

1 How Camming Made Streaming: Retelling the History of Live Streaming through Webcam Modeling

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The way that we tell the history of live streaming matters for the way we envision live streaming today. What are the origins of live streaming? Who has been centered in established histories, and whose contributions have been overlooked? The answers to these questions have direct effects on how live streaming is understood as a medium of culture. They shape our foundational beliefs about whose presence in the medium has been longstanding, influential, and therefore legitimate. They also dictate our assumptions about what sorts of people and practices stand at the margins. Telling—and retelling—the history of live streaming constitutes a way to challenge dominant narratives about what live streaming *is* and the people to whom it belongs.

To date, the history of contemporary live streaming practices, and video game live streaming in particular, has primarily been told through stories about technological innovation and shifts in media industries. Writing in *Watch Me Play*, T. L. Taylor situates the rise of live streaming on game-oriented platforms like Twitch within longer histories of television media entertainment, including broadcast television (Taylor 2018, 3–6). Donghee Yvette Wohn and Guo Freeman (2020) are among many who have connected the evolution of video game live streaming and esports, suggesting that the growth of live streaming has gone hand in hand with the increased visibility of competitive gaming. As live streaming continues to gain public attention, mainstream news reports too are adding their takes on the history of live streaming. Throughout 2020 and 2021, many such reports explained the explosive expansion of live streaming as a direct result of the COVID-19 pandemic, citing people’s longing for human contact during lockdown as the soon-to-be historical cause that brought many new

streamers and viewers to live streaming platforms (Stephen 2020). Meanwhile, companies like Twitch have told their own versions of live streaming history, framing streaming as a novel practice at the center of a current revolution in online content creation and community building.

However, these are only some of the possible ways to tell the history of live streaming. To gain a fuller, more accurate, and more inclusive understanding of live streaming, we must also seek out its alternative histories and counter histories. These alternative histories should challenge us to reconsider what we think we know about where live streaming comes from and whose efforts honed and popularized the practice of broadcasting oneself online. This chapter offers one such history: the history of how live streaming as we know it today originated not with broadcast television or esports, but rather with webcam modeling. As Angela Jones explains in her book *Camming* (2020), webcam modeling is a form of internet-based sex work that predominantly involves performing erotic acts live for viewers who pay (in one way or another) to watch or to engage with cammers. Stated more broadly, webcam modeling can be thought of as “a genre of indirect sex work, in which cam models sell interactive computer-mediated sex online” (Jones 2020, 1). Although webcam modeling is often associated with young, white, cisgender women, there are many men, as well as people of color and transgender people, who engage in this work, both as a form of labor and a pleasurable mode of sexual and creative self-expression (Jones 2020, 7).

Despite being almost entirely overlooked in dominant narratives of live streaming history, webcam modeling has in fact fundamentally shaped contemporary live streaming—including genres of live streaming that may seem initially unrelated to sex and sexuality. As I detail in this chapter, there are many striking similarities between the work of webcam modeling and other forms of real-time, online self-broadcasting, including live streaming video game play. Yet live streaming is not only closely connected to webcam modeling in the present moment; the two have also been intertwined across their histories. Going back to the pioneering “camgirls” of the 1990s, up through sex workers who set up subscription-based online webcams in the early 2000s, through the birth of Justin.tv and its eventual transformation into Twitch, I show how the history of live streaming is one and the same as the history of webcam modeling. Although this relationship has implications for live streaming across platforms, I focus here on Twitch, partly because its historical connections to webcam modeling are particularly

clear and partly because, ironically, Twitch as a company has worked the hardest to distance itself from associations with sex work (Ruberg 2020). It is here, where “toxic gamer culture” (Consalvo 2012) meets the disavowal of streaming’s erotic implications, that this historical intervention is most urgently needed.

Camming is far more than a salacious footnote in the history of live streaming. On the contrary, webcam modeling *made* live streaming. That means that it is not white male tech visionaries or gregarious gamer bros to whom we should credit the rise of live streaming; it is sex workers. To remove them from this history is an act of erasure, perpetuating the stigmatization and pathologization of erotic labor often done by women, queer people, transgender people, and people of color. In a moment when sex workers are being rapidly deplatformed specifically by companies including Twitch (Dickson 2021), it is crucial to recognize that there is no history of live streaming without the history of online sex work, and no live streaming without sex workers.

