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Persona Play in Videogame Livestreaming: An Ethnography of Performance on Twitch

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Persona Play in Videogame Livestreaming: An Ethnography of Performance on Twitch

Nathan J Jackson

A thesis in fulfilment of the requirements for the degree of

Doctor of Philosophy

School of the Arts and Media

Faculty of Arts, Design & Architecture

April 2023

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Abstract

Twitch.tv ('Twitch') is a livestreaming platform known for the live broadcasting ('streaming') of videogame-related content. It is also the most popular livestreaming platform in most countries. Drawing upon over one thousand hours of ethnographic observation across twenty-one Twitch channels, and six months of part-time streaming, this thesis investigates how streaming persona is constructed and performed on Twitch. Streaming persona, the thesis posits, is to be differentiated from more straightforward readings of streamer identity as performance. This thesis instead shows that streaming persona is constructed and performed collectively by both human and nonhuman actors in a Twitch stream. It does this by intervening in five core areas of interdisciplinary concern. The first of these explores new ways of understanding perceptions of authenticity that are constructed and denied as a result of streamer decisions, including an analysis of ways that gendered streamer performances affect perceptions of authenticity. Secondly, this thesis presents a new perspective on the conflicting and negotiated agencies of different stream actors during a stream, including games and the Twitch platform as nonhuman actors. The third core area of interest extends existing scholarship on moderation and governance by investigating boundary-work as a playful activity performed by multiple stream actors, including focused examinations of boundary-work associated with game-centric practices, such as spoiling content, and toxic behaviours. Fourthly, this thesis presents a highly novel exploration of how time on Twitch is arranged and experienced differently by different stream actors and the associated temporal politics of the platform. And fifthly, it intervenes in existing research on both games and Twitch by examining (digital) games as stream actors that perform alongside the streamer, spectators, and platform, thereby presenting new ways to understand games, game play, and why streaming and

spectating game play are compelling activities. The concept of streaming persona allows for an exploration of how social identities are constructed and performed through and with the Twitch platform and its users. As such, it provides novel insights into the sociality, culture, politics, and economics of Twitch.

Style Guidelines

According to Departmental advice received, the style guidelines to be adopted for the presentation of this thesis were optional. Therefore, the guidelines of choice were those of The American Psychological Association 7th edition. Taken into account was the small modifications allowed by these guidelines in the interests of clear communication.

This thesis relies heavily upon recounts of observed moments in Twitch streams. A number of conventions are applied to these recounts, which are discussed in detail in Chapter 3 but also included here for convenience:

- I alternate between novelisations of observed moments, screenshots, and general descriptions.
- I present messages sent through chat as speech but italicised.
- All quotes have been presented as accurately as possible, with dashes indicating stutters or broken sentences and filler words such as ‘um’ and ‘like’ maintained.

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To begin with, this project would simply not have been possible without the Twitch streamers and viewers about whom I wrote. This thesis is as much as an analysis and reflection of my observations as it is a tribute to them.

It has been such a joy to work with my team of supervisors, who have each approached every step of this project with care and enthusiasm. At every stage of my candidature I was excited for my supervision meetings as they were full of genuine excitement towards this project and all of its potential. I don't think that I would have ever considered this path without the guidance of Bryoni Trezise. She inspired me consistently throughout my undergraduate years to think creatively and critically about the capacity of performance studies to understand everyday life, and it has been nothing less than a pleasure to apply those skills to this project under her supervision. Brigid Costello supported me in paying closer attention to detail and precision in my writing, particularly around games and play. It is through her encouragement that I developed my analytical skills around and through games. These few words are not nearly enough to express my gratitude towards Bryoni and Brigid, my primary supervisors, who supported and challenged me at every step in this process. This thesis is what it is thanks only to their amazing efforts.

I am extremely lucky to have had an extended network of committed and engaged readers at different stages in this process. Jonathan Bollen, my secondary supervisor, rounded out my supervisory team with careful and thoughtful feedback as my project unfolded – particularly in its final stages. Across my annual candidature reviews, I also received extremely generous and supportive advice from both Edgar Gómez-Cruz and Michael Balfour. I was a little nervous submitting portions of my work for these reviews but Edgar's and Michael's reports always instilled me with confidence in myself and this project. I have been fortunate to find a friend, mentor, and collaborator in Mark Johnson. He has been astonishing in his willingness to share thoughts and suggestions and to support me in thinking through my arguments and how to express them. I also want to acknowledge the amazing proofreading work of Nicole Saintilan, which has taken an enormous amount of pressure from the final stages of thesis preparation.

The looming isolation of completing a PhD is present at the best of times, let alone during a global pandemic. I was fortunate enough to have had friends and fellow PhD candidates to combat that isolation. A pre-pandemic window on campus allowed me to connect with some wonderful office mates. The sustained mutual support of Georgia Phillips, Oliver Wakelin, Ryan Martin, and Nakita Dass continues to inspire me to put my best foot forward. I cannot wait to celebrate all of their PhD completions and see all of their future successes and I could not be prouder to call them friends. George Lazaris was not just an astounding personal support but also challenged my ideas and helped me to extend them from their unique perspective as a theatre practitioner who understands Twitch. And Dominic Vella, who indulged the full range of emotions from despair to excitement (sometimes in the same conversation) from day one.

No one has indulged me on this journey nearly as much as my partner, Jessica Fredkin. She listened to my rants about every abstract, every chapter, just about every iteration of every aspect of this project, and every plan – successful and failed. She picked up the slack at home while I wrote. Most of all, she accepted how all-consuming the process of completing a PhD can be, even when that was far from easy. While nothing that I have written in this section does justice to my gratitude for everyone who has contributed to this thesis, words feel particularly flimsy here so I will simply say thank you.

Finally, I have to acknowledge my cats Toast and Crumpet. Though I think they more often distracted me from working than anything else.

1. Introduction:

Defining and Researching Persona on Twitch

Videogame livestreaming is in many ways a bizarre practice. It involves the synchronous capture and digital broadcast of videogame content to an audience. Audience members can interact with each other and with the streamer via a text chat. Videogame livestreaming might certainly be unusual if thought of as a replacement for playing videogames. Videogames are designed to be played, so it is reasonable to imagine that the experience is markedly different when spectated. However, videogame livestreaming is part of a history of spectating videogame play and social gaming. This history can be traced back to the days of crowding around machines at arcades in the 1970s and has evolved through many different forms since (Taylor, 2018b). Videogame play has been socially spectated for as long as videogames have existed, and livestreaming has expanded upon these social practices to enable more people, across greater distances, to connect in real time.

In this thesis, I demonstrate how the sociality, culture, politics, and economics of a platform are produced by interactions with and between human and nonhuman actors through an (auto)ethnography of the livestreaming platform Twitch.tv (hereafter 'Twitch'). Specifically, I interrogate how the social, cultural, political, and economic are performed on Twitch by drawing upon actual user practices, which are yet to receive sufficient scholarly attention despite being crucial to understanding the Twitch platform and the practice of livestreaming more broadly. Twitch holds the market shared in broadcasters (hereafter 'streamers') and viewers. Twitch was introduced in 2011 as a gaming-focused offshoot of the more general livestreaming platform Justin.tv. In 2014, Twitch was acquired by Amazon for

US$970 million, and has grown dramatically in popularity since. Across the first quarter of 2022, Twitch saw 10.9 million unique channels stream 229 million hours of content to an average of 2.8 million concurrent viewers across the platform (May, E., 2022). Figure 1 depicts a typical Twitch stream when viewed from an internet browser on a computer. The primary features are:

(1) Stream screen – contains gameplay footage, facecam footage, and any other information that the streamer wishes to include;

(2) Stream information – includes the streamer's profile picture and username, stream title and category information, options for following and subscribing, as well as the current number of viewers and the time that the stream has been live;

(3) Chat – where live text messages can be sent and read;

(4) Platform and profile information – a list of live streamers that the currently logged-in user follows (left) and information about the currently logged-in user's profile (top-right).

(5) Header – includes general platform links (left), a search bar (middle), and profile information of and notifications for the user currently logged in (right).

This list is not comprehensive; I introduce features in more detail as they become relevant throughout this thesis. Since their beginnings, Twitch streams have extended beyond videogame content. There are categories for tabletop games, chatting, cooking, arts and crafts, music, and many other activities that streamers share with spectators. In this thesis, I focus on videogame livestreaming, which is the content most strongly associated with Twitch and has been the dominant form of content on the platform throughout this project. I typically refer to videogame livestreaming simply as *streaming* in this thesis, not to deny the existence of or undermine the value of other forms of streaming but rather to emphasise that many of the

dynamics that I identify emerge from videogame content but also extend beyond the bounds of this research.

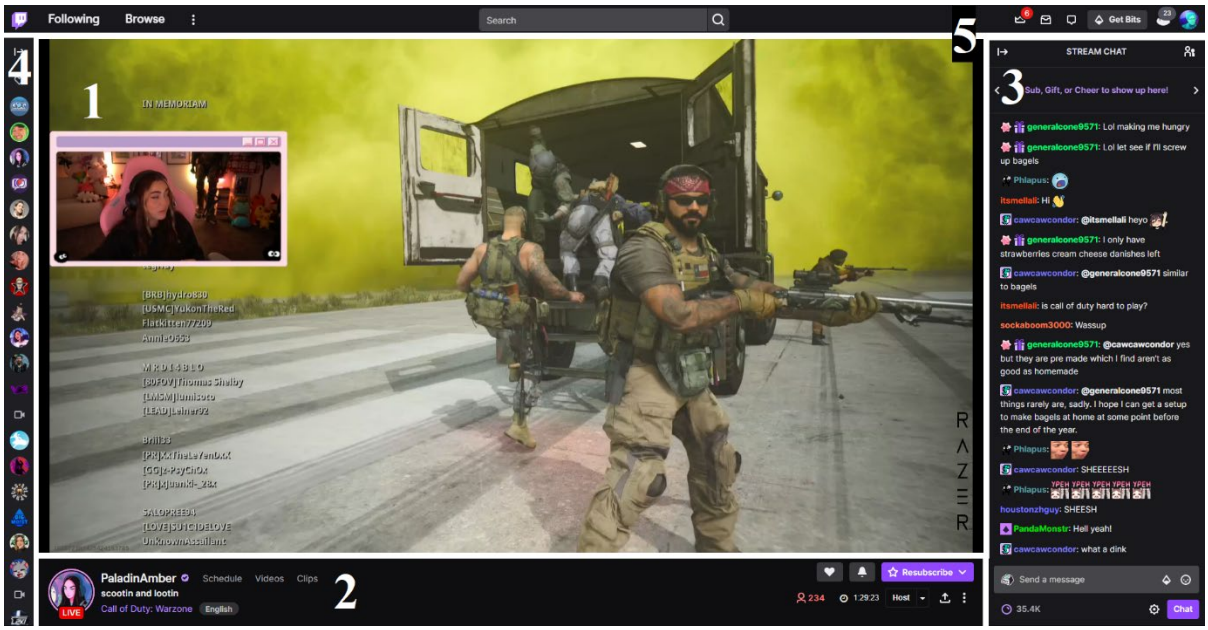

Figure 1. A typical Twitch stream, segmented to highlight primary elements.

My history with and passions for both games and performance have driven this research. I have played videogames and shared videogame play with others since childhood. Whether it was (sometimes reluctantly) passing the controller back and forth at home, meeting in the computer lab after school, or forging connections with others that I knew only through the world of multiplayer matchmaking, there was always a strong element of performance involved in playing with and for others. The joy wasn't necessarily in the play itself but in the sharing of that play. As the Let's Play format grew popular on YouTube[1] and livestreaming videogame play on Twitch emerged sharing game play has become increasingly public. And this shift from private to public has carried with it a suite of new dynamics and of social,

[1] Let's Play videos are recordings of game playthroughs, usually with commentary from the player.

cultural, political, and economic consequences. Streamers perform through and around game play for spectators, who also take on a performative role through their interactions. This project was motivated by a want to better understand those performances, and this thesis is a testament to my success in achieving that understanding.

Research Aims: Streaming Persona as a Framework

This thesis contributes a conceptual and practical framework of *streaming persona*, which emerges from the behaviours of and interactions between the human and nonhuman actors identified in Figure 2. Through streaming persona, I account for the relationships between streamer, spectator, game, and platform, as well as the choices made by each actor in crafting an identity unique to each stream. I establish streaming persona as a fluid expression of collective and individual identities that is constantly being constructed and performed during streams, that in turn enables deeper understandings of the sociality, culture, politics, and economics of the platform.

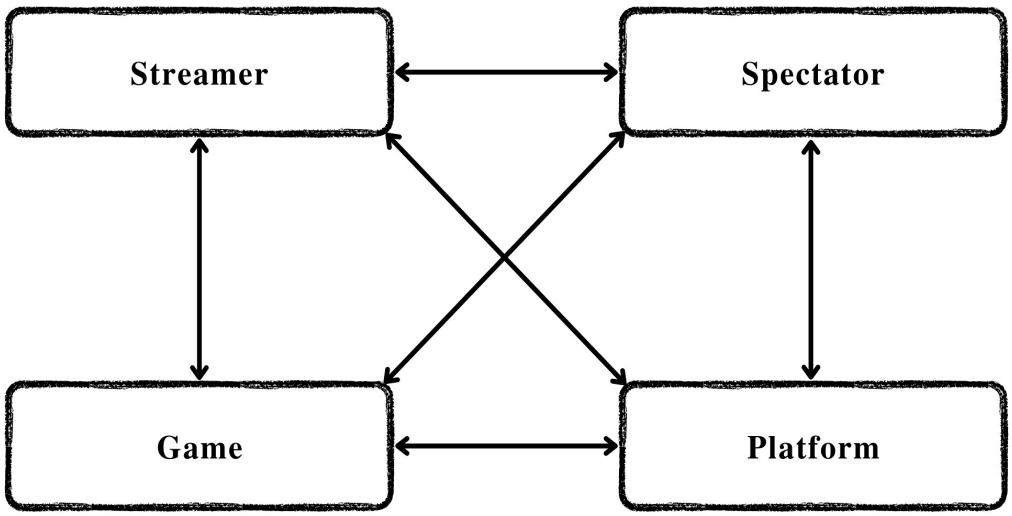

Figure 2. The relationships between four key actors in Twitch streams.

This research examines the roles of various stream actors in contributing to the experience of videogame livestreaming. Figure 2 identifies four key stream actor roles: streamer, spectator, game, and platform. The arrows connecting these actors demonstrate directional interactions, with arrows pointing in the direction of impact. For example, the arrow pointing from streamer to game stands for the streamer playing the game. These human and nonhuman actors operate as an assemblage that *is* the stream. The modes of interaction between the actors indicated in the diagram occur simultaneously with varying degrees of visibility. Through this thesis, I unveil how each of these roles contributes to users' experiences on the platform. I further render visible, disentangle, and characterise these modes of interaction, but also demonstrate how they culminate in distinct streamer-specific identities – streaming personas – that provide new insights into the user-platform relationship of value from both theoretical and practical perspectives.

Research Question

This research is motivated by a single focused research question that I have refined throughout the data collection process – a standard practice for ethnographic research. This question is: how is streaming persona constructed and performed, and how does it contribute towards the sociality, culture, politics, and economics of the Twitch platform? While conducting this research, I developed a set of sub questions to address the primary research question from different perspectives. These sub questions are based on different answers to the primary research question that emerged throughout the project and are reflected in the discussion chapters that follow:

(1) How do streamers *perform authenticity*, and how do these performances affect their relationship with their viewers?

(2) How do negotiations between stream actors affect the relationship between *members of a stream's collective*, and what impact do these relationships have on the streaming persona?

(3) How do platform users establish and maintain *boundaries* between acceptable and unacceptable behaviours within a stream?

(4) How does the capacity to arrange and experience *time* in different ways on Twitch affect relationships between users and the streaming persona?

(5) What is the impact of different *games and approaches to game play* on stream dynamics and the streaming persona?

The answers to these sub questions are not independent, in fact they are heavily related. These sub questions instead give rise to common concerns such as those of agency, labour, and the platform economy through interwoven themes (italicised above) that in turn are used to address the primary research question.

Chapter Summaries

Chapter 2 positions this thesis in relation to existing scholarship. I provide an expansive overview of relevant research that contextualises streaming persona through theories of persona, performance, and play. Further, I acknowledge Twitch as a site of multiple intersecting areas of research interest including game cultures and identity politics within, digital labour, and platform economies. While each chapter introduces and examines its own core relevant scholarship, this chapter forms a foundation for the understanding of Twitch upon which this thesis is built.

The methodology for this thesis is introduced in Chapter 3, where each step in the undertaking of this thesis' research is described and underpinned by key relevant ethnographies that came before. I detail how my work adheres to ethnographic principles while extending upon the methods of other researchers in response to the needs of this project – namely the specifics of the Twitch platform. Chapter 3 emphasises how this thesis' significance is a combination of its theoretical and methodological novelty that I have consciously interwoven in the collection and analysis of ethnographic and autoethnographic data.

In Chapter 4, I develop streamer performance as a foundation of streaming persona by examining the decisions that streamers make in presenting themselves and producing a 'self' that is perceived as authentic by spectators. To do this I coin the terms *curated self* and *labouring self* to separate the outcomes of streamer performance in a strategically presented self for spectator consumption (curated) in the first case and the illusory self 'behind' the curated self perceived by spectators (labouring) in the second case. These two selves produce perceptions of authentic streaming persona in different ways, which I examine through Garde and Mumford's concept of *Authenticity-Effects*, which are "theatre techniques and modes of representation" and also "the resulting perceptual experiences" (p. 6). In order to further analyse the relationship between these selves, I conceptualise the *authenticity gap* that separates them. Through the authenticity gap I argue that the curated and labour selves are not oppositional but rather fluidly produce, enhance, extend, and undo each other at different times. In my analysis I account particularly for ways that streamer performances of gender affect the production of authenticity through spectators' gendered expectations. The curated and labouring selves in the context of streaming are novel contributions to scholarship that afford new insights into the practice of streaming and interactions therein, offering new insights into

the production of authenticity that are sensitive to the mode and platform but are applicable elsewhere. The remainder of the chapter then explores the relationship between the corporeal streamer and nonhuman stream actors in the production of authentic streaming persona. I do this by accounting for the minimum authenticity gap that is necessarily produced by *mediating objects* such as cameras and microphones, which create the sounds and images that produce perceptions of the inaccessible physical streamer through representations thereof. Lastly I examine virtual extensions of the corporeal streamer, which are representations of the streamer without streamer agency. These human-nonhuman interactions are the first of many within this thesis and highlight the essential – and sometimes invisible – roles that nonhuman stream actors play in the construction and performance of streaming persona.

Chapter 5 expands my analysis beyond the streamer to the collective of stream actors – consisting of streamer, spectators, games, and platform – which construct and perform the streaming persona. I argue that streaming persona is collectively performed by these actors through the individual performances and interactions. The primary contribution of this chapter to scholarship and to this project is to consider the collective of human *and* nonhuman stream actors as members of a *stream ensemble*, a concept which is introduced in this chapter and deployed throughout the remainder of the thesis. I articulate stream ensemble as a highly appropriate term for the collective of stream actors as it emphasises the collaborative and consciously performative nature of stream participation. Stream ensemble participation, in particular stream spectators, is a form of labour that inextricably binds financial and social capital on Twitch. I argue that the social aspects of ensemble membership aligns stream ensembles with communities, while the financial motivations maintain separation between the two. This link between performance, sociality, and the platform economy is new and

contributes to ongoing conversations about Twitch and streaming more broadly. To further unveil new forms of sociality on Twitch I also assert that streaming persona is defined through normative behaviours resulting from the negotiated agencies of ensemble members. A particular example of this that I frequently observed throughout this project, which I label *playful antagonism*, has ensemble members perform opposition, often cheering for and against streamer success in game play. This is the first scholarly account of this practice, although I point towards accounts of other similar practices. I then challenge the prevailing assumption that streamer agency is dominant on Twitch by emphasising that other ensemble members – particularly spectators – must have opportunities to enact agency in order to continue engaging with the stream. This chapter then concludes with the first scholarly examination of *text-to-speech* functionality on Twitch. I highlight how text-to-speech tools become avenues through which human spectators and the nonhuman tool combine to produce a perform a unified embodiment of the non-streamer ensemble, reproducing many of the dynamics that I observed on a smaller scale between streamer and individual spectators, as well as explicitly incorporating nonhuman performance into the streaming persona.

