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The work of watching Twitch: Audience labour in livestreaming and esports

ABSTRACT

This article focuses on the interactivity afforded to audiences by the video game livestreaming platform twitch.tv. Drawing on theories of audience labour, we explore what audience interactivity on Twitch might mean within the context of the contemporary digital economy. Specifically, and inspired by a range of existing work in media and cultural studies research on audiences, we argue that interactive audience practices on Twitch can be read as a site of 'audience work'. Our contention is that the various kinds of interactive, audience practices on Twitch generate considerable economic value for the platform and its broadcasters. In the context of growing academic interest in livestreaming platforms like Twitch, this article contributes a new perspective towards the role that the interactivity of Twitch plays in creating commodified and commercially desirable experiences via the labour of audience activity.

KEYWORDS

esports
Twitch
livestreaming
audience work
spectatorship
online gaming
digital economy

INTRODUCTION

Twitch.tv is the most popular video game streaming platform in most regions in the world. It is a leading venue for watching both live, professional and competitive esports events, and watching the ‘amateur’ (although increasingly professionalized) play of others (through what writers like Taylor [2018: 93] have termed ‘variety’ streams). As a platform, the technical affordances of Twitch (i.e. the material properties of the platform which allow for action on the part of the user) enable users to do ‘more than watch’ – facilitating varying forms and degrees of interactivity. Our work here focuses on this audience interactivity, with questions of audience labour and commodification in mind, contributing to a growing interdisciplinary literature on Twitch, its place within the digital economy and increasingly pertinent questions to do with labour and the commodification of online audiences.

Extensive scholarship on Twitch has accompanied its rapid rise to become a keystone platform for games culture (see Taylor 2018). Recent work by Johnson (2018) and Johnson and Woodcock (2017) has explored the labour of livestreaming, situating Twitch as part of the ‘digital economy’. Crucially both recognize the importance of the affordances of the Twitch platform itself for broadcasters; giving examples like the interactivity of chat, or how the webcam overlays which might create a closer emotional or affective connection between audience and streamer (see also Anderson 2017). Several other works have looked at Twitch as an interactive platform, specifically at the relations between viewer and broadcaster, a relationship facilitated by the technical affordances of Twitch (Smith et al. 2013; Scully-Blaker et al. 2017), and the central role interactivity plays in motivations to spectate on Twitch (Hamari and Sjöblom 2017; Wulf et al. 2018; Wohn et al. 2018).

Building on existing studies of physically situated crowds at ‘LAN’ esports tournaments (particularly Nicholas Taylor’s [2016] work on e-sports, audienceing and labour), we argue in this article that the interactivity afforded by Twitch can be read in terms of ‘audience work’. Broadly construed, this denotes a process of ‘channelling and extracting value from activities of cultural consumption, which is to say audience activities’ (Nixon 2015: 99). Through our discussion of the interactive elements of viewing through the Twitch platform – focusing on viewership, chat, donations and subscriptions – we underline the ways that Twitch viewers’ engagements are key to what Seo (2013) might refer to as Twitch’s ‘experience economy’. We argue that this is significant because it generates considerable value for Twitch as a platform, as well as those who broadcast their games through the platform (both larger esports broadcasters, and individual livestreamers). While we are not the first to make the claim that watching people play video games ought to be considered in terms of labour (Taylor 2016), nor are we the first to connect watching Twitch with the question of work (Taylor 2018), we offer what we believe to be the first sustained account of how Twitch as an interactive platform enables audience practices that can be conceived as work.

This article proceeds by outlining prior research theorizing audience labour and audience as commodity, and the adoption of such perspectives in media and cultural studies. Following this, we present our methodology and analysis of the work of watching Twitch. This is presented in four main subsections, which spotlight different ways of interacting with Twitch, and outline how they can be understood as audience work. We conclude with a discussion of our findings and identify the implications for understanding video game

spectatorship as a form of work in the context of Twitch as a central part of contemporary video gaming, underlining our contributions to increasingly pertinent discussions of labour in the digital economy.

AUDIENCE: COMMODITY AND LABOURER

A significant body of work in media and cultural studies has attended to how media industries derive value from audiences. A range of related, yet not interchangeable, terms have been used to describe this process of value extraction – including labour (e.g. audience labour, fan labour, free labour, affective labour) and commodification. In this section we draw from literatures about commercialization of the media audience to outline our model of audience labour and commodification, providing some definitional clarity in how we use these terms to think through our case study of Twitch.

First, we argue that audience activity on Twitch is generative of economic value in a way that can be termed labour. The idea that the audience activity of watching is a site of labour, commodity and value creation is one that emerges in large part from Smythe's contributions to the political economy of communication (1977). For Smythe, consuming television content operates as commodified behaviour, and more specifically, a form of labour. Jhally and Livant (1986) apply Smythe's take on the audience commodity to think about the viewing time of TV audiences as commodity – taking the activity of watching TV, and consuming advertisements, as a form of value-generating labour for the media industries (indeed, we now see much the same dynamic played out within the context of datamining based advertising on social media, cf. Andrejevic 2009). In this way, as summed up by Fisher (2015), following Smythe the active work of the audience can be characterized as unwaged and cognitive or emotional, and to do with audiences 'learning to desire and buy particular brands and commodities' (2015: 1111), with audiences 'paid' in the form of television content.

