face engaging in online spaces. One event, "The Fappening," centered on

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illegally acquired nudes of celebrities (most prominently Jennifer Lawrence) distributed and discussed via anonymous image-board 4chan and Reddit.com. The second, #Gamergate (GG), ostensibly a hashtag "movement" spawned by individuals who purported to be frustrated by a perceived lack of ethics within gaming journalism became a campaign of systematic harassment of female and minority game developers, journalists, and critics and their allies. Both were emblematic of an ongoing backlash against women and their use of technology and participation in public life. Discussions of harassment online often cast a broad net, focusing on the legal aspects or offering large-scale policy solutions that might reduce victimization (Citron, 2014). Fewer, however, examine the ways certain design decisions and assumptions of use unintentionally may enable and/or implicitly encourage these spaces to become hotbeds of misogynistic activism.

In this article, I examine how the platform and algorithmic politics (Bucher, 2012; Gillespie, 2010; Van Dijck, 2013) of Reddit.com provides fertile ground for these kinds of toxic spaces to emerge. By focusing on the ways in which a single platform's design and politics can support these kinds of activities, I hope to highlight the ways in which Reddit implicitly reifies the desires of certain groups (often young, white, cis-gendered, heterosexual males) while ignoring and marginalizing others. This project is grounded in actor-network theory (ANT) (Latour, 1992, 2005), which emphasizes the importance of considering how non-human technological agents (algorithms, scripts, policies) can shape and are shaped by human activity, and is informed by the results of a 3-year ethnographic study and observation of the Reddit's communities and culture (Massanari, 2015). In particular, this article focuses on the ways in which Reddit's karma point system, aggregation of material across subreddits, ease of subreddit and user account creation, governance structure, and policies around offensive content implicitly encourage a pattern of what I call "toxic technocultures" to take hold and have an outsized presence on the platform.

Reddit as cultural platform

Despite its growing popularity as a unique platform for user-generated content, and controversial role as a site for citizen journalism, Reddit remains an underexplored space within new media scholarship. Reddit is an open-source platform on which anyone can create their own community of interest (subreddit). Individuals can also download the entire Reddit codebase and use the platform for their own ends. Subreddits are wide and varied, but often reflect a geek sensibility, with many revolving around computing, science, or fandom interests. Reddit depends on user-submitted and user-created content, as well as a large number of volunteer moderators who set and enforce the rules of individual subreddits. Creating an account allows one to customize the vast list of subreddits and subscribe to only those of interest—these then constitute the "front" page for an individual Redditor (reddit member). When a Redditor first creates an account, they are subscribed to a default list of subreddits, which are intended to demonstrate the breadth of the site's communities.[1] While Redditors may curate their feed to unsubscribe from all default subreddits, they still remain an integral part of the Reddit experience for new and lurking users—as material from these subreddits often populate /r/all (the default, non-logged in page that individuals see when visiting http://www.reddit.com).

In addition to personalizing their front page, Redditors can upvote material they find interesting or worthwhile and downvote that which they find off-topic or otherwise uninteresting. Highly upvoted material—both links and comments—appears higher on the site (or subreddit's) front page and thus receives more attention from viewers. Each link and comment displays a number of points (score), which corresponds loosely to the number of upvotes minus the number of downvotes a given item has received.[2] This score translates into karma points for a user's account, a kind of currency that marks an individual's contributions to the Reddit community.

While featuring very basic profile pages, Reddit has less in common with social-networking spaces such as Facebook or Google+ than it does message boards and early community sites such as the WELL. Because accounts are pseudonymous and easily created, interactions on the platform's myriad subreddits tend to feature elements of play and candor that one might not associate with traditional social-networking spaces that enforce a "one-name/real name" policy (Massanari, 2015). Presumably to encourage this sense of play and candor, Reddit's administrators take an extremely hands-off approach toward content shared by users. The few rules they enforce prohibit sharing private information (doxxing), or sexualized images of minors, distributing spam, interfering with the site's regular functioning, and manipulating voting (reddit.com, 2014).

Reddit has quickly become a popular center of geek culture. Because anyone can create a subreddit on any topic, niche interests are well represented on the site. So finding others interested in an obscure anime show is easy, as there is probably a subreddit that already exists for discussing it, or one can easily be created. In addition, Reddit's default subreddits (which tend to have the largest subscriber base) skew toward geek interests, with gaming (/r/gaming), science and technology (/r/science and /r/technology), news (/r/news and /r/worldnews), and popular culture (/r/Music, /r/movies) landing regularly on /r/all.[3] Also popular are subreddits dedicated to sharing knowledge, such as /r/askscience or /r/explainlikeimfive. Popular celebrity Redditors include Neil de Grasse Tyson, famed astrophysicist, philanthropist and Microsoft founder Bill Gates, and former *Star Trek* star William Shatner.