In Chapter 6, I combine the streamer-focused arguments of Chapter 4 with the ensemble-focused arguments of Chapter 5 to argue that boundary work on Twitch is a form of persona play. In the context of my research boundary work refers to actions and behaviours that demarcate between acceptable and unacceptable behaviours. In this chapter, I examine how the social, cultural, and technological dynamics of the Twitch platform are a product of interactions between ensemble members and the boundaries of streaming persona. As a starting point, I demonstrate how stream rules and norms function to encourage particular behaviours and discourage others, thereby shaping the boundaries of streaming persona. Persona play also

occurs through boundary testing and moderation – in breaching boundaries, deciding what constitutes a breach, and deciding what the associated penalty for such a breach should be. In doing so I highlight the critical role of human and nonhuman moderators in playing persona through the enforcement of these boundaries, and discuss how combinations of education, removal, and avoidance are the most prominent forms of moderation that in turn feed into the streaming persona. I then perform one of, if not the, first focused analysis of spoilers and backseating as sociocultural game-related practices on Twitch. Spoiling involves the sharing of otherwise unknown information like plot details, while backseating involves telling the streamer what to do in-game as they play. I draw upon Consalvo's (2009) framework of cheating to argue that ensemble members are cheated by these practices, demonstrating that exact definitions of what constitutes spoiling and backseating, as well as levels of acceptance, vary between streaming personas. I then move to an examination of boundary work associated with toxic behaviours and note that despite definitions of the term, the impact of toxicity on streaming personas is not inherently negative. Yet toxic behaviours do spread within and between streaming personas, which I attend to as an issue for female-presenting streamers who are often the victims of targeted toxicity. As well as providing insight into the structure of streaming persona and persona play, this chapter contributes new insights into sociocultural game-related practices, as well as toxicity and the associated politics.

In Chapter 7, I examine how arrangements and experiences of time affect streaming persona and demonstrate how temporal power is enacted by ensemble members in different ways. Livestreaming is a long-form mode, with the vast majority of streams extending to multiple hours. Such a time-focused examination is nevertheless highly novel as few studies so far have attended to time on Twitch in any capacity, despite its prominence in the mode. I

coin the terms *internal* and *external temporalities* to describe how time is arranged and experienced within streams, and across and between streams respectively. To analyse internal temporalities, I present a series of temporal segments through which stream time is organised. The segments I propose for analysis are *pre-stream*, *chatting*, *playing*, *breaks*, and *wind-down*, and each has its own capacity for temporal transformation in the construction and performance of streaming persona. Through these a collective time-sense emerges, by which ensemble members recognise these segments through a combination of social, visual, and performative cues. Meanwhile external temporalities give rise to what I call *stream histories*, a concept that recognises streaming persona as in a constant state of flux by situating each act of persona play in terms of past, present, and future acts of persona play. A familiarity with stream history enables ensemble members to strengthen their connection to the stream ensemble. Temporal power is therefore held by the platform and streamer as spectators are encouraged to spend more time with the stream ensemble, but also with collective audiences for whom the streamer is compelled to stream. This temporal framework is significant in its demonstration of temporal politics on Twitch. These politics are further demonstrated through my argument that a temporal economy emerges through a particular set of platform features, which quantify the value of streaming persona by attaching explicit value to the time that spectators spend in a stream and enabling them to redeem that time to affect the stream in different ways. I conclude the chapter by examining the temporal power of games as nonhuman ensemble members, whose rhythms drive stream rhythms through their interactions with the streamer-player. Temporal power is enacted through and as persona play, affecting the sociocultural significance of time on Twitch through the temporal politics between ensemble members.

Chapter 8 examines how games themselves play persona and how streaming persona is played through games. I begin by blending a micro analysis of acts of performance in games aided by Jayemanne (2017) with a macro analysis of streaming persona as a metagame driven by Boluk and LeMieux's (2017) work to provide a foundation for the analysis of games as stream actors. This blend motivates an investigation of how streaming and spectating game play is compelling, querying the sociocultural significance of the Twitch platform through streaming persona. I separate game play from persona play to emphasise the distinction between streamer-player affecting the game and the game affecting streaming persona as an ensemble member, but argue that streamed game play *is* persona play. When streamed game play aligns with spectator expectations and the established relationship between streamer and games, then game play is considered what I term *ensemble-worthy*. As it is suited to the streaming mode, the Twitch platform, and a particular stream ensemble, ensemble-worthy play reflects the specific socio-technical environment of individual ensembles, making the concept a significant contribution to platform-based game play that highlights how game play is not universally compelling for spectators. Spectators are engaged by game play through a combination of its content, and its appropriateness to form and streaming persona. I conclude this chapter with analyses of failure and *challenge run* metagames. Games play persona and act as adversaries to the streamer-player through in-game failure. I demonstrate the social significance of failure to streaming persona through failure-related vernacular and streamer reactions to failure. For the latter, I adapt Ruberg's (2017) notions of *failing towards* and *failing away from* game systems to argue that streamers can fail towards the streaming persona metagame by embracing failure in persona play. Challenge runs are metagames – game-like practices developed from games – that involve adding rules to a game in order to make it more

difficult and are a highly popular form of streamed game content. I examine how social rules, glitches, and forms of repetition each represent different reasons that streamed game play is compelling for human ensemble members by altering the streamer-game relationship. Despite the centrality of gaming to Twitch, this chapter is the first close analysis of streamed game play of its kind, and a first close scholarly consideration of challenge runs. Additionally, it provides insights into why streamed and spectated game play is compelling as – and separately from – persona play.

I conclude in Chapter 9 by presenting the totality streaming persona as an expanded framework for the analysis of streaming. As I bring together each of the key contributions of Chapters 4 to 8, I frame each chapter in terms of its contribution to streaming persona as a whole. When these perspective are brought together, I argue that the significance of streaming persona is not only in the individual offerings of each chapter but in the whole that is created as these elements are combined. As a whole, streaming persona affords new ways of understanding the interactions between users on and through platforms, and consequently how the sociality, culture, politics, and economics of platforms develop and are expressed through these interactions. I provide additional contexts through which the framework of streaming persona can be meaningfully applied, as well as its potential practical value from the perspective of Twitch and other platforms. I then conclude with recommendations and suggestions for future research in this area, including some of the research directions that I plan to explore further in the future.

2. Setting the Scene:

Relevant Scholarship

The academic narrative surrounding Twitch is rich and has developed dramatically over this project's duration but there are still many under-explored and unexplored areas of interest around the platform. This thesis contributes additional understandings of the social, cultural, political, and economic foundations upon which Twitch operates by extending upon existing disciplinary threads and introducing new ones, grounded in ways that actors engage with each other on and through the Twitch platform. These highly interdisciplinary contributions begin with the concept of *streaming persona* itself. I draw upon and direct my arguments towards performance, games, and the internet and digital media as distinct – but deeply related – areas of study. Throughout this thesis, I examine the streaming persona and behaviours of Twitch users more generally by bringing theories and arguments from multiple disciplines into conversation, thereby contributing to each. I begin by carefully defining a number of key terms and identifying significant recurring themes for further examination in the remainder of this thesis. In this chapter I address relevant literature to this project and make clear how it connects to and shapes the ideas presented in this thesis.

Defining Streaming Persona

Streaming persona accounts for the interactions between different human and nonhuman actors that contribute to a stream. In her book on Twitch, Taylor (2018b) describes the performative elements of successful streams including set design, streamer performance, sociality, and materials (p. 73–78). She further emphasises that these (and other) elements operate in concert to produce various effects and relationships, and to communicate particular

meanings to stream spectators. These are the threads that I take up and extend upon through developing my framework of streaming persona. I define *streaming persona* as the negotiated social identity that is performed by individual and collective (human and nonhuman) actors within a stream. The streaming persona is a performance of self within a particular stream context, and emerges through streamer decisions and performance, individual and collective behaviours, and interactions with games and the Twitch platform. It is fluid, as an expression of the constantly negotiated agencies of different stream actors. These actors, and their interactions, are all essential stream elements and so analysing streaming persona reveals the similarities and differences between stream experiences.

My definition of streaming persona is inspired in part by the work of persona studies. Persona studies scholars trace the term *persona* back to its theatrical origins, emphasising its relationship with performance of character through masks (Marshall et al., 2020). They combine this with Jung's (1928) and Goffman's (1956) understandings of persona as a product of social interactions and a form of impression management. When these roots are carried into a contemporary digital context, Marshall et al. (2020) arrive at the definition of persona as

> A strategic public identity that is neither the true individual nor a false individual. It is an identity that is used to navigate the social world and only exists to manage collective connections. It is a performance of the self for strategies to be used in some public setting. (p. 238)

This definition is a refinement of other recent definitions within the field (Marshall, 2016, 2019; Marshall et al., 2015). One of the challenges of defining persona is capturing the broad range of uses that the term has historically seen without making the definition itself too broad. My definition of streaming persona fits the general definition above but is also more specific

courtesy of the fixed stream context, elements, and actors, making it a worthwhile contribution to the field. The collective is one of five key dimensions of persona according to Moore et al. (2017), with agency also being marked as significant. While persona more generally focuses on individual enactments of agency to maintain and demonstrate collective membership, *streaming* persona is itself collectively performed and is equally a product of collective and individual agencies. This departure from the literature, and subsequent extension of contemporary understandings of persona, is one of this thesis' key theoretical contributions that is directed towards a deeper understanding of interactions with and on digital platforms.

Playing Persona

Play is a conceptual framework that binds performance studies and game studies together. Theorists within both disciplines consider play as central to their objects of study. Performance theorist Marvin Carlson (2013) frames the relationship between performance and play by drawing upon the works of Johann Huizinga (1950), Roger Caillois (2001), and Brian Sutton-Smith (2001). These texts, in particular their explorations of human and nonhuman play, are some of the most influential works on early game studies. Conversely, game scholar Franz Mäyrä (2008) historically frames Richard Schechner's (2013) and Victor Turner's (1982) theories of human performance and ritual as central to game studies' understanding of play. Nitsche (2014) further provides an extensive summary of relevant theories of performance to videogame play. Twitch streaming embodies this relationship as a site both highlighting videogame play and the performance of that play for and with an audience. To best examine these modes of play, a definition of *play* is required. Salen and Zimmerman (2004) consolidate numerous definitions and theories of play, including a number of those previously mentioned, and arrive at the deceptively simple definition of play as "free movement within a more rigid

structure" (p. 304). The authors emphasise the more rigid structure both as enabling play and acting in opposition to it. I use play to appeal to what is common between theories of performance and games to investigate streaming persona.

Games are commonly associated with play – the primary mode of interaction with a game is to play – yet not every mode of play constitutes a game. As consolidation of previous definitions, Juul (2010) defines a game as

> a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable (p. 255).

The mere fact that Juul refers to the *play*er serves as evidence of the links between the terms. Throughout this thesis I primarily examine streams involving games and understand Twitch as a site in which game cultures operate. As such play is a central activity on the platform and in my analysis.

I extend the relationship between play and Twitch beyond games as I argue that streaming persona is played, and played differently, by each stream actor. The more rigid structures shaping persona play on Twitch include platform features, game code, normative behaviours, and sociocultural expectations. The notion of playing persona[2] captures each actor's interaction with and within these structures. In the same way that a game exists not as hardware or software, but as a playful interaction between structures and players, streaming persona is a product of playful interactions between structures and stream actors. In her analysis

[2] Hereafter, playing persona and persona play implicitly refer to the context of streaming.

of game modification, Taylor (2009) asserts that videogame play is "a complex set of relationships between not only the player and their software, but the *collective* use of software and the production of *group practices*" (p. 336, emphases in original). She extends on this in her work on Twitch, claiming that streaming "is a rich illustration of the assemblage of play" (Taylor, 2018b, p. 80) as it renders this assemblage visible. I take this a step further to argue that not only does Twitch *illustrate* this assemblage through the gameplay that it presents, but it also enacts it through persona play. During streams, playful interactions are interwoven and overlapping as actors simultaneously play with different structures and other stream actors. Together, playing streaming persona and play as assemblage highlight the interrelations between the different stream actors in Figure 2.

Playing streaming persona provides new opportunities and perspectives for the analysis of Twitch streams. For example, Vysotsky and Allaway (2018) offer an analytic approach to videogames that includes the player as part of the videogame text. This approach critiques examination of play that focuses only upon videogame representations and structures, and includes

> the ways that players make meaning – the ways that they incorporate their subjectivities and their values into their play, the ways that they generate knowledge while playing, and the styles of play that they adopt (p.160).

That is to say that players contribute as much as the game itself to the experience of play. The significance of this thesis is in part an extension of this approach by arguing that streaming persona is play through the examination of the contributions of its players – streamers, spectators, games, and platform – as they move freely within the various rigid structures of streaming. This thesis is novel in the ways it inverts Vysotsky and Allaway's approach: rather

than treating the player as part of the videogame text, the videogame is examined as a stream actor and it is through interactions with other stream actors that knowledge, values, and subjectivities are performed. To this end, Jayemanne's (2017) framework for examining videogame play as performance becomes instrumental in this thesis' later chapters as it provides a vocabulary for understanding playful acts of streaming persona as both performative and occurring within a broader gaming context.

Streaming as Performance

Another of this thesis' interventions is in bringing languages and perspectives of performance to the analysis of Twitch – a platform immersed in everyday performance. Performances are "restored behaviours" (Schechner, 2013, p. 28–29), in other words they consist of behaviours that have been (consciously or not) prepared or rehearsed. Identity is constructed through performance, as Butler (1990) argues regarding gender when she claims that "identity is performatively constituted by the very 'expressions' that are said to be its results" (p. 25). Following this logic, streaming persona includes *and* is a result of restored behaviours including performances of body, voice, space, and technology. Further, these materials of performance expand beyond their impacts on the physical world to their virtual presences (Schneider, 2015). Scholarship is yet to attend to these kinds of performative effects on Twitch, and so this thesis contributes to scholarship by unveiling new modes of human and nonhuman performance through streaming persona.

Many contemporary performance theorists grapple with new ways of performing with, within, through, and alongside the digital in response to rapid technological developments. As part of their *New Media Dramaturgy*, Eckersall et al. (2017) theorise "a dramaturgy of various mediated and material properties in terms of their thingly influence on the 'soul' and 'structure'

of production" (p. 7). They focus upon the materiality of various technologies as they are deployed by performance artists. Streaming in contrast provides an opportunity to examine performance in the digital. I examine not how technologies can be incorporated as materials into performance, but rather how new modes of performance (persona play) have emerged from complex arrangements of technologies. Playing persona falls into Dixon's (2015) category of digital performance as "performance works where computer technologies play a *key* role rather than a subsidiary one in content, techniques, aesthetics, or delivery forms" (p. 3). Many of the elements that Dixon discusses in his examination of digital performance will feature prominently in my own analyses going forward. Befitting an analysis of streaming, I contextualise these elements through a physical-virtual interplay that maintains the prominence of materiality whilst identifying the transformations that materiality undergoes. These transformations are a direct result of streaming persona as a playful assemblage, which aligns with a number of performance perspectives. Chatzichristodoulou (2017) observes that emergent behaviour associated with the deployment of the digital in performance "does not depend on or derive from the system's individual parts in isolation, but from their relationships to one another; that is, from their encounter" (p. 316). Similarly, Leeker (2017) argues that "the dispositif of the performative within digital cultures creates a setting in which material formations, practices and discourses are immersed into a network of relationality" (p. 32). Arguably these networks of relationality and emergent behaviour are both articulations of digital performance as assemblage and call for an understanding of digital performance as both product and process of assemblage.

I respond to this call by unveiling Twitch as a site for both conventional and new performer-audience dynamics. The role of the streamer is broadly understood as entertainer

(Lin et al., 2019), but the nature of this entertainment shifts in relation to interactions between streamer and spectators (Chen & Lin, 2018; Karhulahti, 2016). A number of (primarily quantitative) research studies demonstrate that the motivations for livestream spectatorship are many and varied (and not always consistent). For example, there are conflicting reports around possible correlations between game players and game spectators (Cabeza-Ramírez et al., 2022; Wohn & Freeman, 2020). These conflicting studies together suggest that stream audiences consist of both players and non-players. Orme (2022) has identified a range of sociocultural motivators for "Just Watchers" – spectators who do not play game – including temporal and financial costs of gaming as well as spectatorship simply being a distinct experience. This distinct experience can be in part explained by viewing Twitch streams as virtual third places from which participatory communities emerge (Hamilton et al., 2014). The associated sociality and connections with others experienced during streams is a recurring motivation for stream participation (Hilvert-Bruce et al., 2018; Hu et al., 2017; Sjöblom & Hamari, 2017). This sociality stems from the extended, synchronous interactions that are enabled by the live and long-form nature of streaming. These interactions between human actors are facilitated by platform as a nonhuman actor, and so I demonstrate how they can be understood through the streaming persona.

As a social site, Twitch invites spectators to participate actively, thereby making spectatorship performative. Through their performances of streaming persona, Twitch viewers actively contribute to stream content. Streaming is a form of co-performance, where spectators have the capacity to enact agency – sometimes even over the streamer (Li et al., 2019). Streamers constantly negotiate their performance and play through interactions with their audience (Partin, 2019; Scully-Blaker et al., 2017). These performative moments, and

negotiations between stream actors, all contribute to the identity of the stream. That is, as I show, these performances are part of the construction and performance of streaming persona. Many scholars characterise the interactions and relationships between streamers and spectators as parasocial (Leith, 2021; Lim et al., 2020; McLaughlin & Wohn, 2021; Wulf et al., 2018). I see this as something of a mischaracterisation of streaming, a perspective shared by Kowert and Daniel (2021), who propose a "one-and-a-half sided parasocial relationship" to account for the reciprocal nature of stream interactions. The ratio of spectators to streamers is often many-to-one, and so it is certainly possible for spectators' and streamers' perceptions of their relationships to differ. I argue that this difference is not sufficient to consider these relationships parasocial, and that these differences are played out through the streaming persona in ways that do not diminish stream sociality. This thesis therefore offers a new perspective on the nature of interactions between stream actors, namely that interactions on Twitch are genuinely social, though this sociality is affected by elements like questions of streamer authenticity and underlying (or explicitly presented) economic motivations.

Ambivalence, Identity and Gaming

Streaming persona is a collective identity that orbits game cultures, and as such it inherits and plays out the values and politics of those cultures. This thesis takes up Burroughs and Rama's (2015) early call for Twitch to be taken seriously as a potential future for gaming, in particular noting its potential for transforming the cultures of gaming. In this section, I introduce my response to this call through a number of scholars who have pioneered work on identity in the contexts of gaming and streaming cultures. I revisit these scholars periodically through my analysis of streaming persona, particularly as I examine the ambivalence underpinning both relationships between streamer identity and streaming persona, and the

collective construction of streaming persona. Ambivalence seems to be embedded in all aspects of digital culture, and I identify a number of ambivalences in relation to the construction and performance of streaming persona, particularly as an expression of identity. My use of the term 'ambivalence' in this thesis reflects Phillips and Milner's (2018) usage of the term in their examination of ambivalence on the internet, which "reflects the 'both, on both sides' use not the blasé sense of indifferent" (p.10). The authors go on to extend this usage to "all, on all sides" to accommodate layers of polysemy that arise on the internet. Throughout this thesis I analyse ambivalences to capture the multi-faceted nature of streaming persona as it is constructed and performed by numerous actors with their own distinct perspectives, motivations, and approaches. Ambivalence and persona are intertwined, as Phillips and Milner (2018) demonstrate through their extended metaphor of performed identities as "masks." They describe forms of identity play that constitute "mask adjustment ... *toward* a particular audience, *against* a particular object" (p. 65, emphasis in original). The etymological link between persona and masks invites comparison and, aligning with Phillips and Milner's logic, streaming persona is defined by the performer(s) as well as their audience. Persona play is defined as much by what it is (free movement) as what it isn't (beyond the bounds of the more rigid structure), which can be a source of tension between stream actors. Some ambivalences have more potential for harm than others. For instance, Marwick (2019) observes that "social media can be simultaneously feminist and misogynist; like all media, it is subject to the structural power relations that exist between those who use it" (p. 310). This ambivalence exists within game cultures where marginalised users must navigate problematic traditions.