Smythe's influential theory of the audience commodity is a useful starting point for our analysis, for understanding the production of value within the context of post-Fordism and digital capitalism. Our argument, while similarly finding purchase in the idea that audience activity is commercialized, differs from this well-known (yet often debated, see Hesmondhalgh 2010: 279–80) perspective. We are not arguing here that audiences learn to desire and purchase products, accruing (monetary) benefits to advertisers (and the broadcasters who sell airtime to advertisers). Rather, our conception of audience work draws from Marxist-inspired accounts of work (Arvidsson 2005) – of autonomous or uncoerced activity as subsumed or commodified – more closely aligned with what Marxist theorists have called 'digital labour' (Scholz 2013) or 'free labour' (Terranova 2000).¹ While not interchangeable, these terms generally describe a condition of late capitalism and post-industrial life amidst new media, whereby cultural, technical and creative adoptions of technologies are co-opted by capitalist enterprises as to maintain capitalist hegemony. Commensurate with this perspective are literatures of 'participatory new media' (Jenkins 2006), 'produsage' and 'prosumption' (Bruns 2008; Deuze 2003), platforms (Andrejevic 2009), 'playbour' (Kücklich 2005) and user-generated content (Jenkins et al. 2013: 127–28). Taken together, the broad point here is that audiences are increasingly, through their consumption of media, performing activities that generate commercial value for the media industries.

1. We do not take up Terranova's concern with the question of exploitation, which is key in her account. As Hesmondhalgh (2010) writes, in a cautionary note, studies of media apply the label of exploitation too hastily and loosely. So, while we are interested in how the activity of audience is subsumed by capital, the questions we ask are not to do with exploitation.

Second, in arguing that audience activity creates particular ways of ‘feeling’ a stream, of producing a particular ‘vibe’, shaping the contours of sensory experience, we suggest that the value generated through audience interaction with the Twitch platform can be considered in terms of affect. Affect has been the subject of interdisciplinary theoretical interventions in the humanities and social sciences and has various definitions. We understand affect in this article following its widely adopted definition in cultural theory after the philosopher Brian Massumi (2002), for whom affect is a non-subjective force foundational to social, psychic and somatic individuation or ‘becoming’. It does not – as Massumi emphasizes – denote any discrete, individualized or ‘named’ emotion – as in some neuroscientific or psychological studies of affect. Affect for Massumi refers to situated relationality between various human and non-human forces in an environment, an impersonal and transpersonal ‘intensity’. Affect, in this way, is always in excess of the individual: beyond the bounds of a single human subject, yet foundational in its becoming. As a range of writers since have suggested, affect is something that emerges atmospherically – out of arrangements of various human and non-human entities and forces in an environment (Anderson 2009; Ash and Anderson 2015). Thus, keeping with a non-subjective take on affect, affective capitalism might be understood as the project of arranging subject–object relations in order to narrow the potential for commercially desirable affective states (or emotional content) to emerge (Egliston 2020a; Slaby 2018). In this way, ‘affect is a real condition, an intrinsic variable of the late capitalist system, as infrastructural as a factory’ (Massumi 2002: 45).

The concept of affective labour is thus a useful one in unpacking our understanding of audience interactivity as a productive activity (in terms of affectivity). Emerging from autonomist studies of work, affective labour is typically taken to refer to activities (not normally considered as work) – involving components of the body, or modes of cognition – which produce immaterial affective states, and often come to be commodified (see Hardt and Negri 2004). A key example is the labour of ‘care’ – and the channelling of affect via embodied dispositions – that characterize many jobs in the service industry. Increasingly, media and communication interactions produce and circulate these kinds of states, as exemplified in Woodcock and Johnson’s (2019) study of the affective labour performed by Twitch streamers. Such digitally mediated forms of affective labour have come to operate as key method of the ‘attention economy’, creating emotional or affective bonds that impel continued consumption.

Third, in thinking Twitch as site of ‘free’, affective labour, our goal is not to situate audiences as duped or ‘exploited’. The labour performed by viewers is ‘free’ in that it is unwaged, but also in that it is ‘freely given’. It is uncoerced, and users retain a degree of autonomy (see Andrejevic 2009). As prior quantitative survey research into Twitch has found, the space to interact with streamers and peers are key motivations for watching Twitch (Sjöblom and Hamari 2016; Wulf et al. 2018) and donating financially to streamers (Wohn et al. 2018). Ultimately, as we unpack in this article, these activities contribute to the ‘feel’ of the stream. In this way, consistent with writers like Jenkins (2013) and Arvidsson (2005), forms of affectivity, sociality and subjectivity were constructed and projected through audience engagement with Twitch. To conclude, our characterization of audience activity on Twitch is that it is dually autonomous of capital but also captured/extracted and appropriated by the Twitch platform.