Reddit is, of course, a community of communities (as each subreddit is independently moderated), and thus embraces a multitude of cultures. While many of them share a geek sensibility, the fact that GG and The Fappening found a welcome home on Reddit is not to suggest that these events are the direct result of geek culture per se. However, both events were precipitated by individual actions that do suggest a technological expertise and embeddedness within the *habitus* (Bourdieu, 1977) of geek culture (the former within the gaming community; the latter within a criminal hacking underground). Likewise, Reddit's multitude of communities (subreddits) are regulated by the unifying nature of the platform's algorithm, which both rewards individual contribution and emphasizes popular and recent content, and its mostly hands-off moderation policies.

Geek culture and geek masculinity

As discussed earlier, Reddit's most popular subreddits and general ethos tend to coalesce around geek interests—technology, science, popular culture (particularly of the science fiction, fantasy, and comic book variety), and gaming. Thus, some examination of geek

culture and, given the gendered nature of the two cases discussed herein, geek masculinity is warranted. Geeks valorize expertise and specialized knowledge and geek culture often revolves around the acquisition, sharing, and distribution of this knowledge with others. They often value wit, cleverness, and craft, negotiating between a sense of collectivism and individualism within the communities of which they are a part (Coleman, 2013)—and the interactions on Reddit's many subreddits exemplify this tendency. But despite the ways in which geek culture may welcome and promote deep engagement with niche, often unpopular interests, it often demonstrates a fraught relationship to issues of gender and race. As Kendall (2011) argues, the stereotypical image of the nerd[4] still conflates interests in computing and technology with a specific kind of gender and racial formation as it

> … conjoins five statements: (1) Computers are an important but problematic type of technology. (2) Nerds understand and enjoy computers. (3) Those who understand and enjoy computers are nerds. (4) Nerds are socially inept and undesirable. (5) Nerds are white men. (p. 519)

Likewise, the "revenge fantasies" of Silicon Valley founders, in which the geek or nerd gains power and moves from a marginal position to dominate their competitors, almost always valorizes a white man (Fan, 2014). Online interactions in geek-friendly spaces such as Reddit are equally racialized and gendered and often presume a white male centrality (Milner, 2013).

So to discuss geek and nerd culture is to discuss masculinity—in particular, white male masculinity. Like other gender expressions, geek masculinity is both liminal and performative. However, it both repudiates and reifies elements of hegemonic masculinity (Connell and Messerschmidt, 2005). For example, geek masculinity often embraces facets of hypermasculinity by valorizing intellect over social or emotional intelligence. At the same time, geek masculinity rejects other hypermasculine traits, as "the geek" may show little interest in physical sports and may also demonstrate awkwardness regarding sexual/romantic relationships (Kendall, 2011).

Despite the increasing cultural acceptance of geek pastimes, those who identify with geek culture often feel marginal, as their interests are marked by the dominant culture as odd or weird. Because of this, critiques of the immense amount of capital (particularly cultural and intellectual capital) that geeks possess may be met with skepticism or outright hostility. Suggesting that geek culture can also be oppressive and marginalize certain populations may create a sense of cognitive dissonance for these individuals, who likely view themselves as perpetual outsiders and thus are unable or unwilling to recognize their own immense privilege (Penny, 2014). Geek masculinity also embraces a kind of techno/cyberlibertarian ethos, valuing the notion of a rational, autonomous individual and meritocratic idealism (Turner, 2006). Therefore, critiques about the limited diversity of geek communities such as Reddit are often subsumed under a banner of choice—that the reason more women or people of color do not participate is because they do not want to—rather than a recognition of the structural barriers that might make participation difficult or unappealing.

Spaces dedicated to geek culture and STEM interests (like Reddit) may exhibit the tendency to view women as either objects of sexual desire or unwelcome interlopers or

both—making them doubly unwelcoming for women (Varma, 2007). Herring and Stoerger's (2014) work underscores the gendered nature of online discourse generally and the ways in which it can serve as a barrier to entry for women. Likewise, in his analysis of the free culture movement, Reagle (2012) articulates a number of ways in which community values and norms come to shape why female participation in these spaces is contested and fraught. These include the argumentation style often characteristic of geek culture, the openness of communities which often leads to them being dominated by trolls or other problematic members, and a "rhetoric of freedom and choice" which overemphasizes individual choice as the reason why women may not participate and ultimately devalues such conversations as infringing upon members' freedom of speech (Reagle, 2012: ¶3). All these factors are also at play on Reddit's platform, but are complicated by the way voting makes material more or less visible on the site.

Toxic technocultures—two cases

Perhaps because of its entanglement with geek masculinity, and its complicated relationship around issues of race and gender, Reddit serves as a nexus for various toxic technocultures to thrive. I am using the phrase "toxic technocultures" to describe the toxic cultures that are enabled by and propagated through sociotechnical networks such as Reddit, 4chan, Twitter, and online gaming. Toxic technocultures are related to, but distinct from other issue-based, networked (boyd, 2011) and affective publics (Papacharissi, 2015), as they may coalesce around a particular issue or event, but tactics used within these cultures often rely heavily on implicit or explicit harassment of others. The toxic technocultures I discuss here demonstrate retrograde ideas of gender, sexual identity, sexuality, and race and push against issues of diversity, multiculturalism, and progressivism. This is not to suggest that individuals within these cultures are not diverse themselves in terms of their backgrounds, or reasons for participating, or that they all share the same vision of what the culture is "about." However, the larger discourse which characterizes a "toxic technoculture" often relies an Othering of those perceived as outside the culture, reliance on outmoded and poorly understood applications of evolutionary psychology, and a valorization of masculinity masquerading as a peculiar form of "rationality."