Streamer identity, particularly in the context of videogame livestreaming, is an extension of player identity, and player identity is understood in relation to play practices to

which players subscribe and those that they reject. Player practices are (de)legitimised through various perspectives on cheating (Consalvo, 2009) and what constitutes a 'real' game (Consalvo & Paul, 2019). Particular player practices have complex relationships with game development and player identity. Chess (2017) captures this using the phrase *designed identity* to describe "the perception of women players as they are constructed, designed, and managed by the video game industry" (p. 5). Designed identity reinforces assumptions around 'legitimate' playstyles and player identity, and upholds (cis)sexist, racist, misogynistic, ablest, and otherwise marginalising value systems within gaming. These assumptions are inherited on Twitch, where the games that streamers play and they ways that they play them are experienced in relation to player identities.

Feminist game scholars have recently challenged these problematic attitudes and value systems. Cote (2020) examines the historical resistance to women's participation in gaming spheres and their potential to overcome it, while Phillips (2020) performs alternative readings of historical and representational practices within gaming culture that centre queer and women of colour feminisms. In the context of streaming, Cullen (2022) found particular approaches to feminism are accepted by users, namely those that pose minimal threat to the disruption of what those users see as an apolitical space. However, user practices reify the politics of Twitch, given Nakandala et al.'s (2017) findings that – particularly within popular channels – female streamers receive more objectifying messages while male streamers receive more game-related messages. Todd and Melancon (2018) studied the relationships between male and female spectators and streamers on Twitch. They found that male viewers more strongly engaged with female streamers than female viewers. Male viewers demonstrated higher relationship motivations, donated more money, and were most invested. However, all viewers rated male

streamers higher in expertise than their female counterparts. In addition to this, Todd and Melancon (2019) found that trolling in the form of sexual harassment was more commonly witnessed in women's streams, and that male viewers who watched female streamers were less tolerant and more likely to intervene. Female streamers are delegitimised through cultural perceptions of gender within gaming, which I examine as one aspect of streaming persona that emerges from streamer performances of gender and spectator responses to those performances. However, persona play can be empowering and disruptive. By 'playing like a feminist,' streamers can challenge identity-based assumptions (Chess, 2020). Chess defines "a playful feminism [as] one that *plays into* a structural paradigm yet pushes at the boundaries of that structure" (p. 40, emphasis in original). By playing persona like a feminist, streamers can push against – and potentially even shift – the sociocultural boundaries within which they operate. Consalvo demonstrates Twitch streamers' potential to play like a feminist through streamer Kaceytron's transgressive performances of persona (Consalvo, 2017, 2019). As part of her analysis, Consalvo observes that spectators enact their agency as they attempt to uphold misogynistic traditions that Kaceytron simultaneously (ambivalently) plays into and resists. I incorporate these agential ambivalences into the identity of the stream by framing streaming persona as a *collective* identity and asserting that its boundaries are constantly reshaped through persona play. This framework transforms understandings of Twitch by demonstrating simultaneous empowerment and disruption that regularly occurs within individual streaming personas through persona players' contesting agencies and on the platform as a whole as streaming personas feed into, align with, and challenge the culture of the platform itself.

Queer game studies emphasises the inherent queerness of particular games design and play practices, including those enacted in persona play, and the contributions of queer identities

to game and stream cultures. Shaw (2015) examines representational politics in gaming through the experiences of marginalised players. Coming from the design angle, Ruberg (2020a) centres queer independent game developers and asserts the transformative potential of their work on video games more broadly. When introducing their edited collection, Ruberg and Shaw (2017) note that queer game studies "uses queerness as a method or paradigm to dramatically rethink game scholarship" (p. xvii). Stream culture cannot be examined without consideration of performances of, and attitudes towards, gender and sexuality (Ruberg & Brewer, 2022). In the context of streaming, queer game studies perspectives highlight the practices of LGBTQ+ streamers and their relationship both to the culture of streaming and the platform itself (Youngblood, 2022). These perspectives further critique heteronormative assumptions around decisions that streamers make when presenting themselves to spectators (Brett, 2022; Tran, 2022), as well as the positions that Twitch takes on, and its definition of, sexual content (Cullen & Ruberg, 2019; Ruberg, 2020b; Zolides, 2021). Ruberg et al. (2019) examine gender disparities underpinned by this heteronormativity through the derogatory term *titty streamer* that is used to criticise female streamers perceived to use their bodies for attention. Practices of self-presentation, and the ways that these practices are understood by stream actors, are parts of streaming persona that I demonstrate challenge identity-based assumptions associated with games and streaming.

Issues of race are also prominent in studies of game and stream cultures. Kishonna Gray's work on identity and gaming focuses on the experiences of women and people of colour as participants in online gaming spaces (2012; 2014). She brings a black cyberfeminist perspective to Twitch, applying her notion of *deviance* to streamers. Gray (2017) names women and people of colour as deviants as they do not conform to the dominant (white male) culture

of gaming and argues that discrimination against deviant bodies is normalised on the platform. Black streamers face obstacles, both in the practice of streaming as well as through the technologies surrounding and enabling it, that white streamers do not (Chan & Gray, 2020; Gray, 2020). By challenging and overcoming these obstacles, participation becomes a continuous series of acts of resistance against hegemonic whiteness. As such, streamer identity becomes part of the streaming persona as a streamer's race affects their participation on the platform and interactions with other stream actors.

Participation for individuals within marginalised identity groups is highly ambivalent, both enabling and restrictive. This has been made particularly visible through research considering streamers with chronic conditions or disabilities. Streaming is flexible in terms of time commitment and schedules and enables streamers to participate from home. Streamers with mental health issues, disabilities, and chronic conditions can thus participate, both socially and as a form of work, more fully than they might otherwise be able to (Johnson, 2019). However, a streamer's identity may be affected by chronic conditions and disabilities, which often impacts how they stream and their relationships with spectators in ways that streamers experience as both positive and negative (Anderson & Johnson, 2021). Ambivalence is produced through the increase in accessibility and participation that is experienced simultaneously with negative social experiences and potential inabilities to meet spectator expectations. These ambivalent aspects of participation thus become ambivalences of streaming persona as spectator expectations are adjusted by the time and content that streamers are able to offer.

Labour and Economics

The multitude of labours involved in streaming, and the monetisation of those labours, are part of construction and performance of streaming persona that is subject to persona as a constructed identity. These labours are best examined in relation to established theories of digital labour and in conversation with existing literature on the nature of streamer and spectator labour. The relationship between play and labour has been dramatically altered through digital technologies, including platforms like Twitch (Ferrer-Conill, 2018). Videogame livestreaming is a form of playbour, conceptualised by Kücklich (2005) to describe the relationship between work and play that emerges from productive (in a capitalist sense) ways of interacting with games. In fact, Phelps and Consalvo (2020) find that the relationship between labour and play extends beyond videogame-based streams. As such, streaming – videogame content or otherwise – demands multiple kinds of labour, as not only is there live performance and technological proficiency required, but also brand-building, and fostering relationships with spectators. These different types of labour are discussed by Johnson and Woodcock (2019a) in their examination of the professionalisation (and legitimisation) of Twitch streaming as a career. The authors also emphasise how demanding and precarious this labour can be. Further, Johnson (2019) observes the intensity of the labour, and the toxicity and harassment associated with streaming outside of the dominant population that was discussed in the previous section. To add to all of this, the labour extends beyond the live stream moments, with streamers managing stream aesthetics, social media accounts, and their presences on other platforms like Discord and YouTube, as well as networking 'off-camera' (Johnson, 2022). All of these decisions affect the stream experience and feed into the streaming persona.

Streamers perform emotional labour as part of the performance of streaming persona. According to Hochschild (2012), emotional labour involves "induc[ing] or suppress[ing] feeling in order to sustain the outward countenance that produces the proper state of mind in others" (par. 9). Through the examination of a number of YouTube tutorial videos on streaming, Ruberg and Cullen (2019) argue that the emotional labour involved in streaming consists of "cultivating feelings in viewers, performing feelings for viewers, managing one's own emotions, and using emotions to build a community or brand" (p. 99). The previously mentioned gendered nature of harassment within streams translates to gendered emotional labour, where women streamers are required to perform additional emotional labour in response to harassment. Some of this emotional labour is also performed through moderation by streamers and non-streamer moderators (Seering et al., 2017; Wohn, 2019). Moderators monitor the stream and remove any potentially harmful messages. They often work with the streamer and perform variations of the same emotional labour. By adjusting the emotions that they perform for their audiences, streamers affect their interactions with spectators and hence streaming persona.

As an extension (or particular kind) of emotional labour, streamers perform affective and relational labours to deepen their connections with their spectators. Affective labour is a kind of immaterial labour (Hardt, 1999) that "produces or manipulates affects such as a feeling of ease, well-being, satisfaction, excitement, or passion" (Hardt & Negri, 2004, p. 108). Through a case study of a female YouTube Live streamer, Guarriello (2019) identifies listening attentively, being talkative, emotional, and genuinely concerned as gendered forms of affective labour performed by streamers. Specifically referring to Twitch, Woodcock and Johnson (2019a) focus on the actual performance involved in streaming and the affective labour built

into that performance. This affective labour also appears through homosocial intimacies on the platform, embedding streaming in toxic geek masculine practices as the affective labour of streaming draws upon and feeds into definitions of masculinity (Welch, 2022). Spectators can often feel more comfortable participating in a stream, or playing persona, as a result of a streamer's affective labour. As such, a streamer's affective labour can be considered a form of relational labour. Relational labour describes "regular, ongoing communication with audiences over time to build social relationships that foster paid work" (Baym, 2015, p. 16). Though it was originally conceptualised to refer to the work of musicians, relational labour naturally extends to stream settings, with the slight adjustment that often the relational labour *is* the paid work of streaming. Through the encouragement of particular affects and regular communication, streamer labour promotes a sense of intimacy between human stream actors.

This thesis argues that the labour that stream spectators perform constitutes persona play, a novel argument that makes explicit the links between social and financial capital upon which Twitch's economy is built. The presence and contributions of stream audience members are characterised as forms of labour by Carter and Egliston (2021), who discuss how this labour feeds into the economy of the platform through various monetisation strategies. My analysis examines how this spectatorial labour is part of the construction and performance of streaming persona, in turn reflecting the very sociality and culture of Twitch. In reference to the Chinese livestreaming platform Douyin, Yang (2021) finds that spectators perform emotional labour, which shifts in nature depending upon whether or not the spectators are 'fans' of the streamer. They argue that while streamers perform emotional labour as a commercial endeavour, spectators perform emotional labour for social purposes. While I have found a more substantial overlap between the motivations of emotional labour performed by streamer and spectators, I

certainly agree that spectators' emotional labour often appears socially motivated and is about performing a connection to the streaming persona.

The economics of the Twitch platform are rooted in streamer and spectators labours. Streamer labour is monetised by both the streamer and the platform in a multitude of ways, some reliant on direct financial contributions by spectators and others from third-party sponsors (Johnson & Woodcock, 2019b). Wohn and Freeman (2020) conceptualise money as a form of tangible social support, and find that attachment to the stream, valuing a streamer's skills and talent, and a streamer's personality attractiveness were all positively related with a spectator's intention to give financial support. Related to these findings, a number of quantitative research studies propose different motivations for financial contributions to streams, such as perceptions of streamer genuineness and loyalty (Wohn et al., 2019), emotional attachment and perceptions of streamer trustworthiness and attractiveness (Li & Peng, 2021), as well as information sharing and a sense of belonging (Li & Guo, 2021). Other quantitative researchers have extended upon this by theorising factors that predict spectator contributions in relation to value perception and satisfaction while spectating livestreamed sports events (Liu et al., 2022), and attempting to predict future donations based upon past donations (Jia et al., 2021). I augment these findings with my own to examine how the economic success of a stream hinges upon interactions between stream actors (both human and nonhuman), the streamer-spectator relationship, and spectators' connections to the stream collective, each of which is a new contribution of this thesis to platform research that I explore with close attention as and through persona play.

Twitch as a Platform: Features and Affordances

Twitch is a key contributor to contemporary streaming culture, demonstrating its own interwoven relationships between culture and economics (Burroughs & Rugg, 2014; Rugg &

Burroughs, 2016). These relationships arise through interactions with, within, and through the Twitch platform, which can in turn be understood through the features and associated relational affordances of the platforms, as well as platform governance. I consider the Twitch platform one of the nonhuman actors contributing towards streaming persona in order to capture this understanding. Taylor (2018b) investigates Twitch as a site where "people begin to *transform private play into public entertainment* and an emerging media form of *networked broadcasting* arises" (p. 22, emphases in original). This transformation and emergence occur within the bounds of Twitch as a platform – it is limited and enabled by the platforms features and its governance. Technological, social, economic, and political significance accompanies the identification of Twitch as a platform (Gillespie, 2010), which is consistent with the studies discussed thus far. However, focusing on form and platform features adds new dimensions to these discussions.

Streaming persona is affected by the choices that streamers and spectators make in their interactions with the platform, as well as the number of interactions occurring simultaneously. The chat box (label 2 in Figure 1) is a core feature of Twitch as it enables spectators to interact with the streamer and each other. In streams with large (active) audiences, the focus shifts from "individual identity and self-expression" towards "entertaining and engaging with a crowd" (Ford et al., 2017, p. 867), demonstrating how spectators' persona play can shift between individual and collective in different situations. Flores-Saviaga et al. (2019) propose a typology of streams that accounts for audience volume, acknowledging that the stream experience is transformed by the number of viewers and consequently the use of the chat box. The 'type' of stream content also impacts platform use (Sjöblom et al., 2017), which supports Smith et al.'s

(2013) identification of esports, Let's Plays[3], and speedruns as primary content types. Churchill and Xu (2016) similarly distinguish between *Casual Players*, *Speed Runners*, and *Competitive Gamers*. Offering another perspective on platform uses, Gandolfi (2016) names three streaming orientations – the challenge, the exhibition, and the exchange – that game streamers move between as they play. These different approaches to typologising stream content suggests that a more wholistic approach to Twitch streams is necessary to best characterise the similarities and differences between streams.

Streamer practices can be situated historically as they relate to other uses of digital and social media. For example, camgirls can be understood as ancestors to the contemporary Twitch streamer. In her work on camgirling, Theresa Senft (2008) examined the development of a branded self in the practice of homecamming, which involves women streaming footage via webcam of them in private spaces such as bedrooms. Many of the strategies that Senft identifies can be seen in contemporary Twitch streaming, as Ruberg (2022) identifies. Ruberg further explores the tensions that come with such an association, along with the potential sociocultural benefits of breaking down the barriers between the two practices. One feature that these practices share is the conscious presentation of an identity (a streaming persona) to be consumed by an audience. In this sense, streamers are microcelebrity practitioners. Senft (2013) defines microcelebrity as "the commitment to deploying and maintaining one's online identity as if it were a branded good" (p. 347). Unique formations of microcelebrity emerge through platform-specific features and affordances, with features that enable interaction and foster a perception of accessibility being core (Marwick, 2015). Streamers have already been

[3] Streams where "much of the entertainment comes from the player as they play through a game." (p.132).

identified as influencers, both in an academic sense (Woodcock & Johnson, 2019b) and in a commercial sense through the prevalence of sponsorships. Though I propose streaming persona as a new term and to emphasise the distinction of streaming from other practices, elements of historical and contemporary internet practices elsewhere still bear relevance as streaming is a part of internet culture.

3. Getting Ready to Go Live: Methodology and Ethics

Twitch as a Site for Ethnography

Ethnographic methods are ideal for developing an in-depth understanding of particular social and cultural groups and the behaviours of members of those groups in context. On Twitch, these methods involve spending time as a genuine platform user, observing how others use the platform, and reflexively examining my own use of the platform. Given that it is defined in ways that capture interactions with and on the platform, persona play is not only a theory of, but also a method for, stream analysis. The theoretical arguments that I make and conclusions that I draw throughout this thesis are immediately grounded in the sociality, culture, politics, and economics of Twitch as I have engaged in and observed persona play in situ. The analytical perspective that I take centres the perspective of streamers and spectators and their experiences of the platform as a nonhuman actor.

In both principles and practice, my research design was modelled on a number of methodological texts. To begin with, Ethnographer Christine Hine (2015) has been a core methodological influence in the design and execution of this research. Her E^3 model for the internet – embedded, embodied, and everyday – is consistently present throughout this thesis. This model reminds researchers employing ethnographic methods that the internet is experienced differently by different users and has different meanings in different settings (embedded), there are different ways of being on the internet (embodied), and that both the mundane and the exceptional ought to be treated with equal weight (everyday). From these

starting points stemmed the ultimately fluid and adaptive methodology that I summarise throughout this chapter.

Another key influence was Boellstorff et al.'s (2012) handbook, which inspired the initial structure of this research. They encourage ethnographers to "research narrowly and think broadly" (p. 54), advice which I have put into practice through the strong focus on streaming persona that has been present in my research since the beginning of this project, broadened by the diverse ways of approaching the concept. Further, the authors argue for a clear, singular, and flexible research question, which I have supported through the sub questions presented in Chapter 1. I also drew heavily upon the frameworks provided by Pink et al. (2016), which extended upon the more practical advice of Boellstorff et al. (2012) with a stronger focus on the different kinds of knowledge that ethnographic studies can unveil. Their discussion of research practices in particular emphasised the importance of considering nonhuman actors, which motivated the natural inclusion of the platform and games as players of persona.

There are many different perspectives on and approaches towards ethnography. Terms like virtual ethnography (Hine, 2000), social media ethnography (Postill & Pink, 2012), netnography (Kozinets, 2015), and digital ethnography (Pink et al., 2016) have all been used to describe ethnographic methods deployed in different online sites. As an acknowledgement of the saturation of these terms, Pink (2013) proposes a shift away from so-called 'buzzword' ethnographies (Abidin & de Seta, 2020) that does not fundamentally transform the methodology itself and instead towards 'ethnographies for' different sites and spaces. As such, this study might be considered ethnography for livestreaming or more broadly ethnography for the internet.

I collected data through three methods. Firstly, I conducted participant and non-participant observation as a member of chat over an extended period in each of a number of channels. Secondly, I spent a period of time streaming myself, adding an autoethnographic component to this research. Thirdly, I conducted three interviews with participant streamers to support and extend upon the first two methods.[4] These methods combined enabled me to develop an understanding of the construction and performance of streaming persona, as well as its contributions towards the sociality, culture, politics, and economics of Twitch.[5]

Fieldsites and Acculturation

For the purposes of this project, I decided that individual channels – that is, individual streamers' pages on Twitch – would be considered distinct fieldsites. There are multiple benefits to framing this project as a multi-sited ethnography in this way. This treatment accounts for the uniqueness of each channel as home to its own streaming persona without discounting that they all operate within the same platform. I was thus more conscious of behaviours and interactions that marked each stream as similar or different to others by considering each stream as a separate fieldsite. Another benefit of this project as a multi-sited ethnography was the ability to clearly establish the boundaries of each fieldsite. Rather than having to negotiate a single larger fieldsite that was either unwieldy in its size or awkwardly-bounded, I was able to work across multiple, clearly-bounded individual stream pages. Additionally, the multi-sited ethnographic approach enabled me to acknowledge these

[4] Though three interviews is a relatively small number, as I explain in detail later in this section, interviews were a secondary method that added minor additional data points to the project. Information obtained in these interviews provided little information beyond the two primary methods as I found that streaming persona carried over into interviews.

[5] This project received ethics approval from a UNSW HREC (HC number: HC190548) for the methods outlined in this section.

adjacent sites such as streamers' Twitter accounts or Discord servers. Though these did not form part of the streaming persona, they did contextualise it at times.