Camming and Streaming

The relationship between video game live streaming and webcam modeling is a fraught one. On the one hand, there are many parallels between the day-to-day labor involved in streaming and camming. Both involve the use of similar equipment, such as multiple devices and monitors, carefully arrayed lighting, and the construction of specifically arranged physical spaces that form a visual backdrop. Camming and streaming are both highly physical forms of labor. In the case of camming, this physicality is explicit, with the webcam model performer visually foregrounding their body and using it to perform erotic actions on-screen. Yet physicality is just as crucial to live streaming. Streamers often bemoan “streamer burnout,” a state of physical and mental stress caused in part by the bodily exhaustion that comes from sitting for long hours playing video games or talking with viewers while needing to be constantly “on” (Alexander 2018).

Similarly, live streaming and webcam modeling are both modes of digital labor that blur notions of work and play, raising questions about what it means to navigate the space between amateur and professional and make money while either playing a game or engaging in sexual play (Nayar 2017). In addition, there is a growing number of similarities between the platform

affordances and monetization structures found in the camming and live streaming industries, respectively. Many of the techniques for encouraging viewers to engage and give money that streamers have cultivated (Johnson and Woodcock 2019) have erotic counterparts in camming techniques. As the work of internet celebrities and influencers becomes increasingly cross-platform, there are also numerous webcam models who live stream, and vice versa. These similarities illustrate how the line between camming and streaming is fundamentally porous: a culturally constructed division between so-called normal and sexual self-broadcasting.

Such overlaps also help explain how the specter of sex work has come to be so vilified in the context of video game live streaming. Many scholars have identified the prevalence of toxicity and harassment in the gaming culture on Twitch (e.g., Guarriello 2019). This toxicity takes many forms, but prominent among them is discriminatory behavior toward streamers who are perceived to be too sexual in their self-appearance and are therefore derided as “camgirls,” “titty streamers,” or “thots” (Ruberg, Cullen, and Brewster 2019). Such streamers are often envisioned, both by Twitch viewers and by Twitch as a company, as corrupting the platform with their sexual presence. Many of the platform’s regulatory policies, as well as their notoriously inconsistent enforcement of such policies, can be understood as an ongoing effort to build a firewall between live streaming and webcam modeling. In their many forms, these attempts to separate live streaming from webcam modeling reflect a perceived need to ensure that the already precarious public perception of live streaming—and video game live streaming in particular—remain untarnished. Here, the fragile masculinity of video game culture merges with the public relations gymnastics of Twitch, wherein the cultural legitimacy of streaming hinges on its insistence that it has nothing to do with sex or the feminized work of erotic online labor.

Admittedly, the blame for misrepresenting webcam modeling falls on multiple shoulders. The mainstream perception of camming, perpetuated by sensationalized representations like the 2015 documentary *Hot Girls Wanted*, equates webcam modeling with sexual exploitation or the general seediness of the internet. Standing in contrast to this are the perspectives of sex workers’ rights activists and feminist scholars who value the work and creative contributions of erotic performers. Scholarship on webcam modeling also has its own questionable relationship to history. As research on camming grows, recent work has approached webcam modeling from a

variety of angles—such as through economic lenses, an approach that also manifests in live streaming research, looking at phenomena like market competition between cammers (van Doorn and Velthuis 2018) and how camming can be seen as a form of “feminist entrepreneurship” (Bleakley 2014). Yet much of this work, along with popular press reporting on camming from the past few years, itself dehistoricizes webcam modeling, framing its cultural importance through the “recent growth of the adult webcam industry” (van Doorn and Velthuis 2018, 178) or the “burgeoning ‘cam-girl’ genre” (Bleakley 2014, 892). As with live streaming, news reports have also pointed to the COVID-19 pandemic as a historical turning point in the growth of webcam modeling and viewership (Bishop 2020).

It is certainly true that the industry of webcam modeling has expanded in recent years with the rise of large corporate camming platforms like Chaturbate and MyFreeCams—which, not coincidentally, mirrors the rise of streaming platforms like Twitch. Yet it is misleading to couch a discussion of camming only in the current moment when it has in fact emerged and grown over the last three decades. Thus, in addition to offering us a new perspective on live streaming, rehistoricizing webcam modeling helps us better understand camming itself, drawing attention to the work of webcam models not just as performers, but also as important agents in the history of internet technologies: early adopters and innovators in their own right.