APPROACH

The empirical material presented in this article emerges from two broader research projects examining livestreaming and esports (2014–18; Carter et al. 2013, 2015; Gibbs et al. 2018; Egliston 2020b, 2020c). During these projects, authors made extensive use of the Twitch platform, including watching Twitch and observing activity in chat channels. Our methodological commitments in this project were to the emerging suite of ‘digital methods’ in media and internet studies (see Rogers 2009). A tenet of much digital methods research is the use of web resources, which provide ‘traces’ of online activity useful in studying cultures and practices online (see Hine 2009; Rogers 2009).

For this specific work, the authors observed esports streams, popular ‘mega’ streams and smaller streams (both authors were familiar with Twitch and the games streamed). In doing so, our objective was to identify, categorize and understand how audiencing operated across various different contexts, and to understand its various implications in terms of labour and value (for a full list of streams watched by authors, see Table 1).

RESULTS

The work of watching Twitch

Here, we draw on a range of examples to demonstrate how the interactivity of Twitch (and the user practices enabled through this interactivity) can be understood as a form of audience work; where the consumption practices involved in ‘audiencing’ take the form of productive labour, creating value here for both Twitch and its broadcasters. We present these here in a scaffold of interactive complexity, proceeding with the most basic: viewership. We then discuss in further detail Twitch’s live-chat, followed by an explanation of how Twitch users use ‘emotes’, which can both be read in terms of audience work in that they cultivate desirable affective ‘atmospheres’. We conclude by looking at how Twitch viewing is increasingly monetized via subscriptions, badges and donations. We suggest that these acts are ‘played up’ through various aspects of the viewing interface, creating more than just direct monetary value but also contributing to the atmospheric and affective experiences of watching Twitch.

VIEWERSHIP AS ‘CROWD’

The most basic and passive form of interactivity that creates value for the Twitch platform is the way the viewer’s presence watching the stream is incorporated into that stream through its viewer count – a numerical aggregate of total viewers watching the stream – shown in red text under the video. When navigating Twitch’s stream channel pages, the number of viewers is superimposed over a thumbnail image of the stream. On channel pages, streams are by default sorted by viewer count (from highest to lowest). Streams with large viewer counts often feature on Twitch’s homepage (moderated by Twitch). Viewers, by making up part of this crowd, create value by raising this number. The higher the viewer count, the more visible a stream is on Twitch’s ‘Live Channels’ page – which will likely result in more incoming traffic (and therefore potential donations, subscriptions and increased ad revenue). Recognizing the value of a large viewer count, in some instances Twitch streamers have engaged in the disallowed practice of ‘viewbotting’: using bots to artificially inflate viewership numbers (see Shah 2017). While we do not have sufficient space to elaborate in this article, bots and automated viewing

Stream URL	Game
esport tournaments	
https://www.twitch.tv/dota2ti	<i>Dota 2</i>
https://www.twitch.tv/esl_dota2	<i>Dota 2</i>
https://www.twitch.tv/pgl_dota2	<i>Dota 2</i>
https://www.twitch.tv/beyondthesummit	<i>Dota 2</i>
https://www.twitch.tv/esl_csgo	<i>Counter-Strike: GO</i>
https://www.twitch.tv/ccp	<i>EVE Online</i>
https://www.twitch.tv/playhearthstone	<i>Hearthstone</i>
Mega-streams	
https://www.twitch.tv/ninja	<i>Fortnite</i>
https://www.twitch.tv/towelliee	<i>WoW/Variety</i>
https://www.twitch.tv/shroud	<i>Variety</i>
https://www.twitch.tv/drlupo	<i>PUBG/Fortnite</i>
https://www.twitch.tv/nickmerc5	<i>Fortnite</i>
https://www.twitch.tv/arteezy	<i>Dota 2</i>
https://www.twitch.tv/trihex	<i>Variety</i>
https://www.twitch.tv/tsm_daequan	<i>Fortnite</i>
https://www.twitch.tv/drdisrespect	<i>Variety</i>
https://www.twitch.tv/nl_kripp	<i>Hearthstone</i>
https://www.twitch.tv/grimmz	<i>PUBG</i>
Small livestreams	
https://www.twitch.tv/bloodynine	<i>Dota 2</i>
https://www.twitch.tv/cat6669	<i>Dota 2</i>
https://www.twitch.tv/gunnardota2	<i>Dota 2</i>
https://www.twitch.tv/narcissawright	<i>Variety</i>
https://www.twitch.tv/ink_dota	<i>Dota 2</i>

Table 1: Streams watched by authors.

complicate understandings of the various forms of labour (including audience labour) emerging within Twitch.