There were twenty-one participant streamers examined in this project. This study was intended to apply the ethnographic principle of inductive reason to theorise based upon a relatively small sample of streamers, rather than to present a comprehensive examination of every behaviour and practice on Twitch. Despite this, I spent an initial viewing period with each potential streamer participant in order to familiarise myself with their approach to streaming and the culture of their stream. During these periods, I would assess how their streaming persona compared with those of other streamers that I observed. In this way, I was able to select a relatively small number of streamers while maintaining a diverse representation of approaches to streaming persona across the project as a whole.

On top of this general approach, I also adhered to a series of inclusion and exclusion criteria to further bound the research whilst still ensuring that results could address the research aims. These ensured a base level of diversity among the participant streamers and restricted the scope of the study, ultimately producing more meaningful theoretical implications. Participants were approximately 50% male-presenting and 50% female-presenting. Of the twenty-one streamers chosen, eleven were solo female-presenting streamers, ten were solo male-presenting streamers, and one was a cis-presenting heterosexual couple. This enabled me to draw theorise around the relationships between streamer performances of (binary) gender identity and streaming persona. There were no criteria for race and sexuality as this information was not always offered by streamers during initial viewing periods. Streamers were chosen to represent a cross-section of North America, the UK, Europe, and Australia. These regions represent some of the largest populations in terms of Twitch users and therefore ensured that the research

results were as broadly applicable as possible. Streamers must be English-speaking. Finally, streamers were chosen to represent a range of audience sizes. A number of websites record Twitch viewership data for public access, and I used the average consecutive viewer count in the 90 days leading up to the initial viewing period when categorising streamers. I categorised streamers with up to 150 viewers, between 151 and 1,000 viewers, between 1,001 and 5,000 viewers, and over 5,000 viewers separately. These criteria ensured diversity among stream participants, hence enabling me to theorise inductively from the research results.

The amount of time that I spent with each streamer varied. The number of hours ranged from ten hours total up to over two hundred hours, spread out across a period of between two and six months between 2019 and 2022, and depended upon a number of factors. Streamer schedules vary, meaning that some streamers streamed less often than others or had fluctuating stream schedules. A small number of streamers were connected with events or other streamers of interest, and so I only spent enough time with them to form a sufficient understanding of their streaming persona for analysis in that context. I also tended to spend more time with streamers that I encountered earlier in the project, as I would periodically check in on those streams after I formally concluded data collection. This decision ended up having a substantial impact on the project, identifying the role of time as significant in persona play. In order to account for the different experiences associated with different amounts of time spent in a stream, I broadly classified streams as 'intense,' where I spent more than 35 hours in total, and 'not intense,' where I spent up to 35 hours (see Table 1 for a breakdown of the streamer participants).

Table 1. Streamer participants sorted by gender presentation and intensity of observation.

	Male-presenting	Female-presenting	Couple
Intense	5	5	1
Not intense	4	6	0

Even the minimum number of hours with a streamer was enough to develop a basic understanding of their streaming persona, and how the stream actors played persona. While it was not viable with every streamer, intense participation provided more opportunities to attune myself with performances of persona within the stream. More time enabled more insight into occurrences that were mundane and exceptional, and moments when the mundane masqueraded as exceptional and vice versa, in keeping with Hine's (2015) everyday. By splitting participation into intense and not, my research was also able to echo more realistic spectatorial practice, where spectators have streamer preferences. As such, while the deeper familiarity enabled by intense participation contributed greatly to my understanding of stream dynamics, not intense participation grounded that familiarity in regular processes of acculturation.

Capturing and Organising Observations

In each of the streams described above, I conducted a combination of participant and non-participant observation as a member of chat. Participant observation involved engaging with the streamer and other spectators through and with the Twitch platform while the streamer was live. Non-participant observation was restricted to interactions between stream actors and included a combination of live and recorded streams. Ethnographers occupy an insider-outsider identity as they conduct research, and the blurred boundaries between emic and etic approaches in this context embodies this duality. Stream participation as a member of chat – equivalently

an emic approach – does not require constantly interacting during stream, and so participant observation was as much about being aware of when I felt compelled to contribute as the actual contribution. Reflexivity is a key ethnographic principle (Hine, 2017), and so examining these feelings was essential to my research. I was further challenged to regularly and reflexively assess my live observation approach as emic or etic, as a way of better understanding stream participation from different perspectives.

This nuanced approach to observation reflects genuine user practice and was therefore an essential consideration in conducting my research. In her discussion of ethnographic approaches to digital media, Coleman (2010) has emphasised the importance of the prosaics of digital media, namely the contexts under which they operate and how they are mobilised for use. This sentiment is echoed by Hine (2017) when she names an ontological multiplicity that emerges from different sets of practices involving an individual piece of technology. I applied these perspectives by allowing fluid movements between different modes of observation, which match typical spectator practices. Spectators are seldom actively watching and chatting for the full duration of a stream. Often they will move between active and passive spectatorship, the latter of which is a practice known as *lurking* among Twitch users. Lurking often involves having a stream on in the background while doing something else that prevents interaction. For the duration of this project, I almost always had a stream playing for multiple hours per day, even if I wasn't actively taking notes or interacting. Lurking was particularly helpful for the initial viewing periods, when I familiarised myself with the vernacular and the overall tone of specific streams, and also to keep in touch with the evolution of particular streams after a longer period of data collection.

I recorded my observations in detailed fieldnotes. The fieldnotes for each stream were organised in tables, with entries recording the approximate time into the stream (flagged in thirty minute increments for convenience), a description of the occurrence, and any thoughts or reflections that I had in the moment. The full transcription of a moment on Twitch – that accounts for all spectator comments, all streamer comments and movements, and any on-stream and in-game occurrences – is extraordinarily difficult (Recktenwald, 2017). In fact, the simultaneous layered interactions in most of the streams that I attended simply made it impossible to record everything across all of the hours that I observed. I have offset some of these difficulties by taking screenshots to help capture visual information without having to describe everything in detail, and revisiting recording of moments that I observed live to fill in any details that I missed. However by far the most enabling decision that I made was restricting the observations that I recorded.

My approach to observation was a mix of ad libitum and behaviour sampling (Kellehear, 2020). Ad libitum sampling – recording "whatever is of interest" (p. 13) – identified noteworthy behaviours that characterised the streaming persona. These behaviours were then contextualised by behaviour sampling, which involved recording the different situations within which they occurred. Combined, these approaches to sampling offset the challenge of recording every occurrence while also reducing the potential bias of ad libitum sampling by itself. Further, by iteratively applying both sampling methods, I was able to continue identifying and noting a range of behaviours occurring within different streams and at different times, even identifying connections between behaviours and streaming personas that might otherwise not be visible. I maintained a focus in my sampling on the ground-level experience of the platform,

retaining throughout this project the perspectives of streamers and spectators as they interacted through and with the Twitch platform.

I organised and iteratively coded my fieldnotes using NVIVO. Notes from each individual stream were uploaded separately, as well as screenshots and any video recordings. I approached coding flexibly, starting with general themes, which were then refined through further observations. These themes allowed me to focus my future observations and the different approaches to streaming persona that addressed my research aims. Through these more focused observations, I generated more nuanced themes, which produced specific thematic connections between more general themes. This approach demonstrated how individual moments might be analysed from different perspectives, encouraging ambivalence as a method for analysis as well as a key concept emerging from analysis. Additionally, this iterative process unveiled nuances of streaming persona (including the concept of *playing persona*) and fed into this thesis' structure.

Interviews

Interviewing is a standard ethnographic method and was included as an extension of the other methods presented in this chapter as opposed to a primary method. I conducted semi-structured interviews with three of the streamer participants that I observed as a way of augmenting my observations and experiences as a spectator. These interviews were either via Discord call or email and were transcribed where necessary and coded using the approach to fieldnotes described above. Though only a secondary method in this project, these interviews provided a more concrete understanding of the motivations behind streamers' choices and the opportunity to assess how well my analysis of streaming persona aligned with streamer perception of their persona, thereby filling in small gaps in my observational data. These

benefits come with the caveat of streamers participating in the interview as a performance of streaming persona. The heterogeneity of streamer practice was never more apparent to me than through contrasting interview responses. Despite many similarities between them, the streamers that I interviewed saw streaming, and how they wanted their viewers to connect with them, very differently. Even with the relatively small number of interview respondents, the interviews augmented my observational data and offered reminders of my positionality when analysing that data.

Streaming as Autoethnography

For a period of six months in 2020, I streamed on Twitch eight to ten hours per week across one or two streams. I recorded all of these streams, and also kept a log of reflections that I updated during stream breaks and after streams. I coded these reflections using the same approach as interviews and observation fieldnotes. My focus when employing streaming as a method was to develop an embodied understanding – again following Hine's (2015) E^3 model – of the labours involved in streaming. Through its stronger focus on my experience, this method was autoethnographic, hence requiring an even more diligent reflexive approach and understanding of my own subjectivity and positionality as a researcher and an individual. This period benefited the research project in a number of ways that I did not foresee. Streaming gave me ownership of a fieldsite that operated similarly and in relation to the others in which I participated, thereby providing me with a grounded positionality. As well as having the intended experience of streaming for an (admittedly small) audience, I developed first-hand knowledge of the hardware and software involved in streaming, aesthetic stream elements, and the performance of my streaming persona in other streams. I was forced to consider my stream

schedule, the content that I would stream, my Twitch username and profile picture, among other things.

Part of my streaming practice involved a number of practical steps and occurrences that emphasised how streamer subjectivity impacts streaming persona. I was in part visible as a streamer due to my presence in other streams and connections with other streamers. As a researcher my focus wasn't building an audience, but I also didn't often find myself in a situation where I was streaming for no one. Though it wasn't strictly speaking necessary for streaming, I was able to afford a computer that was good enough to both stream and play some relatively modern games simultaneously, as well as decent peripherals like a microphone and camera. This helped me to align my streaming more closely with the professional set up that many of the streamers that I observed had. Similarly, I had a space in my home that I could use for streaming with minimal disruptions. Given that this was for research purposes, I was also able to dedicate time to learning how to use streaming software and set up the stream. I had the time, space, and sufficient finances to enable this greater level of participation.

On top of this, my subjectivity as a cisgendered, white, able-bodied male was much more prominent in my streaming practice than through my time as a spectator. Through I certainly wasn't immune to slightly disruptive comments, I wasn't often a target for harassment. In fact, in some instances, I felt that my identity acted as an invitation for inappropriate comments directed at other groups. Taylor (2018a) makes a similar observation when he notes that "those participants who are most comfortable with my presence are the same ones whose actions and dispositions, I am most interested in problematising" ... and that his "actions and…bodily presence contribute to the marginalisation and objectification of female participants" (p. 16-7). There were certainly times when I felt complicit in reinforcing

values that I found objectionable simply by not speaking when I had an opportunity (and a platform in the case of my streamer participation). I did discover that this conflict, while a result of my privilege, was also something that other streamers grappled with in their live interactions. As a result of these moments, I proceeded through the entire project with a heightened awareness of my own subjectivity and the position of privilege from which I operated.

Is Twitch Public?

In her discussion of internet research ethics, Buchanan (2011) accepts that ethical pluralism is embedded in online research. In order to conduct research ethically, internet researchers need to consider recruitment, consent, and identification specific to the context of their research. The first major ethical consideration for this project was whether Twitch interactions are public or private. The slipperiness of the public-private dichotomy in research ethics is not a new issue (Waskul, 1996), but is certainly one that merits consideration when undertaking a project like this. According to Twitch's privacy note,

> You may share personal information when using the Twitch Services. One example is when you provide information about yourself as part of the Twitch account creation process. Another is when you take certain actions on the Twitch Services that are public or intended to be public in nature, such as when you broadcast content, participate in a chat room, post profile information, follow a channel, or subscribe to a broadcast channel. Given the social nature of some of the Twitch Services, that information may be collected, used, or disclosed by others who are part of that social interaction.

This information unambiguously states that information shared on Twitch is public. I have also taken into consideration the notion of perceived privacy (King, 1996) in my treatment of stream contributions. As performers in public spaces, I consider streamers public figures who have an awareness of their streams as public spaces. However, some spectators may perceive the stream space to be private, and thereby contribute without the full understanding the comment's public nature. For this reason, I did not record any spectator comments that I felt might be shared without a consciousness of the public nature of Twitch participation, that might elicit discomfort from a spectator if they were shared beyond the stream, or that might potentially identify the spectator beyond the platform. Such comments included references to location, disclosures of illness, names, or occupations.

Consent and Identification

My approaches to consent and identification were contextual. Since streams are defined to be public spaces, no consent was required to record interactions that I was observing. However, consent was required if I wanted to record interactions in which I was involved or that resulted from a comment that I made. For these occurrences, I sought consent using an online survey that used Twitch usernames to link data with consent. In their discussion of ethical issues around internet ethnographies, Sveningsson (2004) suggests that consent may be waived for participant observation in public spaces with the caveat that participants should not be identifiable. I adhered to this principle for spectators, completely removing any references to individual usernames during the data collection process. To further deidentify spectators, I will often paraphrase their messages rather than quoting them directly.

On the other hand, this project was designed to examine streaming persona. Streaming persona is affected by stream elements such as a streamer's username, appearance, and stream

aesthetics – each of which would make a streamer identifiable. As such, I afforded streamers the opportunity to be identified, and also chose to identify streamers for whom I only used public information (interactions of which I was not a part). In this decision, I diverge from some of the work of other Twitch scholars who go as far as to deliberately refuse to identify streamer participants, even upon request (Johnson, 2022; Taylor, 2018b). However there is ethical precedent for identifying streamers using only public data as a sort of case study (Consalvo, 2018; Guarriello, 2019; Yodovich & Kim, 2022). Throughout my data collection and analysis, I took great care to treat public and private information appropriately. As such, I was able to ethically produce a theory of streaming persona.

Disrupting the Fieldsite

My methods presented minimal disruptions to the fieldsite. Streamers often have to deal with uncomfortable messages and ignore messages from members of chat during streams. While I made every effort to avoid causing streamers discomfort, they were well-versed in managing any minor discomfort that a message might cause as part of their streaming practice. Additionally, when seeking to record my interactions with streamers, I approached them off-stream in order to avoid disrupting their stream. I allowed those streamers to decide if and how they wanted to make my presence known to their spectators. I embedded my researcher status in my own channel, including a reference to it on my Twitch profile, in the title of every stream, and also by providing a chat command that produces a link to the project consent form.

Analysing and Presenting Data

I analyse stream occurrences as performative moments, while integrating elements of thematic analysis to organise and present the data. When linking performance and ethnographic

methods, Hsu (2017) suggests a focus on what objects do rather than what they are. I thus emphasise the materiality of stream elements identified in my previous discussion of streaming as performance. As such, my observations and reflections often focused upon how the human and nonhuman actors perform and interact (play persona), as well as how stream materials – both physical and virtual – provide insight into a stream's social, cultural, economic, and political meanings. This approach to data collection and analysis helped to refine my research question as well keep the research aims in focus at all times. Further, this focus on doing over being encouraged me to examine even static stream elements in terms of their function and active contributions to the streaming persona. I found Braun and Clarke's (2006) work on thematic analysis particularly helpful as well. Although their intended audience is psychology researchers, they clearly state strategies for approaching thematic analysis that encourage rigour and clarity, as well as identifying common pitfalls involved in this kind of research. Their suggestions influence how I analyse and present data, and the theoretical conclusions that I draw.

There are a number of decisions that I have made when discussing stream moments for the sake of consistency and clarity. Firstly, and perhaps most notably, I alternate between novelisations of particular observed moments, screenshots, and general descriptions. While the latter two presentations should be familiar to most readers, the former is a response to the aforementioned challenges with fully transcribing individual stream moments. The potentially overwhelming simultaneity of these moments is reduced as I present them narratively and include only comments and occurrences relevant to the analysis at hand. Secondly, I present messages sent through chat as speech but italicised. This formatting decision emphasises that these messages are part of a conversation while acknowledging the difference in format

between streamers' spoken words and spectators' typed words. Thirdly, all quotes have been presented as accurately as possible, with dashes indicating stutters or broken sentences and filler words such as 'um' and 'like' maintained, as these are part of streamer performance, impact streaming persona, and reflect the improvised nature of Twitch streaming. Fourthly, as in the initial discussion of streamer participants, I refer to streamers as male-presenting or female-presenting when referring to the performance of binary gender identities as to avoid assumptions around streamer identity and to highlight gender performance as part of streaming persona.

Challenges

Ethnographic methodologies are inherently flexible, giving researchers opportunities to accommodate any unanticipated obstacles to their research – in some cases, those obstacles even form valuable contributions to the research results. The first issue that I encountered were concerns about receiving consent from streamer participants, which also extended to interviews. This concern was worsened when the COVID-19 pandemic removed the possibility to attend in-person events, meaning that all recruitment interactions with streamers would have to be via email. However, as previously discussed, since interviewing was not a primary method for this project, a small number of interviews presented only a minor issue and changed only the way that interview data was used. Without streamer consent for observation, I was restricted in the kinds of data that I could collect, in particular I could not ethically record any interactions that I had participated in or had directly resulted from my interactions. However, by reflecting upon my own experiences independently from recorded stream interactions, I was ethically able to draw meaningful observations without the need for consent.

As a multi-sited project, challenges emerged around observing streamers who streamed at similar times. During a peak period of data collection, there was at least one streamer participant streaming at any given time from the early hours of the morning until late in the afternoon or early evening. This challenge was remedied through careful planning and prioritisation. I used streamers' weekly schedules to plan for different days of the week, based on how often each streamer streamed, the lengths of their streams, as well as who I had observed most often. Additionally, I sometimes made choices based on my mood and personal preference. Through this process, I spread my observational time across multiple streamers. A noteworthy (unanticipated) consequence of this was the different feelings that I had around missing one stream for another. I had not expected conflicting commitments to different streams to have the impact that it did. As I became aware of this more personal investment, I was able to reflexively examine how it affected my perception of both the stream that I was watching and the stream that I was missing.

Ethnography as Persona Play

Through my reflections, moments of my own 'play' (both as performer of streaming persona and as researcher) appeared as I developed familiarity with norms on Twitch and in individual streams, as I interacted with spectators and streamers, as I developed my own streaming persona, and as I experienced successes and failures in each of these. I experienced throughout this project the parallels between ethnography and play (Taylor, 2022). As such, I consider persona play a research method conducted as a combination of streamer and spectator practices as modes of data collection and analysis. Though my methodology is grounded in established ethnographic method, it also adapts and departs from these methods to produce new ways of engaging with platforms like Twitch. In addition, this thesis contributes to scholarship

through its intense focus on interactions with and between stream actors. In other words, my insights are novel as they emerge directly from interactions with the platform and observations of stream actors – an approach taken by few Twitch researchers thus far. And of those who have engaged directly, I am not aware of any who have deployed performance analysis drawn directly from performance studies as I do in this thesis. I mobilise this method and theoretical framework to produce new insights into labour, gender, and participation in the context of gaming and digital media more broadly.

4. The Screen Behind the Screen:

Perceptions of Authenticity in Streamer Performance

"I'm done with posting on Twitter," PaladinAmber (Amber) said during a stream in June 2020, "Y'all just get so mad at me when I post anything now. I'm scared. I'm scared to do The News.[6] *Listen, let's be real – it's Therapy Thursday – I'm gonna get real with you guys. Imma talk some real tea*[7] *with you."*

The streamer is the central human actor in the construction and performance of streaming persona. In Chapter 2, I defined streaming persona as a negotiated social identity performed by individual and collective (human and nonhuman) actors within a stream. Each interaction with and through streaming persona is a form of persona play,[8] which is bounded by social, cultural, and technological structures with and within which stream actors move freely. For instance, the ways that streamers speak and dress are acts of persona play that are constrained socially by the desire for a cohesive streaming persona and culturally by assumptions of gender, race, sexuality, and able-bodiedness. I emphasise through persona play that streaming persona is an ongoing process rather than a fixed product — as the structures that shape persona play shift, so does the resulting streaming persona. While I acknowledged

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[6] The News was a bit of Amber's that involved calling out problematic chat messages imitating a news broadcast presentation and aesthetic.
[7] A colloquialism for gossip.
[8] Recall that I use Salen and Zimmerman's (2004) definition of play as "free movement within a more rigid structure" (p.304).

scholarship that attends to streamer practices and behaviours in Chapter 2, only a small number of scholars have conducted close examinations of particular streamer performances (see Consalvo, 2018; Guarriello, 2019). In this chapter, my analysis of persona play begins with particular streamer choices and expands to capture performances of nonhuman stream actors, thereby contributing to this scholarship. Through persona play and analyses of what actually happens on Twitch I unveil new dynamics, relationships, and social, cultural, and political performances that are otherwise inaccessible to scholars. I begin my analysis of the construction and performance of streaming persona through performances of authenticity and the relationships between authentic streaming persona and Twitch's sociality, culture, and economics.