Toxic technocultures are unique in their leveraging of sociotechnical platforms as both a channel of coordination and harassment and their seemingly leaderless, amorphous quality. Members of these communities often demonstrate technological prowess in engaging in ethically dubious actions such as aggregating public and private content about the targets of their actions (for potential doxxing purposes or simply their own enjoyment) and exploiting platform policies that often value aggregating large audiences while offering little protection from potential harassment victims. At the same time, individuals affiliated with toxic technocultures both champion the power of the community as a way to effect change or voice displeasure with others they view as being adversaries, while still distancing themselves from what they perceive as the more ethically dubious (and illegal) actions of others, suggesting they are "not really part" of whatever toxic technoculture under which they are acting.

Reddit is merely a recent iteration of a vast number of online spaces where toxic technocultures coalesce and propagate. From the USENET groups to the darknet to 4chan and

other chan-style image boards, toxic technocultures have always thrived in an environment of little accountability, anonymity, and the increased globalization enabled by online technologies (Bernstein et al., 2011; Pfaffenberger, 1996). However, many of these spaces remain relatively (and purposefully) inaccessible to the average internet user, often requiring technological expertise to set up proxies (in the case of the darknet) or cultural expertise to understand the myriad memes, in-jokes, and linguistic short-hand that serves the lingua franca of spaces like 4chan. Reddit is interesting because of its prominence and its positioning within the online domain as a social news/entertainment/community site (as in, there is something for everyone). The barriers to entry are few; even if Redditors often rely on sharing links, commenting, and recounting memes and stories to encourage community connection, a new user can participate by simply voting.

Gamergate (GG)

In August 2014, a blog written by the jilted ex-lover of a female independent game designer was posted to the SomethingAwful forums in a thread about terrible breakups. It was quickly removed by moderators, but soon found its way to anonymous image-board 4chan. Authored by Eron Gjoni, the blog featured excruciating detail about his ill-fated relationship with *Depression Quest* (DQ) creator Zoe Quinn and included screenshots of alleged Facebook message conversations between the two. Quinn had already been the target of harassment after she initially posted DQ to the Steam Greenlight service (a platform for independent games still in development to be reviewed and gain exposure) in 2013, with individuals sending her rape and death threats. But after the post, Quinn became the centerpiece and token figure in a hateful campaign to delegitimize and harass women and their allies in the gaming community. Because Gjoni's blog incorrectly implied that Quinn's success was due in no small part to her intimate relationships with games journalists who wrote positive reviews of *DQ*, some within the gaming community argued that it was just another instance of questionable ethics in games journalism (Stuart, 2014).

Actor and right-wing conservative Adam Baldwin responded early on to the controversy, coining the hashtag GG and became an active supporter of the movement. While purportedly a reaction to a perceived lack of ethics in digital games journalism that Quinn's alleged improprieties represented, those rallying behind the hashtag have instead used this moment to engage in concentrated harassment of game developers, feminist critics, and their male allies on Twitter and other platforms. Use of GG or even @mentions of those prominently targeted by harassers (such as *Feminist Frequency*'s Anita Sarkeesian) continues to lead to further harassment of private individuals who are perceived as "anti-GG." For their part, GGs insist that any harassment is done by individuals not affiliated with the GG community (despite their use of the hashtag). While it is possible that certain people have used GG as a convenient cover to engage in harassment while not being truly invested in the issues, the lack of public leadership by organizers means that condemnations of harassment do little to stem the problem (Stuart, 2014). As Coleman (2013) found in her ethnographic work with Anonymous, one of the most difficult aspects of "leaderless" movements is that some may use them as a kind of cover for their own selfish ends.

After discussions of Quinn and GG were finally banned from 4chan by administrator Christopher "moot" Poole in late September 2014 (which many GGs viewed as the ultimate betrayal and proof that so-called "social justice warriors (SJWs)" were infiltrating even their most sacred of spaces), they moved to another chan-style board, 8chan.co (Stuart, 2014). Twitter, 4chan, and 8chan have all been used as spaces for harassment; however, the public face of GG has centered on Reddit's /r/KotakuInAction (KIA). While actual engagement with those perceived as "anti-GG" occurs in spaces such as Twitter and on YouTube, KIA serves as a hub for information about ongoing attempts to pressure companies to pull their advertisements from websites considered sympathetic to social justice in their coverage of the games industry—with gaming website *Kotaku* considered a prime offender.