While a large viewercount can prove very lucrative and is desired by many, we also observed that other thresholds are introduced by the Twitch platform to commoditize even the smallest audiences. For example, we observed one smaller streamer, who maintained a viewership of around 30 viewers per nightly session, attempting to increase their viewer count by awarding prizes to random audience members, with the goal of hitting an average of a fairly modest 70–80 viewers per session. This would mean that they could become partnered with Twitch – making them eligible to further monetize their stream. Quantifying a consistent (yet not necessarily large) viewership is important for smaller streamers wanting to participate in the labour of livestreaming.

In addition to quantifying the size of a stream's audience, it is productive to think about how viewer count represented as a number can produce a particular phenomenal quality. As Thrift puts it, 'number does not just describe, it constructs' (2004: 589). What Thrift means here is that numbers (from the kinds of digital data that pervade modern life, to the invention of mathematics in ancient Greece) construct particular forms of human phenomenality – manifest in ways of experiencing and perceiving the world. In the case of Twitch viewer counts, number describes the size of the audience, but might also construct perceptions of energy, vitality, relevance and the importance of a stream.

In smaller streams with only a handful of viewers, an individual is often acknowledged by the streamer when welcoming new viewers. In the largest streams, the view count does the opposite, presencing the viewer as an audience en masse. The numerical representation of the view count then frames (or constructs) their subsequent interpretations and interactions with the Twitch stream. In our observations of smaller streams, we noted that this numerical framing of experience and perception was by no means 'fixed'. Through features such as 'raiding' and 'hosting' – which allow other streamers to redirect their audience (and viewercount) to another stream – these dynamics are subject to radical change.

CHAT WINDOW AS 'NOISE'

On Twitch, all channels feature the ability for users to enter text-based comments – transmitted to both the broadcaster of the stream and other users in the chat channel along the right pane of the window. When a message is submitted to chat, it enters at the bottom of the screen, pushing other messages up into a scrollable history of communications.

In smaller streams this form of interactivity allows for communication between the audience members and streamer. This interactive, dialogic relation between viewer and streamer can create the capacity for (or feeling of) more authentic and affective relationships or emotional attachments (see Anderson 2017; Johnson and Woodcock 2017; Wohn et al. 2018) – a point consistent with previous work on livestreaming through websites like Stickam (Burgess and Green 2018) and 'cam modelling' (Dobson 2008). A consistent theme across this literature is that through the technical affordances of video broadcasting and livestreaming platforms, viewers have the capacity to affect the broadcast by participating in a dialogue with the streamer, which in turn affects how viewers experience the stream.

However, in larger streams, with tens or hundreds of thousands of live viewers, the chat window is transformed, with text moving up and off the stream chat window almost as soon as it is entered. The capacity to chat and discuss in a meaningful way, as highlighted in Wulf et al.'s (2018) consideration of the enjoyable social experience of Twitch, is lost (see also Hamilton et al. 2014; Recktenwald 2017). In these cases, we argue that this chat instead functions as a digitally mediated crowd – working according to similar logics of sporting events. Thinking of chat as a noisy crowd is not without precedent – and we find some resource in existing work by Hamilton et al. (2014). Writing on Twitch streaming, they liken the chat of a stream with many viewers to 'the roar of a crowd in a stadium', a 'waterfall of text' (Hamilton et al. 2014: 1321). Although Hamilton et al. are not writing about this in terms of labour or experiential commodification (offering a descriptive account), we

2. We are not the first to consider fast-moving, 'noisy' chat as an important dimension of the Twitch experience. Previous work by Ford et al. (2017) has discussed the participatory and engaging nature of large Twitch chats.

can extend this view outwards to think about the value created by the 'noisy' digital crowd of Twitch Chat.²

To think about the value provided by crowds, we turn to work on traditional sporting events. From a phenomenological perspective, crowds in sports are hugely important (Scannell 1996). Through his work on the radio broadcast of Gaelic football matches (which capture and relay the noise of the crowd), McCormack (2013) argues that crowds work to create an event's 'feel', shaping affect. In McCormack's account, affect is understood as atmospheric; transpersonal and not limited to any single entity (see also Anderson 2009). Through technology and technique, affect can be mediated and transferred across diverse sites (McCormack 2013: 134).

The crowd is a central part of the experience economy of sports media. Sports crowds – in conjunction with the ongoing match, the players' movements on the field, the booming commentary, etc. – construct affective atmospheres that are desirable for event organizers or advertisers, potentially compelling continued viewing and consumption (for an account of economically desirable atmospheres in sports stadiums, generated by audience practices, see Chen et al. 2013). For example, televised shots of the ongoing match and a crowd's reaction in a particularly tense sports match might articulate affects like elation, anticipation or dread. Through radio, television and now internet broadcasts, these are channelled from the physical site to the home. The real-time broadcast of the crowd's actions and reactions has a presencing effect: 'presencing, this re-presenting of a present occasion to an absent audience, can powerfully produce the effect of being there, of being involved (caught up) in the here-and-now of the occasion' (Scannell 1996, cited in McCormack 2013: 125). Without crowds being able to see a crowd when watching a sports event, action can appear lifeless (this has been noted at sporting events, see e.g. the 2017 PGL Open in Bucharest, which was not played in front of a live audience). As one Reddit poster put it 'I'm pretty sure even the experience at home will be pretty bad without the audience reactions' (96Yoh 2017: n.pag). Crowds then perform a crucial form of audience work by imbuing the broadcast event with a sense of vitality, an experience that affectively engages those viewing.