The production and perceptions of authenticity recurred in my observations during this project through the (often implied) significance of perceived access to and familiarity with a genuine or 'real' streamer. These perceptions are generated or denied by the decisions that streamers make in the construction and performances of streaming persona, as well as spectators' responses to those decisions and nonhuman actors' facilitation of streamer performance. One of the easiest assumptions to make as a stream spectator (that I myself was guilty of many times) is that there is a knowable, accessible, 'real' streamer discernible through their stream performance. Assumptions like these are perpetuated by suggestions and explicit claims of disclosure and truth, as in the case of Amber's stream described above. These assumptions result from perceptions of authenticity and associated techniques of performance – or what Garde and Mumford (2016) call *Authenticity-Effects* — and are thus essential to the construction and performance of streaming persona.

I examine how these Authenticity-Effects operate on Twitch through the relationships between what I called the *curated self* and the *labouring self*. These terms are my articulation of ways that the "persona 'operator' is not always the same as the persona 'referent'" (Marshall et al., 2020, p. 95) in the context of streaming, where the persona referent is the curated self and the persona operator is the labouring self. On one hand, I frame the curated self as produced for consumption by stream spectators. As suggested by the name, the curated self is strategically constructed to guide spectators to understand the streaming persona in particular ways or to craft particular impressions of the streaming persona. The curated self is enacted through streamer choices such as clothing and make-up, stream design, and the stories that the streamer tells about themselves while live. On the other hand, I define the labouring self as the 'doing' or acting self, often understood as more 'real' than the curated self. However I argue that the labouring self is only ever perceived, and that it is visible labour that produces this perception. So while a streamer visibly wearing make-up would be part of the curated self, being seen to apply make-up or even acknowledging the application of make-up produces the labouring self. The curated and labouring selves are tied together by what I call acts of *persona labour*, which are performed by the labouring self in order to produce the curated self. This separation not only contributes a new way of understanding streamer performance to scholarship but is also significant in the way it unveils how streamers produce versions of themselves while streaming and how those selves affect the streamer-spectator relationship. Part of this significance rests in the politics of authenticity, in particular how particular cultural markers of identity – particular performances of gender, race, sexuality, ability – carry with them particular expectations for authenticity. Throughout this chapter, I draw upon

postfeminist scholarship to explore gendered tensions and ambivalences around the production of authentic streaming persona.

My concepts of curated and labouring selves further present a novel approach towards performance in the context of streaming, but also digital media more broadly. Goffman's (1956) frontstage-backstage metaphor has been a popular framework for scholars examining authenticity and digital media use (cf. Abidin, 2018). As part of his social dramaturgy, Goffman distinguishes between behaviours designed for an audience (front stage) and behaviours performed in the absence of an audience (backstage). While my curated and labouring selves seem to roughly align with performances attuned to front and back stages respectively, I avoid Goffman's metaphor to in turn avoid any suggestions that there is an observable backstage to stream performance. I argue instead that behind the front stage is simply another space staged for spectator consumption, not a backstage but rather another curtain behind the curtain – or more appropriately for the context of streaming, another screen behind the screen. The act of peering behind the curtain – of perceiving a streamer 'behind' the curated self – is enough to elicit perceptions of authenticity, however one can never be certain that there is not more that one cannot see. As Goffman's metaphor falters around this uncertainty, I therefore use the curated and labouring selves as a novel alternative that highlights how authenticity can only be perceived during streams.

My examination of the production of perceptions of authenticity despite any certainty around an accessible authentic streamer is aided by the concept of Authenticity-Effects. Garde and Mumford (2016) coined the term 'Authenticity-Effects' in their investigation of what they call Theatre of Real People. The authors analysed staged performances involving real-people performers, that is "self-representational [performers] and either fully or partially self-

devised…presentations" (p.5), in Berlin's Hebbel am Ufer. They developed the concept of Authenticity-Effects to unpack the relationship between these real-people performers onstage and in their daily lives. Authenticity-Effects are "on the one hand, theatre techniques and modes of representation, and, on the other, the resulting perceptual experiences" (p. 6) of something authentic. I also follow the authors in their definition of the term 'authenticity'. They use authenticity to refer to, on one hand,

> the nature and demeanour of the performers on stage and the impressions they can create as a result, such as sincerity or genuineness, which might in turn create a sense of credibility and referential truthfulness (p.70),

and on the other hand, "the nature and degree of mediation involved in the access to and encounter with other people, such as a sense of unmediated and intimate contact in a theatre production" (p.70). While Twitch differs from the staged theatre examined by Garde and Mumford, the authors' definition of authenticity proves fruitful for the purposes of this thesis in its focus on the elements of performance and the construction and performance of identity on Twitch.

Bringing together Garde and Mumford's definitions, Authenticity-Effects are simultaneously the acts and design of performance that produce an impression that the performance is 'real,' as well as the resulting impression of veracity for spectators. In my terms, a streamer's curated and labouring selves each contribute towards the perception of a cohesive, authentic streaming persona – where authenticity is understood through streamer performance and the performance of the platform and technological apparatus through which spectators perceive access to streamers. The considered performance of the curated self and the visibility of the labouring self which produces that performance, when brought together, constitute

streaming persona. I therefore position streaming persona as an Authenticity-Effect, and as produced by Authenticity-Effects, of the curated self and labouring self.

In this chapter I examine firstly the curated self and secondly the labouring self in terms of the corporeal streamer. I subsequently introduce my concept of the *authenticity gap* as the separation between the curated and labouring selves. The authenticity gap is the space within which streamers *play* persona, namely where streamers may move freely within Twitch's more rigid sociocultural and technological structures. Depending upon how streamers position their performances in relation to these structures, they establish varying authentic alignments between the curated and labouring selves. Through the authenticity gap, I articulate the ways that the curated and labouring selves extend, repeat, undo, and contradict each other in the formation of authentic streaming persona. Figure 3 visualises the key terms of this chapter and the relationships between them that I establish as the chapter's central contribution to streaming persona.

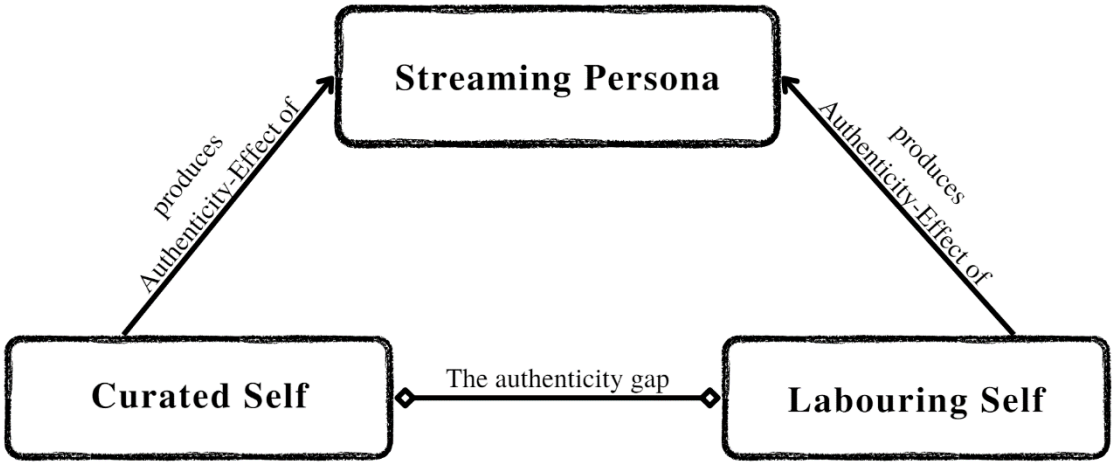

Figure 3. A diagram demonstrating this chapter's key terms and their relationships.

Finally, I examine the transformative impacts of live mediation and virtual extensions of the corporeal streamer on the authenticity produced by and through the corporeal streamer.

These two sections emphasise the pivotal roles of nonhuman actors in the construction and performance of streaming persona, a significant facet of this thesis' contributions. In particular, I call nonhuman actors that produce virtual representations of the corporeal streamer – for example, cameras, microphones, lights – *mediating objects*. I demonstrate the necessary separation between the corporeal streamer and virtual representations thereof introduced by mediating objects and consistent across all streams, which in turn characterises the 'gap' of the authenticity gap. Through virtual extensions of the corporeal self, namely digital representations of the streamer's body, I explore complications to streamer agency and presence, and subsequently how authenticity is perceived through these nonhuman performances of streaming persona.

In this chapter, I therefore demonstrate how streaming persona can generally be understood in terms of the production and denial of authenticity through three avenues. Firstly, I establish the value of the curated and labouring selves through examples of actual platform use. I subsequently disentangle these two selves, arguing that streaming persona is an Authenticity-Effect of the curated self and then the labouring self with a particular focus on the corporeal streamer. These lenses unveil the connection between authentic streaming persona and the sociality and culture of Twitch, specifically how perceptions of authenticity are affected by cultural assumptions associated with particular performances of identity through postfeminist scholarship. Secondly, after examining the curated and labouring selves separately, I bring them back together by establishing the authenticity gap between them. Through the various shapes and sizes of the authenticity gap, I exemplify the complexities surrounding the production and perception of authentic streaming persona through the interplay between the curated and labouring selves. Finally, I extend these complexities by analysing the

impact of nonhuman stream actors whose performance is in part through the corporeal streamer from two perspectives: the live mediation and virtual extensions of the corporeal streamer. These analyses centre the role of nonhuman actors and agency in the construction and performance of authentic streaming persona, framing it clearly as a human-nonhuman assemblage. These three avenues culminate in a construction of streaming persona that is inseparable from authenticity, as well as laying a foundation for the concept in preparation for further analyses of the contributions of non-streamer and nonhuman stream actors in the chapters that follow.

Producing Authenticity as Streaming Persona

Having now defined this chapter's key concepts, in this section I argue by drawing upon concrete examples that the production of perceptions of authenticity is a core aspect of the streamer construction and performance of streaming persona. The curated and labouring selves are rendered visible through examples of how streamers labour and how they perform their labour. But these examples also demonstrate how completely intertwined these two selves are. Tensions emerge as these two selves interact, which I frame in terms of the authenticity gap. The curated and labouring selves produce perceptions of authenticity differently, producing authenticity gaps of different shapes and sizes during different moments of performance. The authenticity gap therefore does not resolve these tensions but rather provides a language for understanding them, particularly for understanding them as problems of authenticity. This section's final problem is how the curated and labouring selves, individually and together, generate or deny authenticity in the construction and performance of streaming persona. In addressing this problem, I draw upon Garde and Mumford's Authenticity-Effects. By grounding these problems of authenticity in individual moments observed throughout this

project, I demonstrate that my terms of curated and labouring self and the authenticity gap contribute not only to scholarship but also reflect actual platform use and concerns of platform users.

The complexities of the relationship between the labouring and curated selves become visible through streamer performances of persona that include emotional labour. Emotional labour makes the labouring self visible while consciously shaping perceptions of the curated self. This balancing of selves was visible during a stream of kungfufruitcup's (Fufu's) in October 2020 when discussing how busy she was. She performed her busyness at length when a spectator listed the positive aspects of her life:

> "Yeah, from an outside perspective absolutely," Fufu agreed, "From my perspective, you know I have like eight hundred thousand things that I'm trying to do and like if I ever wanna move my career forward I have to put my time and effort into all these different categories and see if any of them stick and I don't have enough time to like-" A breath.
>
> "Put all the things in there that I wanna do and so like I'm not getting to the place that I wanna be because I know that my content is really niche and so I have to find other ways to break out-"
>
> Another breath.
>
> "And uh then I've also had flooding in my home and that hasn't really been taken care of to the extent that it should be because contractors are really slow and I have to make a million phone calls-" One more breath.

> "And I want to be able to like reduce other things like on bills and all this other crap that I can you know take care of, and I'm behind on some other stuff and," she paused briefly,
>
> "um I need to work out more and-" She laughed.
>
> "*That's how I see it!* See what I mean? The career seems cool until you're like 'how the hell do I keep up?' and like, you don't. I mean you do, but you just gotta get lucky."
>
> After a few responses from chat, she acknowledged the positivity behind the original message.
>
> "But yes, generally, overall if I have to look at it: I have a loving family, I have an awesome boyfriend, I have a little nice home, I feel very lucky with my friends, I love my job. All I wanna do is put time in my job ... I think that's a good thing."

Fufu performed both her busyness, and the associated stress, by speaking long sentences quickly, and separating them only by (increasingly noticeable) necessary breaths. Further, her labouring self was perceptible through her articulations of her thought process around the content that she produces and concerns related to her personal life. Through this visible labouring self, spectators perceive access to a truthful, unfiltered, 'feeling' Fufu distinct from her curated self. As Fufu demonstrates, the emotional labour of streaming is not only about concealing emotions but rather revealing them (and hence the labouring self) strategically. Fufu's self-moderation – when she stopped speaking midsentence and laughed before shifting to a more positive tone – is an example of shaping the curated self through emotional labour.

Fufu's labouring self is not only visible through her performance of negative emotions, but also through the suppression of those negative emotions in favour of appreciation and gratitude for her life and work, thereby aligning her streaming persona with Ruberg and Cullen's (2019) finding that streamers are encouraged to suppress negative feelings. In this way, emotional labour produces a perception of a streamer self enacting persona labour, while also binding the labouring and curated selves to each other and to the streaming persona.

In contrast, emotional labour may also be enacted to separate the labouring and curated selves. Streamers may distance these two selves by situating the 'feeling' labouring self as of the past. Cardboard Cowboy (CBC) enacted this form of emotional labour when he responded to a viewer's shared experience of personal growth in May 2021 by saying

> "Comparison to others, it does nothing for you. It's such an easy thing to do. In fact, like, I think uh getting on Twitch sort of really pointed that out to me. It's that, you're constantly looking at your numbers on Twitch, and specific numbers. View count, you compare that view count to other people. Your sub count, you compare that sub count to other people. You wanna know where you're at, right, on the hierarchy of Twitch. You sort of can't avoid that. You get better at it. But it always comes back, and you have to deal with it in a different way. *But*. I think I realised that social media does the same thing, only it's not specific numbers right? ... You look on Facebook and someone you went to school with bought a house, and you're like 'oh-I don't have a house ... I'm a mess.' That's the conclusion. That's the thought process, and ... it doesn't do you any good."

In this example, CBC's labouring self is perceived but is distinct from his curated self. Rather than performing the live suppression of negative emotions, CBC framed them as experiences

of a past, labouring self, while the curated self of the present has moved beyond those feelings. Further, he mobilised that experience to relate to, and provide advice to, his spectators. As a result, CBC's persona labour produces a streaming persona that reflects personal growth through the explicit contrast between CBC's two selves.

In addition to emotional labour, the labouring self performs off-stream persona labour to enable the technical and performative elements that constitute the curated self. This work includes choosing clothing and make-up for streams and organising the stream screen, alerts,[9] emote collections,[5] and the physical space from which the streamer broadcasts. These elements contribute towards the curated self and thus affect the streaming persona through streamer-platform interactions. Moreover, the labouring self does not simply enable the curated self, but bleeds into it at times, as demonstrated through Fufu's performance of busyness. Fufu's persona labour was incorporated into her curated self through her acknowledgement of challenges associated with career goals and work-life balance. In contrast, CBC's streaming persona is a product of transparent pretence that is in turn produced by the separation between his curated and labouring selves. He demonstrated this transparent pretence during a stream in October 2021 when responding to another streamer's observation that when CBC was not streaming, he was often too busy working on his stream to talk to them. CBC responded: "What're you talkin' about? I don't do anything ... I just sit in the kitchen, lookin' at my toes." CBC's kitchen, like many visual elements of his stream, is digital (see Figure 4), and his denial of persona labour — and as a result, the existence of his labouring self who performs that labour — is part of his commitment to the 'realness' of this digital world and hence his curated self

[9] Audiovisual clips that play over the stream screen when particular conditions are fulfilled. [5]Emotes function as Twitch's emojis.

residing within. These examples demonstrate how managing the relationship between the labouring and curated selves is itself a form of persona labour that elicits different configurations of streaming persona.

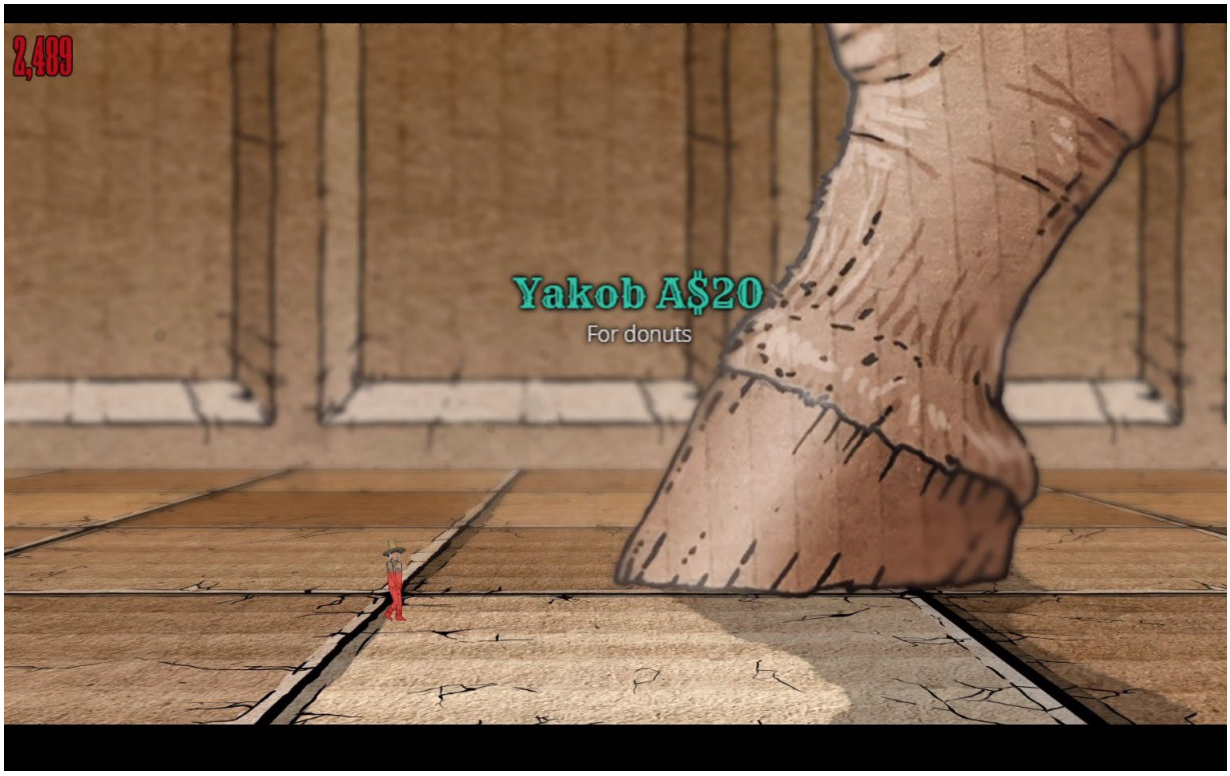

Figure 4. A shrunken CBC walking across his kitchen floor (2020).