/r/KIA takes its name from yet another subreddit with a strongly anti-feminist bent: /r/TumblrInAction (TIA), and unsurprisingly, they share some of the same moderators. Designed originally to satirize the culture of Tumblr, TIA has since shifted to become a meeting place for Redditors to mock feminism, non-binary and trans* gender identities, and social activism. Likewise, discussions on /r/KIA tend to be strongly antifeminist and often express libertarian and/or conservative political sentiments. Part of KIA's prominence within the GG "debate" is likely due to Reddit's anti-doxxing policies, and that discussions on KIA are moderated and pseudonymous, rather than fully anonymous as they are on 8chan, making some sort of accountability theoretically possible, if unlikely.

The Fappening

Around the time that GG was gaining steam in late August 2014, a large cache of stolen photographs of celebrities was posted to 4chan. Many of the images were private female celebrity selfies that had been stored using Apple's iCloud service. While a number of women were victimized by the hack, many of the images featured Jennifer Lawrence, star of *The Hunger Games* series of films. After the stolen photographs were scrubbed from 4chan, they continued to propagate across the web—most notably on the subreddit /r/thefappening, which served as a disturbing hub of discussion about the images and the celebrities involved.[5] /r/thefappening was extremely popular—with 100,000 new subscribers signing up in the first 24 hours of its existence (UnholyDemigod, 2014). Because Reddit's algorithm is heavily influenced by both new and highly upvoted content, /r/all featured numerous links to the stolen images. Thus, if a new visitor were to stumble across Reddit from 30 August until 7 September, when /r/thefappening was finally pulled from the site and other popular subreddits also banned the images, one would have the impression that Redditors were obsessed with upvoting, sharing, and discussing nude pictures of celebrities. The tone of many of /r/thefappening discussions was gleeful, with few individuals expressing concern over the ethical questions that both dissemination and viewing the images raised, instead focusing on what additional photographs might come to light or what other female celebrity might be targeted next.

It is important to note that this was not the first time Jennifer Lawrence had been the object of Reddit interest. Her forthrightness and self-effacing nature has gained her a loyal following on the site, particularly as her ethos suggests a kind of authenticity and candor

that many Redditors prize—and her status as a quintessential "cool girl" who embodies both sexual desirability while remaining unthreatening probably did not hurt (Peterson, 2014). Her presence on the site took several forms: reaction GIFs (animated images that loop and encapsulate specific, often witty emotional response) injected regularly into threads, discussion about her down-to-earth nature and approachability, and a subreddit (/r/jenniferlawrence) dedicated to sharing images and news about her (although, more of the former than the latter).[6] Given this, the discourse on /r/thefappening and /r/thefappeningdiscussion regarding Lawrence's images was particularly stomach churning—as it became quickly apparent that some Redditors had no trouble victimizing a person that at least a portion of the community had previously idolized.

Reddit administrators later noted that the site's traffic increased exponentially as a result of /r/thefappening, requiring constant intervention to keep the rest of the site running. Additionally, numerous Digital Millenium Copyright Act (DMCA) infringement notices were filed on behalf of those who were impacted by the hack also required administrator action. But the subreddit's ban was not ensured until it was revealed that a number of the photographs included those of then-underaged gymnast McKayla Maroney, which constituted a violation of Reddit's policy prohibiting sexualized images of minors (alienth, 2014b). Part of the reason why Reddit administrators might have been reluctant to ban /r/thefappening sooner may have been monetary: in 6 days, subscribers purchased enough Reddit gold (a kind of currency that defrays Reddit's server costs) to run the entire site for a month (Greenberg, 2014). So, the reason the /r/thefappening and its associated images were finally banned from Reddit had little to do with the ethical questions they raised, the invasion of privacy they represented, or the fact that their viewing and distribution represented a sex crime [as Lawrence later claimed in a *Vanity Fair* piece (Vanity Fair, 2014)]. And long after /r/thefappening's demise, the images continued to propagate through many smaller subreddits—including /r/fappeningdiscussion (still in existence as of August 2015), where any new caches of celebrity nudes continue to be shared.

How Reddit's design, policies, and culture support toxic technocultures

While the lurid and public nature of both The Fappening and GG might have inevitably meant some discussion on Reddit, their outsized presence on the platform is a consequence of its culture, politics, and design. Borrowing from Gillespie (2010), Van Dijck (2013), and Bucher (2012), and drawing on ANT, I am using the term "platform politics" to mean the assemblage of design, policies, and norms that encourage certain kinds of cultures and behaviors to coalesce on platforms while implicitly discouraging others. Disentangling the community's norms from the ways those norms are shaped by the platform and administrative policies becomes difficult in a space such as Reddit, as they are co-constitutive of one another. In this section, I broaden out from considering just the cases of The Fappening and GG to argue that the culture and design politics of Reddit implicitly allows anti-feminist and racist activist communities to take hold.