We argue the Twitch chat similarly works as a digitally mediated crowd. Just like how the roars, sighs or cheers of the sports audience might create a particularly compelling affective atmosphere for viewers at home, here too the often incredibly fast-moving chat log signals a feeling of vitality or sense of activity or excitement around the events on the screen, particularly true during esports events. This echoes Harper's (2014) observations about how gaming tournament crowds help 'identify how different styles and forms of play [are] held up as good or desirable' (2014: 40). In viewing a stream with hundreds of thousands of viewers, we are not getting a sense of what each individual comment says. Rather, the speed of the chat works as a spectacle which creates a particular viewing experience – one that is imbued with vitality. This links to Ash's work (2015a: 96–98) on interfaces and the purposeful overwhelming of the player with information. Ash argues that information is intentionally superfluous and ultrafast as to create a sense that something is happening, generating a particular phenomenal quality.

In highly viewed (100,000+) Twitch streams of 'battle royale' game *Fortnite*, we observed the speed of the chat slowing during intense one-versus-one combats – as if the crowd was holding its breath – only to be followed by a rapturous acceleration of the speed of chat as the streamer came out on

top, conveying the collective audience reaction to the events of the stream. Elsewhere, in a *Dota 2* esports event, we noted a ‘chant’ building up at a certain point during a match between teams Invictus Gaming and Cloud 9. During the game users began posting the text ‘つ ● ● \ っ EE-Sama take my energy / っ ● ● \ っ’ – a chant for the player ‘EternalEnvy’. In our experience, the repeated posting appeared to provoke audience engagement, with the text eventually filling the chat window. As these examples show, simply transmitting messages via Twitch chat functions as an important kind of audience labour – creating an event ‘feel’, which might lead to continued viewing, and therefore the potential creation of economic value for both Twitch and the broadcaster.

Beyond displaying the chat in the chat window, some streams use third party software to superimpose chat over the main stream (e.g. the ‘Restream’ software) to create a different sense of audience presence and activity. An analogue to this is in radio, shown in McCormack’s account of sport, of fading in the noise of the crowd, giving texture to the broadcast (2013: 125–26). Chat overlays on Twitch are a tool for working in the ‘natural noise’ of the event’s crowd – viewers are constantly aware, regardless if they have the chatroom open or not, of the crowd’s presence.

Given our discussion of affective atmospheres, it is worth acknowledging that affects are not ‘global’ or uniformly provoked. Following the work of Anderson and Ash (2015), affective atmospheres are multiple, potentially distinct and materially shaped. Such a perspective is a helpful lens through which to think about Twitch chat and its different affective tonalities. Particularly, it allows us to understand features like subscriber-only chatrooms, which allow for the cordoning off of subscribers from non-subscribers. The subscriber chatroom mutes much of the ‘noise’ of chat in favour of a more ambient experience. This chat experience creates value differently. Rather than leveraging how users shape the ‘feel’ of the stream, here subscriber chat gives (for a fee) a particular chat experience – directly deriving monetary value from users’ desire for community (Wulf et al. 2018). Thinking of Twitch chat in terms of separate atmospheres also enjoins consideration of channels with smaller viewerships. For example, watching a smaller *Dota 2* streamer ‘BloodyNine’ over a period of several months, we observed that users would filter into the stream, posting personal messages to the streamer. These users were generally ‘regulars’ to the stream (see Hamilton et al. 2014: 1318). As one user enters the chat, they post ‘Hey Dan what’s up?’ (addressing the streamer), as well as addressing other frequent users in the channel. In contrast to the fervour of the esports matches or mega-streams, smaller stream chatrooms provide the means for social engagement and have a much more subdued and intimate feel (with one user describing the aforementioned stream as having a ‘chill mood’). While recent work has discussed the perceived importance of social engagement on Twitch for viewers (Sjöblom and Hamari 2017; Wohn et al. 2018), we are offering a different perspective – suggesting that what is appealing are the kinds of affective atmospheres constructed through users’ chat engagement.