These configurations of streaming persona can be characterised through my new concept of the *authenticity gap*. The authenticity gap is where the free movement that is persona play occurs — it is the space in which believable and permissible movement, understood in terms of the social, cultural, and technological structures of Twitch, occurs in the construction of a cohesive and authentic streaming persona. The gap is related to authenticity as it is determined by spectators' perceptions of access to a truthful or 'real' streamer, which can often

be reduced to the visibility or awareness of the labouring self through the curated self. An authentic streaming persona is one through which perceptions of an off-camera identity (perceived as the labouring self) are produced and believed to align with the streamer's curated self. Banet-Weiser (2012) claims that "authenticity not only is viewed as residing inside the self but also is demonstrated by allowing the outside world access to one's inner self" (p. 60). However, the inner streamer self is an illusion, accessible only through persona labour in the form of the labouring self. As such, authenticity is a product of persona play, as streamers move freely within the more rigid sociocultural and technological structures of Twitch in order to align or separate their curated and labouring selves. This play constitutes Marshall et al.'s (2020) notion of persona as "a public construction of the private" (p. 33). The resulting tensions between authenticity and curated presentations of self, have been previously discussed in relation to self-branding, including the emotional labour required in the production of the self as brand (Marwick, 2013, p. 196) and the identification of authenticity as a brand (Banet-Weiser, 2012, p. 11). My approach to resolving this tension is through the authenticity gap. Performative acts may be deployed in order to reshape and resize the authenticity gap, in other words to produce perceptions of authenticity, for example by aligning the labouring and curated selves or rendering persona labour visible, as demonstrated thus far through Fufu's and CBC's streaming practices. Throughout the remainder of this chapter, I use the authenticity gap to demonstrate how the path between the labouring and curated selves is not always straight, and to capture the twists and turns of that path.

To begin with, the authenticity gap exists even when it is not perceptible, such as within streaming personas that purport to reflect some 'real' streamer underneath. In these instances, smaller authenticity gaps elicit stronger perceptions of authenticity. Twitch viewers expect

authenticity from streamers, as Johnson (2019) finds when one of his streamer participants felt that they needed to disclose a neurological condition after keeping it private for two years. Streamers can feel obligated by their spectators to perform the authentic sharing of a life that may or may not be 'real' in pursuit of a small (ideally imperceptible) authenticity gap. Consequently, spectators perceive access to an authentic streamer self, and hence that they know the streamer well. When I asked streamer Juliet[10] about how well her viewers knew her in an interview, she said that

> I *do* feel like viewers probably know me better than I know them. I'm pretty open when it comes to most things as well, so I tend to share a lot of my thoughts, opinions and stories when I'm live.

She expanded upon this by adding that

> Our community as a whole has a pretty tight-knit relationship, and I feel like this extends to my connection with viewers as well. Considering the amount of time we spend together as a group, I think I'd have a hard time feeling any different.

Like Johnson's participant, Juliet narrows the authenticity gap, producing a coherently authentic streaming persona. Her labouring self is produced by "thoughts, opinions and stories" that are expressed as part of her curated self, therefore bridging the gap between her two selves. Further, Juliet frames time itself as authenticating. This temporal sentiment is extended by Consalvo et al. (2020) when they argue that liveness generates authenticity, though I emphasise that this authenticity is only *perceived* through the authenticity gap. There is always some

[10] Name changed.

misalignment between the curated and labouring selves — what I call a *minimum* authenticity gap. I agree with Senft (2008) when she interrogates the idea of 'realness' in the context of homecamming, in particular challenging the assumption that immediacy and lack of editing are sufficient for an unequivocal claim to 'realness.' She argues that access to the 'real' is disrupted by mediation and framing performed by webcams, as well as issues of representation. This disruption constitutes the minimum authenticity gap on Twitch, which is expanded and contorted through streamer decisions in the construction and performance of streaming persona.

Thus far I have examined the relationship between the labouring and curated streamer selves and identified the emergent authenticity gap between them. However, it is not yet clear how an authentic streaming persona is performed by the two streamer selves. To unlock the expanded analytic framework of authentic streaming persona as constructed and performed by streamer decisions, I return to Authenticity-Effects. In this context, Authenticity-Effects are both performative actions that lead viewers to believe that the performer is authentic and the perceived authentic self that results from those actions. Further, they

> have the capacity to generate one of more of the following sensations: that of the sincere and genuine and therefore credible, in the sense of honest and free from pretence or counterfeit, or really originating from its reputed maker or source; that of referential truthfulness and veracity, a sense that the theatrical event accurately refers to the world beyond the staged cosmos and/or is factual; and that of unmediated and intimate contact with people who actually exist or have existed (Garde & Mumford, 2016, p. 70).

As such, Authenticity-Effects in the context of performance on Twitch produce the perception of streaming persona as truthfully representing a 'real' person, rather than a purely staged performance. Garde and Mumford further describe two approaches to Authenticity-Effects: the idealising approach and the sceptical approach. The idealising approach "tends to be accompanied by the promise to provide – or the spectator's certainty that she has experienced — 'integrity,' 'honesty,' 'truthfulness,' 'immediacy'" (p. 73). In contrast, the sceptical approach considers the authentic as "the product of an agreement that has been renewed for each authenticating act" (p. 78), where an *authenticating act* is something that "audiences perceive as genuine, untrained behaviour" (p. 78). The latter approach calls into question "whether one is, or ever can be, in the presence of the authentic" (p. 79).

Authenticity-Effects are useful for developing a deeper understanding of the authenticity gap and streaming persona. Firstly, streaming persona is an Authenticity-Effect of the labouring self and the curated self. As such, Authenticity-Effects provide nuance to the authenticity gap when the Authenticity-Effects of the two selves are examined separately and through their interactions in the production of authentic streaming persona. Secondly, the sceptical approach towards Authenticity-Effects quite naturally applies to the visibility of the labouring self enacting persona labour. To paraphrase Garde and Mumford (2016), there is an authenticity agreement that is renewed for each authenticity act (of persona labour) performed by the streamer. The labouring self is produced by these authenticating acts, which also constitute Authenticity-Effects in the production of authentic streaming persona. Authenticating acts occur regularly during streams, in the form of comments about what the streamer did while they were offline, confessions that they almost cancelled the stream because they were having a bad day, references to themselves as 'quieter off-stream' (or in some other

way different from their streaming selves), their ever-present living room visible behind them, or occasional appearances by their pets. Through Authenticity-Effects, some of the more subtle distinctions between the curated and labouring selves emerge, consequently solidifying the size and shape of the authenticity gap. For example, during one stream in July 2021, Wrafferino (Wraff) spoke at length about some of her favourite streamers being "low key and chill," in contrast with her more high-energy personality. She shared her feeling that she should be quieter as a streamer, but then said "I can't change myself, like it's just not how I am." There are two primary Authenticity-Effects in this example. Firstly, the high-energy performance is an Authenticity-Effect of the curated self; it is presented as genuine, despite Wraff's feeling that performing differently might be more effective. Secondly, Wraff's disclosure of her insecurities surrounding this performance is an Authenticity-Effect of her labouring self, rendering the latter visible through her performed awareness of streaming as performance. In this moment, Authenticity-Effects demonstrate the close proximity between Wraff's labouring and curated selves and hence narrow her authenticity gap. Through the identification and analysis of Authenticity-Effects more broadly, the authenticity gap takes shape and the process of producing streaming persona through persona labour is unveiled.

In this section, I have introduced a framework for the analysis of authentic streaming persona through my key concepts of the labouring and curated selves, and the authenticity gap, as well as Garde and Mumford's (2016) Authenticity-Effects. I have demonstrated how the decisions that streamers make in the construction and performance of streaming persona can be understood as acts of persona labour performed by the labouring self in the production of the curated self, and that the relationship between these two selves is highly variable. My concept of authenticity gap serves as an intervention that acknowledges these two selves as

distinct but necessarily related, and both instrumental in the production of authentic streaming persona. Finally, I have drawn upon Garde and Mumford's (2016) Authenticity-Effects as a tool through which the authenticity gap may be primed for more the nuanced examinations of authentic streaming persona in subsequent sections of this chapter.

Curating an Authentic Streamer Self

All streaming on Twitch is a form of body work (Ruberg, 2022; Ruberg et al., 2019), and so problems of authenticity can always be examined in terms of streamer performances of body. The curated self is produced by the persona labour of engaging and referring to the corporeal streamer during streams, bringing into conversation the body work of streaming and authentic streaming persona. The virtual body operates as a "trace and representation of the always already *physical* body" (Dixon, 2015, p. 215, emphasis in original), and so I argue in this section that streamer performances of body necessarily generate or deny perceptions of authenticity into the curated self. The curated self consists of stream elements designed with an awareness of their consumption by spectators, and many curatorial decisions begin with the corporeal streamer and how streamer bodies are understood in relation to their environment. On one hand, the curated corporeal streamer produces Authenticity-Effects through constant references to and representations of an otherwise inaccessible physical body beyond the curated presentation of the stream. On the other hand, identity politics construct different sociocultural expectations of different bodies, which can in turn challenge the production of authenticity. In particular, I draw upon postfeminist scholarship to contextualise the production and reception of gendered curated streamer selves. Through my analysis of the curated self, I complicate the formation of authentic streaming persona by counter-balancing its production as an

Authenticity-Effect of the curated corporeal streamer against cultural assumptions associated with particular performances of identity which destabilise that authenticity.

The curated self is initially and most often encountered through an interplay between the corporeal streamer and technology. This interplay is most apparent through the Authenticity-Effects of facecam footage. CBC's facecam always presents the same information – his physical head, and cardboard hat and collar, upon his digital cardboard body against a digital cardboard world. Figures 4 and 5 demonstrate how this information is positioned differently on-stream depending upon the context. His curated self is performed by the mediatised representation of the unified physical-digital body, producing his nominal cardboard aesthetic and hybrid self. This hybrid self extends the Authenticity-Effects produced by each of the physical and digital to CBC's entire curated self as "audiences cognitively and empathetically perceive the performing virtual human body (as opposed to a computer simulated body) as always already embodied material flesh" (Dixon, 2015, p. 215). As a consequence of hybridity, CBC can sharply cut from a conventional gaming scene to playing a (digital) saxophone (for example from Figure 5 to 6) without his spectators perceiving the performance as inauthentic, since they are already familiar with his material and digital selves as unified. In this way, CBC's hybrid self (perhaps strangely) produces Authenticity-Effects of a perceived credible hybrid streamer self. CBC's curated self is a product of human-nonhuman collaborative persona play, moving freely within the technological structures of the Twitch platform and streaming form to create an authentic streaming persona. CBC's hybrid self is an extreme example that renders visible the use of technology in the construction of a curated self that is present in every stream that includes facecam footage.

Figure 5. A typical stream layout while CBC plays a game (2020).

Figure 6. CBC playing a saxophone (2021).

The curated self, presented through facecam footage is also subject to sociocultural practices and assumptions, which can in turn affect the construction and performance of streaming persona. Scholarship examining postfeminist cultures is particularly useful in

unveiling some of these practices and assumptions as part the gendered history of digital culture. To begin with, in her work on self-representation practices engaged by young Australian women on Social Network Sites, Amy Dobson (2016) uses the term *heterosexy* to describe "the kind of symbols, fashions, poses, and behaviours invested with current gendered ideals of sex appeal" (p. 40). This aesthetic can incorporated into the curated self as a form of sexual subjectification. Rosalind Gill (2007) frames sexual subjectification as a kind of agentic objectification associated with postfeminist practices. Specifically, the turn from objectification to sexual subjectification describes how "women are not straight-forwardly objectified but are portrayed as active, desiring sexual subjects who choose to present themselves in a seemingly objectified manner because it suits their liberated interests to do so" (Goldman as cited in Gill, 2007, p. 151). Female-presenting streamers are often criticised for curatorial decisions that may produce a heterosexy aesthetic or be construed as sexual subjectification, such as positioning their camera high and angled down (maximising visible cleavage), wearing low-cut tops, or taking up too much on-screen space with their facecam (Ruberg et al., 2019). Complaints enforce gendered social and cultural standards around curated selves and authenticity by suggesting that heterosexy aesthetics on Twitch 'unfairly' deploy performances of female-presenting bodies to divert attention from male-presenting streamers. These standards set out to control female-presenting bodies by delegitimising particular curatorial decisions. Gill explains that

> The body is present simultaneously as women's source of power and as always unruly, requiring constant monitoring, surveillance, discipline and remodelling (and consumer spending) in order to conform to ever-narrower judgements of female attractiveness (p. 149).

Though Gill refers to shifting beauty standards, I argue that sociocultural structures bounding persona play adhere to the same logic. Female-presenting streamers are empowered to construct and perform heterosexy aesthetics. By so doing, they push against the social and cultural structures bounding their persona play, resisting the dominant masculinity of the platform through their curated selves. However those boundaries push back, attempting to contain and assert control over those bodies, lest female-presenting streamers deploy their bodies to come by success too easily, as Ruberg et al. (2019) find in their examination of Reddit users' comments. The curated selves, and hence streaming personas, of female-presenting streamers are performed in relation to these postfeminist practices.

In turn, gender politics can lead to challenges to the curated selves constructed and performed by female-presenting streamers. Female-presenting streamer Laser[11] demonstrated how men can (attempt to) enact agency over streamer performances of femininity during a stream in September 2020 when she stated that "boys for some reason just don't want me to cut my hair ... They're like 'ohmygod long hair is so feminine' and they make me feel guilty for wanting to cut my hair." These comments suggest that Laser's authentic curation of her body is less important than adhering to heterosexual male standards of attractiveness and femininity. In contrast, Wraff was critiqued for her curated femininity while streaming in September 2021:

"What's up with all the RGB and e-girl headset?" a chatter sent.

[11] Name changed.

> "So the thing is [chatter] that I like this headset and I like lights, and that's pretty much about it," Wraff responded.
>
> *"I'm not saying this is bad or anything, just used to watch sometime ago and now a lot has changed."*
>
> "Yeah I upgraded my set-up because I was able to."

RGB refers to coloured LED lights present in the backgrounds of many streams, and the 'e-girl headset' to which the chatter referred was a pink headset adorned with cat ears. Additionally, though the connotations of 'e-girl' are somewhat in contention, in this example the connotation almost certainly pejoratively associates the headset with a 'fake gamer' aesthetic. In both examples, streamer agency around curated performances of femininity is critiqued. Laser's choice is not feminine enough, while Wraff's aesthetic is too feminine (or the wrong kind of feminine). These explicit criticisms of female-presenting streamers' self-presentation choices raise questions of authenticity. While Authenticity-Effects would typically be produced through the curated self via haircuts, headsets, and lighting, in these examples authenticity is disrupted by gender politics. The relationship between the curated self and authentic streaming persona is complicated by challenges to the agency of female-presenting streamers.

From this complication to authenticity, I note an ambivalence whereby female-presenting curated selves are expected to adhere to heterosexual male standards of attractiveness (including appearance and interests) but are treated with scepticism when these standards are met. This ambivalence is visible in challenges to Laser's and Wraff's agencies above. It is also visible through a parallel that I observed by particular attitudes towards make-up and the claim that sexual subjectification by female-presenting streamers is somehow

deceptive or inauthentic during one of Laser's streams in September 2020. A spectator asked why "no make-up make-up" (make-up that is less noticeable) was "so good at tricking guys." Laser's reply appealed to common sense:

> "You know how faces look. Do you really believe that women just don't have pores? Like do you just think that ... that's just common sense though. You know how bodies are, you know how faces are. It's not our fault that you guys ... I mean it's not tricking anybody. I'm not like," she moved closer to her microphone, "'Oh my fucking god Imma put this on so Imma trick Brad into liking me.'"

As the conversation continued, a number of (presumably male) viewers communicated the belief that women's choices around make-up and dress were made to attract and deceive them. The Authenticity-Effects inherent in the presence of the corporeal streamer are compromised by a curated self that is suspected of appearing attractive to viewers through make-up or relatable through a fake interest in gaming. There emerges a narrow line that female-presenting curated selves must tread to avoid accusations of inauthenticity, being both sufficiently heteronormatively attractive (without wearing too much make-up or otherwise enacting sexual subjectification) and performing the right kinds of interest in the right kinds of games.

The ambivalence of the female-presenting curated self around persona play on Twitch also expands beyond particular practices to performances of identity associated with those practices. This ambivalence echoes Dubrofsky and Wood's (2014) "call to authenticity," which communicates how

> Women are both lauded for being empowered through expressing themselves and criticised for the consequences of this display, enabling representations of women

> as enterprising individuals who willingly subject themselves to the [male] gaze as a form of agency (p. 284).

This same ambivalence between authenticity and sexual subjectification is active in my framing of the curated self, particularly as Authenticity-Effects are affected by sociocultural assumptions of gender in the formation of streaming persona. Female-presenting streamers enact agency in the construction and performance of their curated selves, however these selves are subject to surveillance that expands beyond particular curatorial decisions — like haircuts, headsets, or lightning — to the streaming persona as a whole.

I have examined here the curated self produced by particular acts of persona labour and as it produces the Authenticity-Effect of streaming persona. With a particular focus on the interplay between the corporeal streamer and technology, I emphasised how Authenticity-Effects are inherent in the presentation of the corporeal streamer. However the corporeal streamer is framed through numerous streamer decisions and deployments of technology as acts of persona labour in the production of the curated self that in turn affects the streaming persona. I extended this argument beyond streamer decisions to sociocultural assumptions around particular performances of identity by engaging postfeminist scholarship and examining the gendered nature of authenticity. In particular, I demonstrated ways that the authenticity of female-presenting streamers is highly ambivalent and subject to both the decisions that these streamers make in the construction and performance of their curated selves, but also gendered assumptions that affect the reception of those curated selves independently of any particular curatorial decisions. Gender politics thus become additional boundaries with and within which streamers play persona. As such, I have shown how streaming persona

emerges from the streamer's curated self and sociocultural assumptions around performances of identity on Twitch, as well as the interplay between the two.

Labouring (and Layering) Authenticity

Unlike the curated self, which is intended for consumption by spectators, the labouring self is perceived to be incidentally consumed (even when it is intentionally presented). By focusing upon this distinction, I move in this section to an analysis of streaming persona as an Authenticity-Effect of the labouring self. I reiterate the illusory nature of the labouring self – the self enacting persona labour – namely that it is only ever *perceived* by spectators, and that persona labour produces this perception. When persona labour is perceived, the illusion of an authentic streamer identity 'behind' the streaming persona is solidified and brought forward as an Authenticity-Effect of the labouring self. In this section, I examine acts of persona labour that render visible the labouring self, thereby producing these particular Authenticity-Effects, and that this production occurs in multiple layers. Different layers of authenticity are simultaneously produced by streamer performances of affect and game play as persona labour is enacted and performed by the streamer. I argue that streamers demonstrate conscious control over the visibility of the labouring self as they explicitly construct and deny Authenticity-Effects through performances of their 'personal' narratives and relationships, and this control in itself constructs and performs authentic streaming persona through the labouring self.

As a first instance of this layered persona labour, the labouring self is visible through both the affective performances of the corporeal streamer and the framing of those performances. I observed many streamer reactions to in-game occurrences that elicited stronger spectator responses than the in-game occurrences themselves. For instance, while streaming in August 2020, I once unconsciously performed my shock in response to an in-game character's

death through raised eyebrows, widened eyes, and an open mouth. My performance of emotion created perceptions of an authentically reacting, feeling self responding to the in-game death. Some streamers technologically extend their affective responses, for example by briefly switching to stream scenes with larger or zoomed in facecam footage. This practice focuses attention more strongly upon their performances of emotion. However, it also highlights an awareness of this expression as an act of performance and renders visible the labouring self who performs the switch. Thus the Authenticity-Effect associated with the performance of emotion itself is reduced and coupled with the second Authenticity-Effect of the labouring self enacting curatorial decisions to direct spectator attention.