ANT's strength as a theoretical framework is that it sensitizes us to the often-unintended consequences of non-human actants (bots, scripts, algorithms, policies) and the ways in which they shape online cultures. In this vein, a critical factor that

shapes the prominence of anti-feminist activity on the platform is karma. As I mentioned earlier, karma is a point system that purports to represent how much Redditors value a particular account's contribution. Postings and comments are accompanied by a point total (score), which is some variation on upvotes minus downvotes that is fuzzed so that spammers and others are less likely to game the system (jeffzem, 2014). Scores also affect the visibility of a given comment or posting; when comments are sorted by the default "best," those comments that are highly upvoted and have received a large number of comment replies are listed higher than others.[7] Each user account has an associated amount of karma based on the scores of their comments and postings to Reddit as a whole. This system valorizes individual contributions and suggests that the site is democratic in terms of what material becomes popular. At the same time, such a system implicitly incentivizes certain activities that might gain karma for the Redditor: for example, reposts of popular material across multiple subreddits (thus the vast spread of material from The Fappening and GG across Reddit) and comments that reflect the general ethos of Reddit's culture in terms of its cyber/technolibertarian bent, gender politics, and geek sensibilities. As other scholars have noted, such a system can create "herding" or power law effects around particular material, biasing individuals to mirror the voting behavior of others (Muchnik et al., 2013). While many subreddits hide karma totals for a time in an effort to diminish these kinds of bandwagon effects, such attempts are relatively ineffectual. Also compounding this problem is Reddit's default sorting filter—users must actively change it if they would like to see more controversial material, and as comment sections on popular posts can easily go into the hundreds or thousands, it seems likely that most Redditors simply read the comments deemed "best" by others and vote on those. While such a system implies that it is directly democratic (suggesting one person = one vote), the ability for a single individual to create multiple accounts means that it is also easily gamed.[8]

Reddit's aggregation of material across subreddits that it hosts is another design choice that can implicitly suppress certain types of content and highlight others and also serves as an unintentional barrier to participation. /r/all, the non-logged-in version of Reddit's home page, provides a kind of barometer of the community as a whole. The specifics of the algorithm used to sort /r/all are complicated, but it generally highlights material across subreddits that is new and considered popular (meaning highly upvoted). To make it on to the first pages of /r/all, a subreddit must already have a substantially large subscriber base (as links only appear there if they have a substantially large score, which means many of them are the default subreddits to which a person is subscribed when they first create a Reddit account). Recognizing that some popular material may not shine the best light on the Reddit community, administrators have allowed subreddit moderators to choose to opt-out from /r/all. This means some highly subscribed and highly popular not-safe-for-work (NSFW) subreddits such as /r/gonewild no longer populate the site's front page unless a person is subscribed to them (alienth, 2014a). But subreddits are only removed if their own moderators ask for their removal, meaning that plenty of posts from popular and objectionable subreddits often populate /r/all, including, for example, /r/fatpeoplehate (FPH) (a subreddit devoted to fat-shaming and ridiculing the health at every size movement). While seasoned Redditors often spend their time

curating the subreddits to which they subscribe often to avoid this kind of material, new users (and lurkers, and non-logged in users) would see /r/all and reasonably assume that it represents the dominant culture of Reddit. So, the problem becomes circular in nature—those who do not see themselves or their views reflected in the subreddits populating /r/all might choose to not participate, further compounding the likelihood that such perspectives do not make it to the top of /r/all.

It is apparent that Reddit administrators are at least somewhat aware of the perception that /r/all often features a limited subset of material and viewpoints and has tried to address this by changing the default set of subreddits to which a Redditor is initially subscribed. In May 2014, a large number of new default subreddits were introduced and others removed, likely in an attempt to broaden the appeal of Reddit for new users. While other new subreddits were defaulted with little disagreement, such as /r/OldSchoolCool and /r/mildlyinteresting, it was the female-oriented /r/TwoXChromosomes (TwoX) that provoked the most hostility of a portion of the Reddit user base. Some Redditors expressed dismay and outright anger that they would be confronted by discussions that might discuss sexual assault, or periods, or female body image. Some inquired why /r/mensrights (a subreddit dedicated to the men's rights movement) was not defaulted as well. Others suggested that TwoX would now become a default space for men on Reddit, filled with comments like, "As a man …" or "Not a female but …." Still others argued that instead of doing more to address the gender imbalance on Reddit, it would backfire and simply make TwoX a terrible space for the women who had once found it supportive (sodypop, 2014). Visibility in the form of defaulting did create a toxic environment in TwoX (at least initially), with individuals being harassed and trolled, and comment threads subjected to mass downvoting by other Redditors who were angered by the change, even though all they needed to do was unsubscribe to the subreddit if they did not want to see it on their front page.