EMOTES AS ‘PITCH’

A second important but distinct aspect of Twitch chat within the context of audience work is the emote system. Like ‘emojis’ on mobile media messaging, users can choose from a range of pre-selected emotes to post a small,

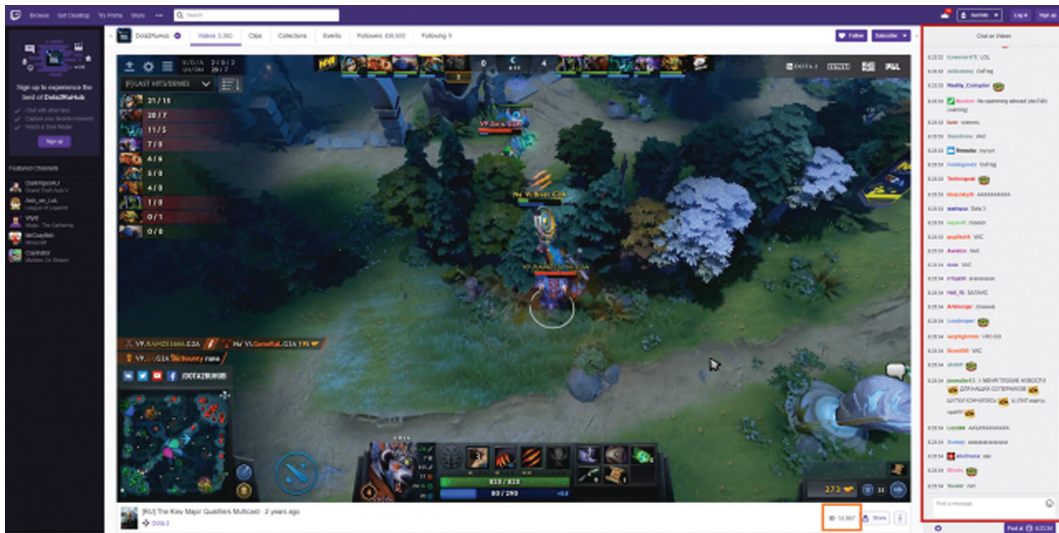



Figure 1: Twitch replay from a 2016 Dota 2 esports match, with users responding with the OSFrog emote to respond to a glitch/bug resulting in the death of a player. All messages currently displayed in the chat window (right) were entered within two seconds.

text-sized image in the chat window, or by typing a particular phrase. For instance, entering ‘haha osfrog’ into the chat window results in the posting of the OSFrog emote, displayed in chat as ‘haha 🐸’. These emotes are generally meant to convey some sort of feeling or affect in response to the events of the Twitch stream, such as elation or frustration (for a wider discussion of Twitch emotes and their meanings, see Ford et al. 2017). This is a similar practice to how other types of image forms such as emojis (Stark and Crawford 2015) and GIFs (Ash 2015b; Miltner and Highfield 2017) are used – mediating affective expression as a contemporary form of ‘social technics’ (as Stark and Crawford put it [2015]).

Emotes are a rich site for thinking about audience work on Twitch. Often the use of emotes is the culmination of various cultural literacies, creativities and platform vernaculars (via Gibbs et al. 2015) – a way of thinking about audience labour that resonates with previous understandings of creative fan labour, where practices of meaning-making and consumption become productive labour for culture industries (see e.g. Jenkins et al. 2013: 127–28). Through emotes, Twitch audiences develop systems of meaning in and around the games and communities they are involved in, often different from their original intended meaning. For instance, the OSFrog emote was originally part of a 2015 Old Spice deodorant advertising campaign, but quickly became useful as an emote for the game *Dota 2*, in reference to the game’s lead developer ‘IceFrog’. In chat, the OSFrog emote is used in response to an ability or strategy or moment in gameplay that is taken to be unfair, overpowered or poorly designed.

We see this in a 2016 *Dota 2* esports match between teams Na’Vi and Virtus Pro. In this match a character’s death occurred on Na’Vi due to a technical glitch, resulting in an advantage gained by Virtus Pro. Here – in response to the glitch (see Figure 1) – users do not just post OSFrog once, but it fills the chat window. The chat is not just filled with the flat, pitchless

eruption of noisy text chat but given pitch; the OSFrog emote allows the digitally mediated crowd to interact as a collective audience of the esports match, articulating their frustration and disbelief at the glitch. Much like how a crowd collectively despairs at a missed penalty shot in football, the collective OSfrogging at this clip conveys the esports audiences' disbelief or frustration.

3. This displays as 

While the initial suite of available emotes were defined by Twitch, the majority of the thousands of available emotes have been created by Twitch streamers themselves. Twitch streamers who have a 'Twitch partnership' (achieved by attaining milestones like streaming 25 hours a month or reaching an average of at least 75 viewers a month) are given the ability to create custom emotes based on the number of 'subscriber points' they have accrued (roughly based on the number of channel subscriptions a user has). Having more subscriber points gives streamers more emotes. Subscribing to a particular channel gives viewers access to premium emotes associated with that channel (with Twitch taking a 50 per cent cut of this payment). For example, subscribing to Ninja's channel provided access to premium emotes, including the 'Ninjacreep' emote.³ Parallels can be drawn here to current discussions about the commodification of image-based means of expressing affect. For example, writing on GIFs, Miltner and Highfield suggest that the format has 'transitioned from a user-driven format within niche digital cultures to a visual device with institutional applications and investment' (2017: 3). The paid Twitch emote is similar – representing a commodification of the kinds of literacies, vernaculars and ways of articulating particular forms of affect through emotes.