A Brief History of Webcam Modeling

To understand how the histories of live streaming and webcam modeling are intertwined, we need to look at the history of camming. The origins of contemporary adult webcam modeling can be traced to the experimental online practices of the early camgirls. Writing in *Camgirls: Celebrity and Community in the Age of Social Networks*, Theresa Senft defines the term to mean “women who broadcast themselves over the Web for the general public, while trying to cultivate a measure of celebrity in the process” (Senft 2008, 1). These women were not webcam models in the present-day sense, in that their performances were not primarily sexual (although they involved sexual elements), and many understood themselves not as sex workers, but as artists and internet pioneers (Senft 2008, 5). Senft’s study focuses on a cohort of camgirls who were active between 2000 and 2004. However, she contextualizes their work within a camming tradition that started in the mid-1990s

with individuals like Jennifer Ringley, whose infamous JenniCam began in 1996. Senft explains that these camgirls were among the first people to bring web-enabled cameras into their homes—and more specifically, in a number of cases, into their bedrooms. In this way, she says, such women functioned as beta testers for techniques of online content creation and management that have become pervasive in the intervening decades. Some of these techniques include “the generation of celebrity, building of self as brand, and engagement in a specific form of emotional labor,” which have clear parallels in the self-branding techniques and forms of affective labor engaged in by contemporary live streamers (Senft 2008, 8).

Yet, the idea that the work of these early camgirls should be seen as the precursors to contemporary webcam modeling is itself a contested narrative. Feminist scholarship on the formative years of online self-broadcasting often explicitly distances experiments like JenniCam from associations with sex. Arguing for the importance of camgirls in the popularization of “lifecasting,” which would later become the focus of Twitch’s predecessor, Justin.tv, Emma Maguire (2018) writes that such women played an influential part in “changing the contemporary media landscape where ‘reality’ (or at least its appearance) emerge[d] as a valuable entertainment commodity” (27). Yet, paralleling similar remarks made by Senft, Maguire rejects the tendency for the work of camgirls to be interpreted as sexual in nature. “These young women’s digital practices of self-representation have often been sexualised and objectified,” she states, “and the radical aspects of their lifecasting practice have been displaced by discussion of the more sensational aspect of giving strangers access to images of their naked bodies” (Maguire 2018, 44). Critiques like these have value, and yet they also risk replicating discriminatory attitudes toward sex work. On the one hand, it is important not to reduce interpretations of these early lifecasting practices as merely points in the genealogy of webcam modeling. On the other hand, to separate the history of camgirls from the sexual aspects of their performances supposedly on the grounds that it makes them less “radical” implies problematically that sex work itself is not a form of radical self-expression or that the history of camming must be disentangled from sex to render it legitimate.

Wherever we land on the question of whether to understand the work of early camgirls as sexual, the fact remains that their practices laid the groundwork for a subsequent generation of webcam models who made

the erotic implications of self-broadcasting explicit. Lissa Rivera, the curator of a 2019–2020 exhibit at the Museum of Sex in New York titled “Cam Life: An Introduction to Webcam Culture,” highlighted 1996 as a pivotal year for the birth of webcam modeling (Shepherd 2019). That year saw the launch of both JenniCam and the now-megaconglomerate Amazon, which owns Twitch and has been instrumental in shaping the current financial, technological, and (by extension) cultural landscapes of live streaming. The fact that camming emerged in lockstep with the company that now controls the largest live streaming platform in the world is one of many points of interrelation between these histories.