The issue of visibility becomes salient, not just in terms of the ways in which it reflects Reddit's sorting algorithm, but also when subreddits, particularly those that do not reflect a particular kind of (white) geek masculinity, are elevated to prominence via /r/all. A vocal minority of Redditors can hijack their content, and their subscribers may become the target of specific harassment efforts. In contrast, material that does align with the kind of (white) geek masculinity that many within the Reddit community prize faces little resistance. For example, during The Fappening, the stolen images quickly propagated across subreddits, earned upvotes, and thus appeared with frequency on /r/all. Likewise, when GG was still an allowable topic on Reddit's many gaming subreddits (/r/gaming, /r/Games, and /PCMasterRace, etc.), the same story or video appeared in many different guises on /r/all. They were then upvoted even more as they became more popular and were submitted to other subreddits. And because upvotes represent visibility on Reddit, and earlier votes count more heavily than later ones, downvoting after something has become extremely popular is likely to have little effect.

Reddit's platform design also provides little support for discouraging material that might be objectionable or harassing. The only recourse administrators provide to users is the ability for individual accounts to report links and comments to moderators. In the report form, a logged-in Redditor can indicate that the content is breaking one of the five rules of Reddit, or can provide another short, 100-character explanation. As with other

sites that rely on "flagging" as a mechanic for handling offensive content, Reddit's tools are limited and do little to support a public, deliberative discussion as to why something might be objectionable (Crawford and Gillespie, 2014). And, there is no clear way to report an entire subreddit for objectionable content, other than messaging the administrators directly. Additionally, site administrators actively discourage Redditors from engaging in "witch-hunts" by overusing the report tool or downvoting indiscriminately, instead encouraging them to create their own communities (subreddits) where they can implement their own rules around interactions (Auerbach, 2014). However, Reddit already functions as a de facto vote-brigading platform, as it encourages large numbers of people to visit (and comment on) material other sites host. The real issue, as some Redditors argue, is the lack of transparency around brigading on Reddit proper and a limited set of moderator tools for handling these events (RobKhonsu, 2015).

The Reddit platform makes it easy to create multiple subreddits and user accounts, even after they have been banned. For example, after /r/creepshots (dedicated to sharing sexualized images of unknowing women) was banned, it was reborn as /r/CandidFashionPolice. Likewise, /r/niggers (banned in 2013) found new life as the equally odious /r/GreatApes and /r/coontown. And, while the relative ease with which users can create multiple accounts may encourage individuals to be more honest—allowing them to discuss sensitive personal issues without concern that it might be repeated to friends or coworkers, for example—it may also enable them to engage in unethical behavior with little repercussion. A Redditor's karma and previous postings/comments may help others determine whether their contributions are productive, but it does not ensure an account will not be used for harassment or will not continue to submit offensive content unless administrators step in.

The platform's policies and approach to community governance also encourage the continued presence of toxic technocultures. Reddit administrators are loathe to intervene in any meaningful way in content disputes, citing Reddit's role as a impartial or "neutral" platform for discussion. As former CEO Yishan Wong noted in a particularly tone-deaf posting in regards to the company's decision (later reversed) to not ban /r/thefappening, "each man is responsible for his [sic] own soul"—suggesting that while he might personally feel that the stolen images were objectionable, that each person had to make that choice for themselves (yishan, 2014). In the aftermath, Reddit administrators also stated that they, "feel it is necessary to maintain as neutral a platform as possible, and to let the communities on Reddit be represented by the actions of the people who participate in them" (alienth, 2014b). But remaining "neutral" in these cases valorizes the rights of the majority while often trampling over the rights of others.

Much of administrators' limited engagement around these issues is the result of a design choice to aggregate, instead of actually host, content. This means that except for self-posts (where a Redditor simply creates a text-only posting in a given subreddit) and the threaded comment discussion that occurs on a given link, most material is hosted on outside platforms such as Imgur, YouTube, Twitter, and Tumblr. Thus, Reddit administrators do not have to concern themselves with the appropriateness of a given piece of content—they are simply linking to (and thus, redistributing) material that is already present online. In the case of The Fappening, administrators could suggest that the platform was merely distributing the content rather than actually hosting it, perhaps

providing a way to circumvent DMCA takedown notices. Likewise, the platform's rules banning the sharing of private information could be circumvented somewhat in the case of GG—Redditors could link to material that was clearly meant to encourage others to harass or doxx Quinn and others—but because it was hosted elsewhere, it might be allowed.

Reddit's reliance on the unpaid labor of its users also has significant implications for the perpetuation of toxic technocultures on the platform. A substantially large number of volunteer moderators are responsible for enforcing the rules the subreddits they moderate, encouraging submissions from other Reddit members, adjudicating any conflicts that arise, and enforcing bans. As scholars have argued, particularly in relation to open-source software development and free culture projects such as Wikipedia (Bruns, 2008; Reagle, 2012), "free labor is not *necessarily* exploited labor" (Terranova, 2003). However, like many other social media platforms, Reddit profits from this unpaid labor, while shifting responsibility for the content shared to individual users.