While we have argued that emotes provide considerable value to streams – in creating commercially desirable affective atmospheres, as well as through more direct monetization (through subscriber emotes) – this is not always the case. We can see this through instances of their harmful, weaponized use.

A striking example arose from a 2018 KFC promotion tying in with the game *PlayerUnknown's Battlegrounds (PUBG)* – which involved the creation of a KFC chicken bucket emote. The idea for the promotion was that this would tie in with the ingame parlance of winning being a 'Chicken Dinner', an emote intended to be used to celebrate a streamer winning. Instead, the emote was weaponized to perpetuate systemic racism and denigrate Black streamers – posting the KFC emote alongside emotes of Black streamers' faces (such as TriHex, CmonBruh or KevinTurtle) when they were on-screen. In this way, emotes in chat do not always generate positive atmospheres through emote usage. Rather, aspects of the platform come to support the values of toxic internet culture and further enact the way that Black streamers are, as Gray discusses in depth (2016), relegated to the margins of gaming culture on Twitch, a form of what Matamoros-Fernández terms 'platformed racism' (2017, 2018). In this way, audiencing practices related to emotes represent part of Twitch's 'regulatory assemblage' (Taylor 2018: 218) – where who is able to, or who is made to feel welcome to stream, echoes enduring and problematic power structures. Moreover, this highlights the challenge Twitch and its broadcasters face in trying to reconcile the commercial objectives of the platform with the toxicity and trolling characteristic of online (particularly online gaming) communities, showing that only certain kinds of emoting are valuable.

BADGES, SUBSCRIPTIONS AND DONATIONS

A further example of how Twitch audiences perform audience work is through the ways that the direct monetization of streams is incorporated into the interactive and affective experience of watching. Monetization on Twitch is via direct tips and donations from viewers, donations of 'Bits' (Twitch's digital currency, see Partin 2020), affiliate sales, sponsorships and through Twitch subscriptions (where users pay US\$5 per month to the streamer). These become incorporated by the technical affordances of Twitch and third-party support programmes that offer the ability to augment the stream with overlays and modify the way messages appear in the chat window, as well as by unlocking access to subscriber-only emotes discussed earlier. In this way, these features and tools play up a tendency that most studies of Twitch neglect to acknowledge – the desire for audiences to be seen (cf. Sjöblom and Hamari 2016).

Our account of the monetization of Twitch adds to existing understandings which situate them as acts of consumption (Wohn et al. 2018; Hilvert-Bruce 2018). Keeping with existing accounts of audience work, we suggest that this form of consumption is also part of a value-creation process not simply limited to that individual donation. The technologies and techniques which automatically or manually alert viewers to donations and subscriptions play up and make them a central part of the stream's visual economy and moreover, contribute to the atmospheric and affective experience. We can make parallels here between Twitch and Taylor's observation that commercial esports events play up (and try to encourage) acts of consumption (through event organization, and the physical layout of the event space). Much like how esports events give significant space to showcasing and selling consumer products (Taylor 2016), significant space is given within the Twitch interface to create an atmosphere of consumption.

One example of a feature that highlights consumption is badges, small images placed next to a user's name in chat, indicating that they have an active subscription with the channel. This visual marker makes otherwise invisible acts of consumption visible, but with an important effect in a noisy and fast-moving chat. When users subscribe for a number of months, the chat is punctuated with a message showing their 'subscription streak' (the number of months a viewer has been subscribed for) and level of subscription (payment). Situated above the chatroom is a fixed interface showing the 'Weekly Top 5 Cheerers' (with 'Cheers' performed through donating 'Bits'). Here, we can see how donating and subscribing are encouraged through game-like, interactive features, but also made visible to other viewers.

Third-party visual augmentations are also extremely important when it comes to subscriptions, donations and harnessing the interactivity of the audience for commercial gain. In many streams, these highly configurable programmes allow for a more engaged, dialogic interaction between Twitch chat member and broadcaster. For instance, whenever a user makes a donation over US\$1 to Twitch streamer Daequan, text appears on-screen, visible to the streamer and audience along with the donation amount, and often text from the donor. Daequan uses moments between rounds of his game to respond to specific questions from users, thank them and engage in a discussion, privileging these interactions. We noted a rhythm to these donations, where spectators do not make them during play (where Daequan is unlikely to respond) waiting until moments of downtime. Streamers often respond generally to donations (i.e. thanks for subbing, some kind of flavour comment – e.g. 'Welcome to the Hammer Squad' for *WoW* streamer Towellie). It is worth noting, a number of

Twitch streamers play off this desire for social gratifications in order to further monetize their stream. Larger streamers often have a minimum donation threshold for having messages, and the donator's name appear on the stream at all. For example, in the popular *Dota 2* stream of pro-gamer 'Arteezy', users have to make a minimum donation of US\$4. In another stream, we observed the use of a third-party tool called 'BitBoss' (<https://www.bossbattles.io>) that gamifies the process of donating bits. Here, players defeat a virtual 'boss' by donating bits to chip down its health pool (displayed in visual form as a stream overlay).