As early as 2002, online sex workers were setting up shop, broadcasting themselves via live webcam feeds that they hosted on their own independent websites, to which viewers often paid monthly subscriptions. Even prior, webcam hosting sites like iFriends.com and Rude.com had already emerged: platforms where individuals could register as models and offer their services through the sites’ systems, with multiframe interfaces that looked much like the streaming and camming platforms of today. One webcam model whose own professional trajectory reflects this historical shift is “Trixie,” who began performing professionally in 2001 and opened her own network of personal websites, including TastieTrixie.com and a number of spinoffs, soon afterward (<http://tastytrixie.com/blog-grid>). When I interviewed Trixie for an article in *The Village Voice* back in 2007, TastieTrixie.com was still active (Ruberg 2007). Trixie described how she placed ten spycams around her home, each of which broadcast live feeds or recorded footage online twenty-four hours a day, seven days a week. The cameras regularly captured her having sex with her partner and walking around her home naked—performances that Trixie orchestrated for her viewers. She also used the bathroom camera to broadcast herself during her period, examples of what Trixie called “shocking” to her male viewers, who “have their dicks out and they expect that they’re not going to be challenged.” Although the experiences and goals of adult webcam models in the early 2000s varied, as they do today, Trixie’s story serves as evidence of the many individuals involved in forms of labor that look much like live streaming nearly two decades ago—who, like many streamers today, saw themselves simultaneously as creative content producers and self-made businesspeople.

In roughly 2010, a sea change moved the camming industry toward its more contemporary model of centralized, platform-based services. This

took place in tandem with other changes in the relationship between adult entertainment and the internet, making it increasingly less viable for online sex workers to make money through customers' monthly subscriptions on their individual websites (Wallace 2011). Simultaneously, shifts in consumer hardware lowered the barrier to entry for webcam models; the cost of external webcams dropped, and it became increasingly common for personal computers and laptops to come equipped with internal webcams. These changes created the conditions for the rise of corporations that provided platforms for webcam models to plug into and begin working, giving them ready access to the software and financial processing systems that allowed them to cam without some of the challenges of operating independently.

This shift to a centralized, platform-based model for webcam modeling also had a wide-reaching impact on the larger landscape of online platforms. Many of the systems and affordances that have since been adopted by other content-sharing platforms were originally born or tested on camming sites. One example is the use of granular, customizable, and gamified monetization systems in which tips (of one kind or another) go to a content producer, with a cut taken by the hosting platform—a practice that migrated from camming sites to live streaming platforms like Twitch. The viewer-facing interface design now familiar on Twitch also has predecessors in webcam sites, where home pages and browsing interfaces are similarly filled with a cacophonous mosaic of live webcam feeds. In using algorithms to determine which streamers will be prominently featured on such pages, Twitch also follows the lead set by camming sites, where such algorithms have long been used to highlight webcam models according to certain characteristics and to downplay the presence of others. Thus, rather than saying that contemporary platforms for streaming and camming look strikingly similar, we might more accurately say that streaming platforms emerged and evolved to look like camming platforms.

An Alternative History of Video Game Live Streaming

Even before accounting for the influence of webcam modeling, mapping the history of Twitch is a complicated task. Official narratives run up against lesser-known backstories as the platform attempts to tell stories about its past that fit its contemporary brand. In the most basic sense, the current iteration of Twitch evolved from Justin.tv, a lifecasting platform launched

in 2007. The founders of Justin.tv, as Taylor (2018) writes, envisioned life-casting as “reality TV based on streaming people’s lives 24/7,” which they believed would “democratize live video” (53). Justin.tv contained broadcasts of many sorts, including a bit of game-related content. Over time, the popularity of gaming streams grew on Justin.tv, eventually spinning off in 2011 into a separate site, Twitch.tv. By 2014, the popularity of Twitch had so surpassed Justin.tv that the original site was shut down and the company rebranded as Twitch Interactive. This also coincided with the purchase of Twitch by Amazon. Ironically, given that Twitch is itself a spin-off of a platform that predominantly featured lifecasting content, Twitch banned all content that did not include game play until 2017, when it began to allow streams in categories such as what have come to be known as “Just Chatting” and “IRL.” These categories, harkening back to the platform’s history (and much to the chagrin of many gamers), have now once again become the most popular on the platform (D’Anastasio 2020).