Reddit's platform also provides moderators few tools to deal with the complexities of moderating subreddits, such as removing offensive content and banning users. Moderators must rely on third-party plug-ins (again, created by unpaid labor), most of which are considered insufficient and cumbersome. Because moderators are unpaid positions, it is not surprising that few individuals are willing to do the time-consuming job, or can do it well. This means that mini-fiefdoms often spring up, whereby a very few moderators control a large segment of the subreddits—resulting in a something more akin to an autocratic, rather than democratic, system of governance (Auerbach, 2014). It is incredibly difficult, too, for powerful moderators to be removed from their positions, however inefficient or problematic they become (see, for example, Alfonso, 2014b). Often moderators of the more pernicious subreddits coalesce; for example, one of the moderators for the popular subreddit /r/BlackPeopleTwitter also moderates /r/CuteFemaleCorpses, /r/BeatingWomen2, and /r/HurtingAnimals.

There seems to be a deep reluctance on the part of the administrators to alienate any part of their audience, no matter how problematic, as it will mean less traffic and ultimately less revenue for Reddit. In the case of The Fappening, the fluid and decentralized nature of Reddit meant that these images were not just contained to the /r/thefappening subreddit. Less prominent subreddits became distribution points for the images, even after they were clearly identified as illegally obtained. For example, a moderator of /r/Celebs expressed ambivalence about allowing the images to be submitted, but also seemed to express glee at what was termed "insane traffic" the subreddit was receiving because of the hack (atticus138, 2014). Later, these moderators chose to ban the images, but only *after* site administrators banned /r/thefappening—most likely because they feared that /r/Celebs would find the same fate. As I mentioned above, simply allowing images from The Fappening to propagate for a few days before banning them was extremely profitable for Reddit's coffers.

Resisting or questioning the design, policy, and culture of Reddit remains difficult. Specific attempts to modify aspects platform's design are numerous, mostly through modifications made to the CSS file used by subreddits. For example, a number of subreddits hide the down arrow next to postings, often in an attempt to encourage more positive interactions. Without administrator intervention, however, there is simply very little

recourse at the disposal of users and moderators who believe that subreddits such as /r/TheRedPill supports rape culture, or that KIA tacitly condones harassment, other than the creation of "metasubreddits" such as /r/TheBluePill and /r/GamerGhazi, which attempt to serve as a discursive counterbalances. The most well known of these are /r/ShitRedditSays (SRS) and its affiliated subreddits, which act as a sort of feminist, anti-racist Reddit-within-reddit. SRS actively critiques the emphasis on karma acquisition and scoring by inverting upvotes and downvotes, and its moderators enforce a much stricter policy around the kind of content and speech that is allowed in its subreddits. However, SRS is the frequent object of many Reddit conspiracy theories (see /r/SRSMythos) and anti-SRS subreddits (for example, /r/SRSsucks), with its members often portrayed as "not *real* Redditors," and SJWs intent on infringing on others' free speech. This echoes the familiar refrain within the gaming and geek communities that some individuals are not "real gamers" or "real fans"—a label that is almost always applied to those who challenge or question the idea that these spaces are designed for white males.

Conclusion

Both GG and The Fappening created an odd paradox, by which individuals associated with each event viewed their actions as somehow noble (at least in the case of the former) or at least unproblematic, while engaging in what even superficially could be considered unethical activity. Both communities raised money for charities that were refused by recipient foundations. While entirely understandable and unsurprising for anyone outside these toxic technocultures, these refusals were portrayed as being somehow surprising, shocking, or hypocritical by those within. Implied in both cases is the idea that women should be shamed and deserve lower standard of privacy because of their sexual activities. Both events are also indicative of a pattern of toxic technocultures that have gained an outsized presence on the Reddit platform.

Given the fluid, permeable nature of the Internet, it is important to understand how these kinds of interactions on Reddit are also reflective of and influenced by other platform cultures. Toxic technocultures propagate precisely because of the liminal and fluid connectedness of Internet platforms. During the height of GG, for example, administrators claimed repeated attempts to doxx Quinn were the result of 4chan brigading Reddit (cupcake1713, 2014). While possibly true, this also problematically positions certain uses of Reddit as "more legitimate" than others. Many 4chan users are probably Reddit users, and vice versa. It is interesting, too, that moderators are willing to consider users from the outside of Reddit as really being Redditors, but that those within Reddit who actively contribute to its sometimes-toxic nature are.

As some have noted, anonymous image board culture (as represented by spaces such as 4chan and 8chan) prizes, "… unfettered emergence of consensus. Moderation is an unnatural intervention" (A Man In Black, 2014: ¶11). So perhaps the toxic technocultures we see gaining traction on Reddit are partially the result of the kinds of interactions these anonymous spaces seem to cultivate and prize. However, as I mentioned above, a number of factors make Reddit in particular a welcoming space. These include the site's design, its governance structure and algorithmic logic, administrator unwillingness to

intervene and make universal decisions regarding offensive content, and its reputation as a geek-friendly environment. I do not mean to suggest that Reddit's administrators willingly court or are even supportive of the kinds of toxic technocultures that coalesce on their platform, but they are the indirect consequence of its technological politics. And although individual administrators may express distaste at the ways in which Reddit is used, they are loathe to make any concrete changes, effectively suggest a lack of awareness when it comes to how the platform has been, and will continue to be, used to mobilize anti-feminist publics.