Taken together, these kinds of audience interaction create a feeling that the stream is engaging. This mediated interaction between streamer and user, as well as user to user, amplifies the kinds of affective or emotional connections that many associate with an interactive platform like Twitch (Wulf et al. 2018; Sjöblom and Hamari 2016). In this way, the action of donating creates more than just economic value through the monetary value of the donations themselves. Donations provoke a response from the streamers, consequently doing important work in making the stream 'feel' more capable of fulfilling what Sjöblom and Hamari (2016) would call 'social gratifications' – such as emotional connection, companionship and recognition.

CONCLUSION

This article has argued that Twitch is a rich site for thinking about audience labour. In doing so we draw on and extend existing research, particularly the sustained account of audience work developed by Taylor (2016), where he argued that audience practices at esports tournaments might productively be conceived in terms of labour – the processes and practices of being an esports spectator variously contributing economic value to these commercialized spaces. Here, we have drawn on this lens of 'audience work' to understand how the interactive elements of livestreaming platform Twitch contribute to the appeal – and therefore economic value – of the livestreamed content, yielding value for the platform and its broadcasters.

We first highlighted how viewership – the numerical representation of the number of people watching a stream – has a phenomenal quality, describing the size of the audience and presencing the viewer. Following this, we discussed the ways that Twitch's chat window, particularly in large streams with thousands of viewers, works as a proxy for noise, transmitting affects compelling continued viewing and consumption. We also noted how Twitch's emote system further provides a rich resource to allow audiences to articulate the collective, transpersonal and affective responses to the content of the stream. Finally, we discussed Twitch's direct monetization strategies such as subscriptions, donations and badges. We suggested that these acts of consumption are 'played up' through various aspects of the interface (such as badges, subscription notifications or third-party overlays). In this way, we highlighted how donating and subscribing create more than just direct monetary value but also contribute to the atmospheric and affective experiences of watching Twitch.

We see this article as making several key contributions to current understandings of Twitch. Firstly, our account of audience labour makes contributions to a recent interest in Twitch and its digital economy (Johnson and Woodcock 2017). While recent research has explored the work done by streamers and volunteer moderators (Wohn 2019), limited study been done on the role of audiences. In giving sustained and critical focus to audience work happening through the platform's interactivity, we contribute to current

conceptions of Twitch and labour. Moreover, by looking at how Twitch viewers perform labour, we provide a new perspective on a much more widespread and mundane form of labour on Twitch, looking beyond the labour performed by streamers or moderators.

Secondly, in discussing some of the ways that audience work is performed this article elaborates on how Twitch creates commodified and commercially desirable experiences. Much like studies of public gaming (Borowy and Jin 2013), esports events (Seo 2013; Taylor 2016) and digitally mediated esports broadcasts (see Egliston 2018; 2021), the Twitch experience is a commodity, one shaped significantly by other spectators. Indeed, through Twitch chat, emotes and monetization interfaces, experience is shaped in large part through the cultivation of particular affective atmospheres. We adopt this term, largely from work done in human and cultural geography, to describe and analyse the ‘vibes’ or ‘feelings’ of a particular channel, constructed through interactions between users and the technical affordances of Twitch. Our focus on the affective atmospheres of Twitch, and how they are put in service of capitalism, is of course valuable to games scholars, but has further resonance with recent work looking at affect’s technological mediation as a device of twenty-first-century capitalism (Ash 2015a; Hansen 2015).

We have also noted that while the activity of viewers can create value for Twitch and its broadcasters, this interaction is not always so straightforward. Troll-like practices, as we showed through our examination of emotes, arise from and come into conflict with the economics of Twitch. Other practices like ‘viewbotting’, which go against Twitch’s terms of service, further complicate the question of audience labour on Twitch. Taken together, we believe the account developed in this article makes a significant contribution to our understanding of audience labour around Twitch, and around gaming more broadly – adding to a burgeoning game studies literature that has sought to understand the appeal and success of watching play online. As gaming becomes more and more spectator-oriented, questions about the value of audiences are pertinent preparation for games research in the immediate future.

While this article has made several important contributions, its scope is also limited as we have focused primarily on esports and have only looked at Twitch, which we acknowledge is not the only livestreaming platform. There are also a number of other important platforms that are regionally specific. For example, as of 2018, in China connectivity to Twitch is blocked (and the Twitch app was removed from the iOS store, see Hall 2018). Video game live-streaming is, nevertheless, extremely popular and broadcast through platforms like Douyu. This is an important reminder that ‘there are many internets across the world, accessed and used in a variety of ways’ (Hinton and Hjorth 2013: 7). While we have not explored Douyu in this article, we expect it – and other platforms – to have their own forms of audience work given their affordances and shaped heavily by the specific business model and economics of that platform.

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