Additional layers of authenticity are produced by the corporeal streamer through the physical and curatorial persona labour of playing games. Brendan Keogh's (2018) phenomenology of videogame experience examines the role of the body during videogame play, consciously attending to ways that videogames engage the body that are less often considered by scholars. Applying his argument to Twitch, when the corporeal streamer is visible during videogame play, the corporeal labouring self transforms into a playing self. Fufu regularly performs game play that engages the expanded corporeal streamer, for example through the exercise game *Ring Fit Adventure* (2019) (see Figure 7) and the VR rhythm/dance game *Beat Saber* (2018) (see Figure 8). Games like these require and direct focus towards physical persona labour, through which Fufu produces the Authenticity-Effect of a streaming persona enthusiastic about fitness and health. In addition, this Authenticity-Effect is enhanced by the curatorial persona labour enacted through Fufu's choices in communicating her playing self. Specifically, she expands her included camera footage to capture her entire playing body,

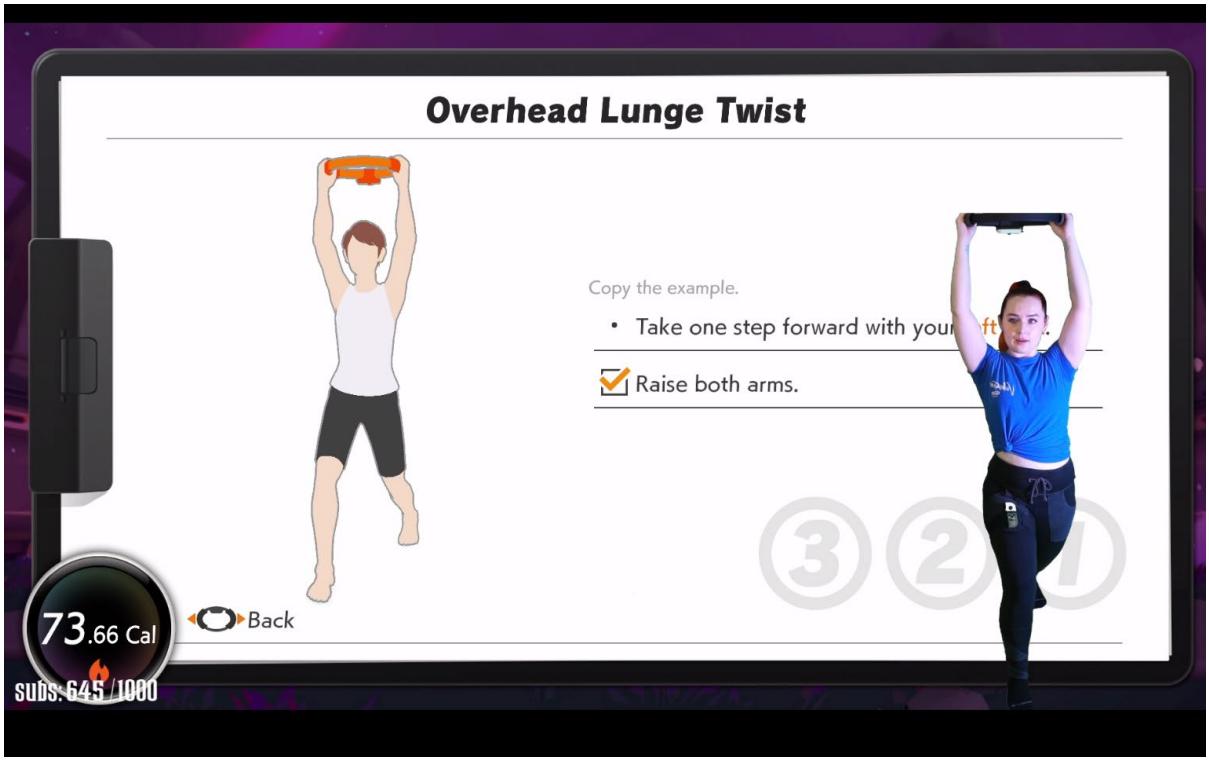

Figure 7. Fufu playing the 2019 exercise game Ring Fit Adventure (2019).

Figure 8. Fufu playing Beat Saber (2018), with her view visible in the bottom-left (2021).

adding her first-person perspective when playing *Beat Saber*. When watching a streamer playing a rhythm game, Egliston (2020a) observes that

> the close-ups of haptic engagements with the game show how various gaming peripherals are necessary and active components to the game's operation – and moreover, to *how the game is experienced by a human player* (p. 252, emphasise mine).

In my terms, Egliston observes that framing decisions produce the labouring self through the perceived authentic experience of the playing self. In Fufu's streams, the collaborative effect of the physical and curatorial persona labours is twofold: play is perceived authentically as happening live and performed by Fufu; and, as an Authenticity-Effect, Fufu's streaming persona is perceived as genuinely interested in these forms of play. The labouring self is consequently visible – and thus authenticity is produced – through both the playing corporeal streamer and how it is framed for consumption by spectators.

The playing self may also produce the labouring self through embodied communication of attention and focus necessary for play. In particular, streamer gaze and posture signify directed attention and levels of concentration (Recktenwald, 2017, p. 74). For example, while streaming an encounter with one of the many bosses in *Cuphead* (2017) in August 2021, Celina leaned forward, communicating her concentration and investment in the game. This shift in posture is referred to as the *gamer lean*, a meme that pejoratively associates the physical change with a player taking the game too seriously. When a member of chat observed Celina's posture change, the chatter used Celina's snapshot feature to capture a frame of her facecam footage, which was then displayed on the stream screen for an additional minute (Figure 9). This snapshot was captioned by a chatter with the phrase "PRO GAMER LEANS FORWARD."

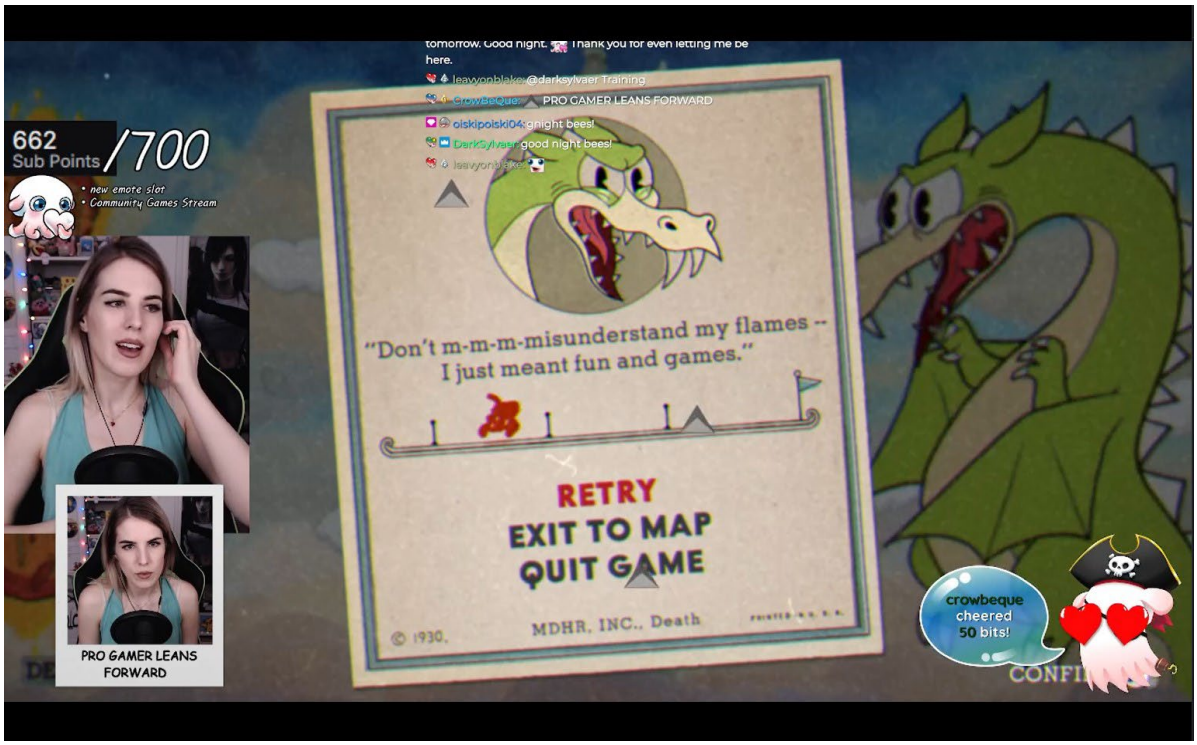

Figure 9. Celina's snapshot including the caption "PRO GAMER LEANS FORWARD" (2021).

Through the reference to the gamer lean, the chatter was accusing Celina of (unconsciously) taking the game too seriously. When she saw the snapshot, Celina said "Oh crap, am I doing the gamer lean? Oh god," before sighing and leaning back. "Thank you [chatter]. Am I do-I was doing the disgusting gamer lean." Similarly, when The_Happy_Hob had won a game of *Call of Duty: Warzone* (2020) during a stream in September 2021 and claimed he was "super serious" in the following game, he visibly craned his neck in different directions. Spectators commented on his "*NECK ERECTION*" and "*meerkat mannerisms.*" In both of these examples, spectators perceived the streamers' labouring – playing – selves, which had the Authenticity-Effect of a genuine focus on and investment in play. This Authenticity-Effect was extended by further performances that communicated a lack of intentionality behind their postures, particularly in Celina's case. Spectators consequently revealed their perception of the authentic

labouring self through their comments, which demonstrated an acute awareness of the shifts in posture and an assumption that these shifts were not intentional. As such, the framing of the playing self extends beyond the camera to streamers' performed awareness of their bodies, which create additional layers of authenticity.

Additionally, layers of authenticity may be produced by the labouring self through stream narratives. Stream narratives authenticate streaming persona by producing perceptions of an offline self consistent with the streamer with whom spectators interact. These narratives develop through mundane acts of persona labour, including streamer discussions of housemates, family members, or pets, answering phone calls during stream (especially if they are visible or audible while speaking), and discussing what they do between streams. These moments produce an image of the labouring self, and consequently impact streaming persona as an Authenticity-Effect. However, CBC plays with the construction and performance of authentic streaming persona in this way through his enactment of transparent pretence. He often recaps his stream narrative as an act of persona labour, and I include here an extended example from a stream in August 2020 to demonstrate how he blends believability and absurdity together in his stream narrative:

> "Lemme give you some backstory on Cardboard Cowboy," CBC said. He spoke quickly, as if he had told this story often before.
>
> "My dad went away," he continued, "Left me in charge of our property. He said to me, 'Cowboy my son you're a stupid idiot, but I'm proud of you' — that's exactly what he said — 'I'm going away to get some cattle, you need to take care of the place.' And I said 'nooo problem dad, I can do that easy,' and he said 'good, because I'm counting on you son,' and I said 'you can count on me dad. I got this.

I know what I'm doing' and he said 'good cause I need you to know what you're doin' and I said 'that's no problem dad, I know what's going on' and he said 'good, cause off I go' and he left.

"And uh the money he left, for me to take care of the place uh I spent all that on a brand new gaming PC to get on Twitch. Then I got on Twitch and everyone was like 'wow Cowboy you're handsome. Can I do that? Just put on stupid hat and make tons of money?,'" here he referenced a comment from chat which posed a similar question, "And I said 'well maybe. Give it a shot. But you gotta live it.'"

"And then [chat] said 'get a wombat,' and I said 'I don't want a wombat' and they said 'go on, get one' and I said 'hey why don't you just shut the fuck up' and they said 'because we're chat. All we do is chat.'

"I was about to leave for TwitchCon[12] and chat was like 'get a wombat' and I was like 'shut up.' And then when I went to leave, there was a little thing out the front. A little package. There was something in that package. Here's some clips put together in a video format for you to enjoy. Sit back, relax, throw your pants out the window, get your ice cream ready."

The stream screen was then completely green with the words 'PREVIOUSLY ON CARDBOARD COWBOY' capitalised and centred. The font had a Western feel appropriate for a cowboy.

[12] An annual convention centred around Twitch.

In the clips that followed, CBC's hybrid physical-digital self performed his (abbreviated) stream narrative from the unpackaging of a digital rabid wombat until the present. I previously argued that the Authenticity-Effects of CBC's physical head expand to his entire hybrid self, which lends authenticity to his narrative as he is visually unified with the digital world presented in the clips. However, CBC's corporeal labouring self is simultaneously perceived through its absent elements. The suggestion that CBC might attend the in-person TwitchCon event provided the tantalising prospect of access to the corporeal streamer, since the technological limits of the platform constrain his hybrid self to virtual spaces. However, this prospect was subsequently denied through his stream narrative, when his TwitchCon attendance was prevented by an aggressive wombat. Complex layers of authenticity emerge through the narrative's assertion that CBC's hybrid self is authentic, while the absurdity of the narrative – rather than its believability – produces perceptions of his labouring self. CBC's streaming persona is therefore simultaneously produced by seemingly contradictory Authenticity-Effects. His transparent pretence perpetuates these contradictions as spectators both believe CBC's narrative as part of his streaming persona while also perceiving the labouring self that is constructing and performing that persona. As such, (sometimes contradictory) layers of authenticity are played out through stream narrative in its production of the labouring self.

These same layers of authenticity are often evident in the ways that streamers' romantic and sexual relationships are performed as part of – or explicitly excluded from – the streaming persona. Many streamers openly share their relationship or marital status with their viewers, with their partners or spouses even participating in chat or appearing on stream. These inclusions are authenticating, as images of the offline labouring self are sharpened by the

visibility of the relationship. In contrast, some streamers explicitly assert boundaries around this aspect of their life, very clearly demarcating it as private. When spectators query a streamer's relationship status, they are often pushing against this boundary and these streamers push back to maintain that privacy. For example, when Laser was asked in October 2020 if she was *"single, married, taken, complicated,"* she responded with:

> "[Chatter]," she faced an open palm towards her facecam, "Imma stop you right there. We're gonna halt ... Once we start approaching personal life territory, we're gonna, we're gonna take a step back and not."
>
> Numerous other spectators agreed that the question was inappropriate or gave facetious answers like *"shes dating ur mom lol"* [sic].

Similarly, when asked if she had a partner in August 2019, Amber responded with a twinge of disappointment and exasperation in her voice,

> "I'm not gonna answer that," she interrupted herself speaking on another topic to address the question, "I'm sorry, man. We don't do that here. I'm partnered on Twitch, did you see that?"

Amber referred to her status as a Twitch Partner, a common wordplay that she used when asked this question. Laser and Amber both explicitly deny Authentic-Effects emerging from spectators knowing their relationship statuses, instead insisting on a firm boundary. While the authenticity agreement is typically consciously renewed in order to maintain an authentic persona and build streamer-spectator relationships, these streamers deliberately perform persona labour to bound that relationship and deny potential renewals of the authenticity agreement. However, this explicit separation is not denying all Authenticity-Effects. In fact,

the boundary itself produces the perception of the labouring self through its inaccessibility. That is, following the logic that there can be no boundary if there is nothing to bound, spectators perceive the labouring self through its denial. As such, the assertion of these boundaries become part of authentic streaming persona through interconnected layers of authenticity produced by the labouring self.

Through the labouring self and its representation of an illusory authentic streamer identity, I have now further developed streaming persona as Authenticity-Effect. In particular, I examined the layers of authenticity that are produced by different acts of persona labour and their impacts on spectator perceptions of the labouring self. I drew upon a range of examples of particular acts of persona labour and Authenticity-Effects, including affective performances of the corporeal streamer, the playing self, stream narratives, and streamer relationships. However, across all of these examples I observed a split between the act of persona labour itself and the additional persona labour associated with framing the former for spectator consumption. Layers of authenticity characterised this split, and streaming persona emerged uniquely as an Authenticity-Effect of their collaborations, distinctions, parallels, and dissonances.

The Authenticity Gap as Space for Persona Play

Thus far, I have attended closely to the streaming persona as an Authenticity-Effect of the curated and labouring selves separately. Yet these two selves to merge, extend, contradict, and undo each other in the production of authentic streaming persona. This shifting relationship is captured by my concept of the authenticity gap, which I deploy in this section to demonstrate how connections and disparities between the curated and labouring selves produce streaming persona together through layered Authenticity-Effects. I reiterate that persona play, inspired by

Salen and Zimmerman (2004), includes a streamer moving freely within the more rigid social, cultural, and technological structures of Twitch. The curated and labouring selves are independently playful following this definition, as demonstrated in previous sections, however they are not independent. For example, the labouring self is perceived as incidental regardless of its potential to be consciously presented for spectators and hence part of the curated self. Through the authenticity gap, I demonstrate how the production and management of Authenticity-Effects across and between the curated and labouring selves are acts of persona play. The authenticity gap begins with the necessary separation of these selves through their statuses as product and performer of persona labour respectively. This gap is a space of believable and permissible (free) movement bounded by the social, cultural, and technological structures of the Twitch platform that results in the construction of a cohesive and authentic streaming persona, making it a space where persona play occurs. In the next section I attend to the authenticity gap as ever-present through the mediation of the corporeal streamer as part of the production of the curated self, but to do so I first focus upon how the gap may be shaped and sized differently through the tensions, contradictions, and blending of the curated and labour selves. Through its constant state of flux, the authenticity gap playfully contributes to the construction and performance of streaming persona and is a valuable tool for visualising streaming persona as unified Authenticity-Effects of the curated and labouring selves.

To begin with, the authenticity gap can be minimised as labouring and curated selves iteratively feed into each other. This cycle forms when the curated self elicits responses that necessitate particular acts of persona labour, which often plays out in response to visible cultural identity markers of the corporeal streamer presented through the inclusion of a facecam on-stream. As such, the decision to include facecam footage carries the weight of identity

politics through visible cultural markers of race, gender, sexuality, or ability, particularly for bodies situated outside of normative identity constructs on the platform. Writing from a black cyberfeminist perspective, Gray (2017) emphasises that the mere existence of users that do not fit the assumed default gamer identity (white and male) is countercultural, thereby characterising them as deviants. The choice to present the corporeal self through the inclusion of a facecam is thus a deviant act for these streamers, which creates additional necessary persona labour through responses to this deviance. For example, markers of femininity can lead to uninvited comments about looks and pet names like 'beautiful' or 'angel,' as well as projected assumptions around gender and gaming expertise and skill. Female-presenting streamers enact persona labour as they manage these comments and assumptions, and this persona labour is often presented in a way that blends the labouring and curated selves. During one of female-presenting Juliet's streams of a difficult game, a chatter told her that she would soon quit the game because it was too hard, implying that it was too hard *for her*. The chatter projected an assumption about Juliet's abilities as a player based on her gendered performance of streaming persona, which is primarily communicated to spectators through her facecam. Assumptions like these – responding to Juliet's curated self – both inform and necessitate the gendered labour of Juliet's streaming persona, which she enacts by blending her labouring self into her curated self. As an immediate example of this labour, Juliet laughed the comment off and informed the chatter that she had played similarly difficult games before and that she enjoyed the challenge. As an ongoing instance of this labour, she must display sufficient skill in her videogame play to combat the assumption and pre-empt similar comments in the future, as well as to authenticate the pleasure that she claims to derive from these games. While I define the curated self as produced by persona labour, in this case, sociocultural assumptions

around Juliet's curated self necessitate particular acts of persona labour, which are performed as part of the curated self – to be consumed by spectators and resist those gendered assumptions. In other words, Juliet's labouring self merges with her curated self in order to push against the constricting sociocultural boundaries that constitute the identity politics of Twitch. The two selves are inextricably bound with a near-indiscernible authenticity gap. Streaming persona is thus cyclically produced through the authenticity gap, specifically though interactions between the curated and labouring selves. However, this cycle – and hence the production of authentic streaming persona – is affected by the identity politics of Twitch.

In turn, perceptions of a complete streamer identity that extends beyond the stream may be crafted through curated facecam content and a separation between the curated and labouring selves. More specifically, when streamers perform the restriction of access by explicitly refusing to share parts of their bodies on-stream, they produce a highly ambivalent streaming persona as an Authenticity-Effect of the curated and labouring selves. On one hand, a tension between the two selves emerges as the labouring self bounds the curated self. On the other hand, this bounding extends the curated self through the perception of a complete identity that is withheld from spectators. This dynamic is somewhat similar to the Authenticity-Effects previously discussed in terms of CBC's production of stream narrative and streamers' refusals to share their relationship status, whereby lack of access denies particular Authenticity-Effects but enables others. For example, Laser removes her facecam footage from the stream screen when she has to stand up. She has justified the removal during streams as intended to avoid spectators seeing her from behind and sexualising her. Through this choice, she adjusts her curated self to reduce access to parts of her body that spectators may sexualise. The knowledge that there is a complete corporeal streamer that is inaccessible produces the Authenticity-Effect

of a complete streamer identity that becomes part of Laser's streaming persona that is not readily available to spectators. Laser's streaming persona is therefore (unexpectedly) authenticated by her deliberate separation of the curated and labouring selves, combined with the attention she draws to that authenticity gap. Though streaming persona is performed live, spectators can clip short stream segments that are then accessible through the streamer's Twitch page. Laser has explained on a number of occasions that her choice to restrict access to parts of her body is in response to clips that she suspects spectators have used to record and re-view moments of that they find arousing. In other words, Laser shapes her authenticity gap in response to the techno-social practice of clipping as an avenue for facilitating heterosexual arousal. The shaping of the authenticity gap through truncated access to the body is yet another form of gendered labour. Laser, like many other female-presenting streamers, presents a streaming persona that is curated not only via restricted access to the completely visualised corporeal streamer but performing said restricted access, thereby reinforcing the illusion of a complete streamer identity through the curated and labouring selves. Unexpectedly, this illusion is produced not by bringing the two selves together, but rather by deliberately and explicitly pulling them apart.