Understanding the ways in which toxic technocultures develop, are sustained, and exploit platform design is imperative. New media scholars as well as activists would be well served in exploring these publics, however unsavory, from this perspective, as it could provide insight into alternative designs and/or tools that may combat their spread. Especially important is considering the ways in which technological design choices of spaces such as Reddit often implicitly reflect a particular kind of geek masculinity—one that is laden with problematic assumptions about who can enter these spaces and how they can participate.

Afterward

During the course of researching and writing this piece, a number of significant changes to Reddit's content policy and administrative team occurred. The first change, announced in February 2015, banned so-called "revenge porn" from the site. In June, new policies to discourage the harassment of Reddit members eventually led to the banning of /r/FPH and several other subreddits (kn0thing, 2015). Both policy changes were instituted by interim CEO Ellen Pao, and the latter in particular led to a kind of uprising by certain individuals who viewed it as the first of many steps toward the site's capitulation to political correctness and SJWs. In addition to spamming the site with FPH clones, some Redditors posted anti-Pao propaganda which dominated the site's front page for several days. Still other Redditors wondered why other subreddits, such as the racist /r/coontown, were spared elimination. Tellingly, subreddits such as /r/KIA were on the anti-Pao frontlines, becoming vocal supporters of a Change.org petition to remove her as CEO (lleti, 2015).

The final straw came in July 2015, when popular Reddit community administrator and AMA coordinator Victoria Taylor was fired without administrators notifying the moderators of /r/IAMA and other subreddits who depended on her assistance. This was viewed by many as further evidence of the dysfunctional relationship between Reddit administrators and moderators (Lynch and Swearingen, 2015). Blame for the botched departure of Taylor was placed on Pao's shoulders. The next week, Pao resigned and co-founder Steve Huffman reemerged to become the site's new CEO. Ellen Pao (2015) subsequently penned an opinion piece for *The Washington Post* suggesting that the "trolls are winning" on Reddit and across the Internet given the numerous death threats and invective she received. Meanwhile, newly appointed CEO Huffman suggested that the policy changes implemented under Pao would stay and would likely be augmented by several others. Huffman proposed new content rules that would prohibit anything that "incites harm or violence against an individual or group of people" or "harasses, bullies, or abuses." In addition, a new category would be created, much like Reddit's NSFW

classification, that would quarantine "indecent" spaces, making them not searchable or publicly listed (spez, 2015).

It remains to be seen how Reddit will develop in light of these new policies. However, the resistance by a vocal group of Redditors to these changes provides further evidence that the technological affordances, and Reddit's platform politics, have cultivated a space where toxicity is normalized. Huffman's proposed solution, to allow but not publicize nor profit from hate-filled subreddits, does nothing to stem the underlying problem. Members of subreddits such as /r/coontown (banned as of August 2015) or /r/CuteFemaleCorpses do not stay contained to their own toxic spaces, but are participants in other, more mainstream areas of Reddit. This means that their retrograde views continue to be implicitly legitimized by Reddit administrators. Most disturbingly, the notion that advertising revenue will not be collected from these objectionable subreddits effectively means that the rest of Reddit—including its anti-racist, feminist, and progressive spaces—would in fact be subsidizing the existence of its toxic neighbors. Such a choice could indeed lead to the capitulation of Reddit to the "trolls" (as Pao calls them), unless something radically shifts in the coming months.

Declaration of Conflicting Interests

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Notes

1. A list of defaults can be found at https://www.reddit.com/r/defaults. URLs for subreddits are shortened to /r/subredditname for readability. Capitalization reflects the subreddit's name as listed at http://www.reddit.com/reddits.
2. Reddit's algorithm weights votes logarithmically, so that the first 10 votes are counted more than the next 100 and so forth (Salihefendic, 2010).
3. A list of the most-subscribed subreddits is at http://redditmetrics.com/top.
4. I am using the terms "nerd" and "geek" interchangeably.
5. The subreddit's name is a portmanteau of a slang term for masturbation popular on Reddit, "fap," and "the happening."
6. The stolen images were posted to /r/jenniferlawrence for a time, but later removed by moderators. In response, the sidebar of the subreddit was changed to add a new rule that specified leaks were no longer allowed.
7. Other comment/link filters include "top," which pushes the top-most voted comments/links (and their responses) to the top, "new," which orders the comment/link threads by time of submission, "hot," which reorders the thread to indicate which comments or links are currently being upvoted, and "controversial," which filters the comments/links by those that have the most similar number of upvotes and downvotes (Salihefendic, 2010).
8. See the case of /u/Unidan, a popular Redditor who was found to be engaging in vote manipulation by creating a number of sockpuppet accounts which he used to upvote his own contributions and downvote those with whom he disagreed (Alfonso, 2014a).

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