These historical twists and turns are largely invisible to the millions of streamers and users who engage with Twitch today. To read mainstream news coverage about Twitch’s growing popularity, or even the company’s own “About” page, it would appear that it is entirely new, exciting precisely because of its nature as *sui generis*—in a class all its own (Twitch 2021). Yet some scholars have pointed to parallels between contemporary live streaming and the projects of individuals who have since been labeled technology visionaries—prominent among them Josh Harris, who founded Pseudo.com (Taylor 2018, 32). Along with Tanya Corrin, Harris also created weliveinpublic.com. Started in 2000, weliveinpublic.com was an online experiment that entailed broadcasting twenty-four-hour surveillance footage from multiple points in an apartment shared by Corrin and Harris, including video of sexual interactions between the pair. In one sense, pointing to Harris’s work as an early inspiration for the kinds of broadcasting that would later, through Justin.tv and then into Twitch, become contemporary live streaming offers a valuable point of complication for streaming’s history. It roots the origins of streaming practices in experimental art-making and highlights the ways that performances of intimacy rather than gameplay or mastery have always been at the heart of video game live streaming. At the same time, weliveinpublic.com becomes less impressive—or at least less visionary—if we consider that it was started four years *after* the founding of JenniCam, or that by 2000, many online sex workers were already doing

the same thing as Harris and Corrin: filling their homes with cameras and broadcasting the footage on the internet.

These examples also suggest that we could retell the history of live streaming, including video game streaming, as self-broadcasting from the bedroom. Jones (2020) explains how early webcam models enacted a meaningful shift in the landscape of digital media production by bringing webcams into their beds. Yet this is also precisely where much contemporary video game live streaming on platforms like Twitch takes place, as Daniel Lark and I have demonstrated elsewhere (Ruberg and Lark 2020): in the home, and depending on the genre of gaming stream, often in the bedroom itself. If we were to believe that video game live streaming was fundamentally inspired by or designed to mimic esports broadcasts, then we would expect to find most gaming streamers shooting footage of themselves in professional or pseudoprofessional venues. Instead, even the most male-dominated, white, heteronormative sectors of video game live streaming—that is, those sectors also invested in disavowing associations between live streaming and webcam modeling—typically offer viewers a sense of personal access to the inner world of the streamer: a view into their personal lives and often, quite literally, their houses. This practice of setting up a camera and broadcasting oneself in one's own intimate private space was not developed through media histories of mainstream broadcast television or the professionalization of digital gaming. Rather, it was explored and established by camgirls and webcam models, who render explicit the erotic overtones of this invitation into the bedroom that persists into the practices of live streaming.

Fittingly, just as the history of live streaming is the history of webcam modeling, the history of streaming's discontents also parallels camming's discontents. Long before the birth of Twitch, online sex workers were already encountering many of the same dilemmas as today's streamers. Asked back in 2007 about her advice for other individuals who wanted to take up webcam modeling, Trixie explained the pros and cons of working through a large platform like iFriends versus operating independently: "It's a limited platform. You're not always the one in control . . . [but] a girl on her own ends up spending so much time just getting customers, putting out ads, posting on message boards. It's exhausting" (Ruberg 2007). Here, we can hear prescient echoes of the present-day laments of live streamers, who may value the fact that Twitch allows them to step into a set of ready-made systems, but who also may well feel frustrated about the ways in

which Twitch controls its streamers, limiting what content they can show, what they can say, and how their content is made visible.

The Cultural Politics of Retelling Live Streaming's History

This is by no means an exhaustive list of the ways that the history of webcam modeling has influenced the forms and cultures of contemporary live streaming. Rather, it is an invitation to look at these intertwining histories more closely, allowing us to see how sex work has played a role in shaping nearly all aspects of streaming: from its technological systems to its profit structures to the types of access that viewers of both streamers and cammers imagine that performers will allow them into their homes.

Exploring alternative ways to tell the story of live streaming's history is key to addressing—and redressing—the culture of live streaming. Each version of this history comes with its own insights, but also its own omissions. For example, telling a history of video game live streaming that does not acknowledge the importance of webcam modeling is inherently sexist, given that many of the webcam models whose work has helped shape live streaming have been women. Thus, by paying attention to webcam modeling, we see that women have been instrumental in the history of live streaming despite the fact that today, live streaming is still often seen predominantly as the realm of men. Ignoring this history promotes a vision of live streaming—and video game live streaming in particular—as a masculine domain not just in the present, but also in the past, implicitly justifying the male domination of live streaming culture by rooting it in historical narratives that foreground the contributions of men. Leaving camming out of the history of video game live streaming also legitimizes the belief of reactionary gamers that those whose performances or bodies read as sexual have no place on streaming platforms. By contrast, retelling this history as one that centers camming is a way to challenge the expectation that sex workers (and, by extension, women, queer people, transgender people, and people of color) do not belong on platforms like Twitch. In reality, they have been here all along.

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