As well as producing the curated self through technology, the live production of the curated self through clothing and make-up can place the authenticity gap in flux through oscillations across and between live performances of self. In their examination of drag streaming as a stream practice that (re)presents the body as an expression of queer identity, Persaud and Perks (2022) use the term *queer mediated liveness* to describe the "particular ways in which drag streamers, and queer live streamers in general, navigate layered expectations for authenticity and vulnerability during their live performances" (p. 9). The ways that the

corporeal streamer is prepared and presented in these cases – particularly as done on-stream – produce streaming persona through a shifting relationship between the labouring and curated selves as the labouring self visibly curates the corporeal streamer. I observed a similar process of identity construction as persona play in the authenticity gap during the first hour of one of female-presenting streamer PaladinAmber's (Amber's) streams in September 2020, during which I watched Amber apply her make-up. Amber's presentation without make-up and her decision to perform her make-up routine while streaming produced Authenticity-Effects as spectators had access to something that was perceived to be private for Amber. This performance narrowed the authenticity gap by integrating her labouring self that typically applies make-up off-stream into her curated self that results from this process, as such constituting an authenticating act of access to her off-stream 'real' self. In a similar situation, Henderson and Taylor (2019) argue that authenticity is produced by two Australian YouTube vloggers through both the application of make-up during vlogs and visualisation of the vloggers without make-up. In Amber's case, the authentic image of the labouring self applying make-up was destabilised when she admitted that she had already prepared her eyelashes before going live. However, there was a double-play of authenticity when she accompanied this admission with the explanation that preparing her eyelashes was a difficult and frustrating part of her routine. Though spectators were denied access to the entire make-up routine, the authenticity agreement was renewed through the confessional mode that she entered when sharing her frustrations. The authenticity gap was in a constant state of flux as her labouring and curated selves were pulled apart by part of her process occurring off-stream, and simultaneously brought together by the confessional mode. As a consequence, Amber's streaming persona was subject to these oscillations across and between various versions of her curated self and the

visibility of her labouring self, from the unseen application of eyelashes until the process was complete and Amber resembled the curated self with whom her spectators were familiar. The authenticity gap should therefore not be seen as static, but fluid and subject to the conditions under which the labouring self produces the curated self.

The balance between disclosure and pretence, as connected with the labouring and curated selves respectively, may also be consciously deployed to produce an authentic streaming persona. This balance may be communicated through *streamer voice*, a term which I adapt from streamer Crayator to refer to streamers' vocal performances of streaming persona. Voice contains cultural markers of identity that streamers can lean into or perform away from. Streamers can also alter pitch, tone, volume, and vocal inflections to craft a more engaging and interesting voice to listen to. While streaming in March 2021, Juliet communicated how her voice had changed over time:

> My voice also sounds different now. I assume that has to do with confidence, but yeah, if you go back to even streams from a couple of years ago, my voice sounds completely different.

As in my previous discussion, Juliet again narrows the authenticity gap, this time by implying that the voice of her curated self is her only voice. However, Crayator presented an alternative perspective through his discussion of streamer voice in February 2021, during which he performatively stretched and reshaped his authenticity gap, which is best captured through an extended recount:

> "Should I use my real-life voice?" he said as he pulled in his microphone. His voice suddenly softened, deepened, and had less tonal variety. It was now more pleasant, but less interesting.

“Is this a little bit better? Should I use my voice I use when I’m away from the camera-is this a little bit better?” he made eye contact with his camera, “’cause this is my real voice, right ’ere. This is it. This is my real voice. This is me.” His streamer voice returned.

“But then again I’d rather just sound all the way up here, you know what I mean? In my streamer voice. Hi guys! I’m a little bit whacky!”

These last comments were accompanied by a greater exaggeration of his streamer voice and laughter.

“I hope you guys know that, yeah, I don’t sound like this when I’m away from the camera. I hope you guys know that. Like this is my-I just showed you guys the difference in a voice, right chat? But I hope you guys also know, most streamers do this by the way. You should hear streamers in real life. You know [streamer’s] voice? Completely different. [streamer’s] voice? Completely different. [Streamer’s] voice? Even different.

“I’ll just show you it. I’m not afraid to show you the difference. Some people get worried that you’ll see, you know, the split in- in characters. You know what I mean? And they get a little bit you know badda bing badda bang weird about it, but I don’t mind if you guys know I put on a voice. Of course I do. Of course I put on a voice ... You would do it as well, you know what I mean? It’s just something you do when you’re on camera. It’s hard to explain.”

During this stream moment, Crayator used distinct voices – the streamer voice of his curated self, and his 'real' voice through which his labouring self is perceived. He framed streamer voice as normal and natural for streamers, thereby normalising the existence of an authenticity gap through streamer voice. However, Crayator's disclosure has a similar effect on the authenticity gap as Amber's disclosure during her make-up stream; the confessional mode that he enters, along with the comfort that he performs in his disclosure, produces streaming persona as an Authenticity-Effect of both the curated and labouring selves. Unlike Amber's make-up stream, this Authenticity-Effect occurs through Crayator's deliberate separation of the two selves and through the perception of the authenticity gap. Even though Crayator shifts back into his streamer voice (and thus his pretence), the perceived authentic streaming persona remains as spectators feel that they have been let in on a secret. In this way, the authenticity gap itself may be deployed to produce authentic streaming persona.

The authenticity gap is also shaped by expressions of the curated self that point towards, without being part of, the corporeal streamer. In her examination of expressions of girlhood through Social Networking Sites, Dobson (2014) emphasises that heterosexiness extends beyond the presentation of the body to iconography and decorations, and a performative shamelessness. As I previously discussed, female-presenting streamers' curated selves are produced in relation to heterosexiness in ways reminiscent of Dobson's findings. Dobson's research subjects would be contemporaries of the female-presenting streamers whom I discuss – those teenagers a decade ago now being in their mid- to late-twenties. Through authenticity gaps, these streamers demonstrate conscious engagement in, resistance towards, and subversion of heterosexiness. While I previously demonstrated how Laser resists heterosexy performance through the deliberate and explicit production of an authenticity gap, female-

presenting streamer Edybot (Edy) reduces the perception of an authenticity gap through a heterosexy aesthetic produced by stream elements other the corporeal streamer. This heterosexy aesthetic is in part attributable to her incorporation of the phrase 'mommy milkers' into her curated self. During a bathroom break in one of her streams in June 2021, she played a recorded spoken word poem. As her recorded voice spoke the lines of the poem softly and slowly paced, the words appeared on-screen. The words were from a chatter's comment history in her own channel. The first verse of the poem was from messages dated August 2020:

MILKY MILKY

MOMMY MILKERS

MOMMY THIRSTY SUCKY

MOMMY

MOMMY MOMMY

MOMMY MILKY

MILKY NOW?

BYE MOMMY

There were two additional verses, dated later that month and April 2021 respectively. As the poem progressed, the soundscape became increasingly sinister with Edy's voice distorting and the introduction of machinic sounds. The final line, "I LOVE MILKIES," repeated over and over, echoing long past its disappearance from the stream screen and accompanied by giggles until eventually it faded to nothing. The poem, as an expression of Edy's curated self, is

extended into her stream iconography through a subscriber emote of a small milk carton decorated with the label "MOMMY MILKERS." Through the poem and emote, Edy performed sexual subjectification through the sexualisation of the maternal function of the female breast, separately from – but pointing towards – her body. This heterosexy aesthetic produces similar ambivalent Authenticity-Effects to Laser's framing of her body with a very different relationship to cultural assumptions associated with that body. Like Laser, Edy alludes towards the labouring corporeal streamer that can only be visualised through the poem. However, in contrast with Laser, Edy's allusion plays into, rather than resists, the "gendered ideals of sex appeal" (Dobson, 2016, p. 40) constituting heterosexiness. As such, Edy's curated self co-opts sexually harassing messages to conjure an image of a separate labouring self, which renders the authenticity gap perceptible. Her heterosexy aesthetic, in particular her performative shamelessness, occurs not through sharing of her body, but rather imagery of withheld parts of her body. Additionally, she has commodified these aspects of her curated self by uploading the poem to Spotify and requiring a monthly subscription fee of US$10 to access the emote. Edy demonstrates how the corporeal streamer may be engaged to bridge the (authenticity) gap between the curated and labouring selves. The two selves overlap, while not completely merging, through the perceived and performed corporeal streamer.

While streamers like Laser and Edy enact agency over their streaming personas to create enlarged authenticity gaps, performances of disclosure may appear as acts of streamer agency that reduce perceptions of authenticity gaps. I have demonstrated oscillations in this regard already in relation to Amber's make-up stream. However, particular kinds of disclosures, such as those related to able-bodiedness or disability, tend to have a much less flexible impact on the authenticity gap. Streamers have a level of control over whether to

communicate these aspects of the corporeal streamer as part of the streaming persona. For example, while a physical disability that affects a streamer's ability to walk would prevent them from playing fitness games as Fufu does, the streamer may opt to produce content not requiring them to disclose their disability to spectators. In their study of streamers with physical disabilities, Anderson and Johnson (2021) find that "gamer identities and disability identities dissolved into each other and co-defined each other as a single concept" (p. 9). Their findings stemmed from the experiences of streamers reporting physical disabilities that directly affected what their bodies could do and visible restrictions from performing play in the same way that normative bodies could. In contrast, while neurodiversity typically is not present through visible markers on the body, it does affect streamer behaviours and thus affects streaming persona – even if the persona is not explicitly identified as neurodivergent. As such, when streamers make the choice to disclose neurodiversity, they bring their curated and labouring selves closer together. For instance, Amber has been diagnosed with ADHD and makes the choice to share her neurodiversity with her spectators, which produces Authenticity-Effects. On multiple occasions, she has described how ADHD affected her childhood and how it continues to affect her day-to-day life. She said regarding streaming while live in July 2021 that

> I will either want to talk, or I will not want to talk at all, which is really interesting, because obviously my job is to sit here and talk with you lovely human beings for as long as I possibly can ... And I can do that, and I can play video games at the same time, because my brain is getting enough serotonin that I can do the thing that I need to do.

I had observed the process that she described throughout many of her streams. Amber's curated self was necessarily affected by her ADHD, even if it wasn't perceived as such. It is only through her disclosure to spectators that ADHD was perceived as part of her labouring self and hence contributed to her authentic streaming persona. Following her disclosure, Amber's ability to maintain multiple conversations at once while playing sometimes quite demanding games became authenticating as a performance of persona that she attributed to her ADHD. Performances of disclosure thus narrow authenticity gaps by producing authentic perceptions of the labouring self as part of the curated self.

While the streaming persona is an Authenticity-Effect of the curated self and the labouring self, it is also produced and framed by interactions between these two selves. In this section, I have moved through a number of different possible arrangements of curated and labouring selves, which resize and reshape the authenticity gap, and examined how those arrangements affect the production of authentic streaming persona. I have demonstrated how the perceptions of the authenticity gap may be deliberately obscured or enhanced, and how these perceptions may affect the performance of persona labour as part of the curated self. Consequently, the construction of the authenticity gap is an example of persona play as streamers freely shift the relationship between the curated and labouring selves within the social, cultural, and technological structures of Twitch. Through the remainder of this chapter, I examine how these arguments surrounding the curated and labouring selves expand beyond the corporeal streamer through nonhuman stream actors.

Live Mediation of the Corporeal Streamer as Nonhuman Persona Play

While the curated and labouring selves are performed through the corporeal streamer, all encounters with streamers on Twitch are actually encounters with virtual representations of streamer. Technology mediates the presentation of corporeal streamers, which can stall the production of authenticity. As streamers perform mediation live in the preparation and presentation of the curated self by monitoring audio levels and camera angles, they produce the labouring self for spectators. Moreover, this live mediation necessarily separates the curated and labouring selves as the physical streamer body is captured as digital information and transported to spectators' screens via the internet. This separation is what I call the *minimum* authenticity gap and in this section I examine how it affects streaming persona. I introduce the term *mediating objects* to refer to nonhuman stream actors whose use necessitates a separation between the streamer's physical body and its representation as part of the curated self, for example, lights, cameras, and microphones. Mediating objects perform, and are performed, in ways that purport to minimise the separation between corporeal streamer and curated self that these objects necessarily produce – to blur the line between representation and represented. Through these performances, I argue that live mediation is a performance of persona labour by and through nonhuman stream actors that maintains and extends the Authenticity-Effects produced by the curated and labouring selves thus far.

To begin with, proximity between the corporeal streamer and their camera parallels the relationship between streamer and spectator, as the camera acts as the eye of the spectator. The distance and angle of the camera relative to the streamer determines the perspective from which

spectators view the streamer, which becomes part of the streamer's curated self, though the labouring self is also produced by the actual placement and set up of the camera. The distance of the camera from the streamer is most effective when it balances a sense of the whole corporeal streamer with sufficient discernible detail in the presented image. For instance, a camera that is too far away will present more of the corporeal streamer at the cost of a detailed image. Some of this cost may be offset by increasing the size of the facecam feed on the stream screen, however this choice may have a negative impact on the streaming persona due to some of the gendered cultural associations discussed in previous sections. The labouring self then becomes visible when balance is not achieved. These examples represent a trend in my data whereby visible live mediation trades Authenticity-Effects produced by the curated self for those produced by the labouring self. Similarly, a camera angled too high or too low can create an uncomfortable relationship between streamer and spectator (or again carry cultural associations that affect streaming persona). There are also practicalities to consider when positioning a camera. As someone who wears glasses, I found myself particularly aware of reflections of lights and computer screens that might make my eyes difficult to see when I streamed. Additionally, I had arranged my set up so that I was facing the camera when reading chat messages – this was a practice that I had adopted from a number of other streamers, which meant that I was physically looking towards spectators (through the camera) when my focus was on their comments, creating the Authenticity-Effect of a genuine interaction. Through these choices, streamers present their understanding of their camera as a stand-in for spectators' eyes, which in turn have the capacity to create perceptions of authentic streamer-spectator interactions.

As well as the positioning of the camera, the camera feed in combination with lighting affects the production of authentic streaming persona by inviting comparisons between the curated self and a perceived labouring streamer. Lighting alters the curated self when it is made visible, such as when coloured LEDs are incorporated into a steam. However it also needs to be deployed for function, namely to provide sufficient visual information to be mediatised by the camera. Like camera positions, this collaboration between lighting and camera as nonhuman stream actors is therefore most effective when it is invisible. When this collaboration is not perceived, the curated self is authenticated as an accurate depiction of the corporeal streamer. However, any change in camera or lighting may call this authenticity into question, as I observed through a change in Laser's facecam feed to a warmer tone during a stream in December 2020. I asked her if she had changed her lighting, and she responded:

> "I actually have an HD cam today Phantom," she called me by my username, "I have my DSLR. This is-THIS IS WHAT I LOOK LIKE. Except for I haven't fucked with the lighting settings or the colours."
>
> Someone commented on Laser not looking as pale as usual.
>
> "I'm not pale, I told you!"
>
> Someone else asked if we were now seeing her real hair colour. Before answering, she made the camera feed full screen, holding some of her hair in her hand, and looked back and forth between that hair and her hair onscreen.
>
> "Uhhhh," she paused, squinting as she considered, "maybe."
>
> "*Omg! The wrinkles!,*" another chatter messaged.
>
> Laser's voice was now deliberately loud, slightly higher pitched, and heavily sarcastic.

> "Wow thanks, yeah! You can see my wrinkles now. Yep! That's a thing. Thanks! Cool!"

In this example, the change to a higher quality camera affected Laser's curated self by changing spectator's perception of her skin tone, hair colour, and the visibility of wrinkles. Similar questions to mine were asked by others as the stream proceeded and others observed the change for the first time. Although a higher quality image implicitly produces Authenticity-Effects through the curated self, the change conjured perceptions of a labouring self that spectators sought to visualise through comparison to the changed curated self. That is, to ask if we were seeing Laser's real hair colour is to assert the claim that such a real exists. Through this example, it is clear that lighting and camera operate as mediating objects that transform the corporeal streamer for consumption during streams. More than that, however, the example demonstrates how spectators seek to authentically perceive the corporeal streamer through mediation.

In contrast, stream audio tends to be less consistent than visuals and hence requires more noticeable live mediation. Audio balancing is a human-nonhuman blend of adjusting speaking volume and microphone gain to ensure that the streamer's voice is audible without maxing out and distorting. Additionally, every game has a different approach to sound design, some having quite loud soundtracks or audio effects, and some being comparatively quiet. As such, audio balancing needs to be adjusted for each game to ensure that one sound source is not drowning out the other. It is in this awareness and these efforts to consistently speak clearly and audibly that streamer voice begins to take shape. If an appropriate amount of testing is done to ensure that this balance is achieved, any significant variation to the voice or relationship between the physical body and the microphone (such as distance or positioning) can undermine

this set up. I learned this lesson when I unintentionally spoke more softly during my first stream than during many test recordings. It was only when I reviewed the recording of the stream afterwards that I realised my mistake. In an effort to avoid similar occurrences, streamers often ask their spectators about their audio levels, which is the easiest way to identify any balancing issues. When streamers ask spectators about audio levels, they immediately pull authenticity from the curated self into the labouring self, as they produce the latter through live mediation while drawing attention to the constructed nature of the former. The liveness of live mediation thus more readily produces the labouring self through sound than through visuals, though still distributes authenticity between the curated and labouring selves.

In my streaming experience, particularly during my first few streams, I found managing the visuals and sound of the stream, on top of interactions and game play, quite overwhelming. My concerns all stemmed from wanting to give viewers the best possible experience – to be able to see and hear me clearly, even if what was seen and heard was not an exact presentation of my appearance or voice. The choices that affect these production elements and the work that these mediating objects perform in passing the physical world into virtual space are not as visible as some of the other elements that I have discussed thus far. However, this (lack of) visibility produces particular Authenticity-Effects in and of itself. Mediating objects demonstrate ways that the corporeal streamer is filtered through technology before it is read by spectators, and bring to light the amount of preparation and consideration that go into this representation. These objects combine to produce authentic streaming persona through the curated self as the mediated corporeal streamer, and the labouring self performing mediation. Additionally, the blend between mediating objects and corporeal streamer in the production of

authentic streaming persona unveils the oft-hidden human-nonhuman assemblage of streaming persona.

Virtually Extending the Self Through Nonhuman Performance

Moving away from examinations of the corporeal streamer and maintaining a focus on the roles of nonhuman stream actors, I conclude this chapter's discussion by turning to virtual extensions of streamers' physical bodies as expressions of streaming persona. By virtual extensions, I refer particularly to representations of the corporeal streamer presented separately from their physical body, for example subscriber emotes depicting the streamer's likeness. In this section, I examine ways that the separation between the corporeal streamer and these virtual extensions complicate and expand the production of authenticity that has been the focus of previous sections. While it is true that all presentations of the corporeal streamer on Twitch are at least once removed from the unmediated streamer self, these virtual extensions enable streaming persona to be performed through the curated self without streamer agency and disrupt perceptions of streamer presence. I make this argument firstly by framing subscriber emotes as *virtual speech acts*, which authentically and figuratively communicate affect and gesture through the curated self as part of the culture of Twitch, and secondly by examining how subscriber emotes transform perceptions of streamer presence. Through their performativity and impacts on streamer presence, I argue that virtual extensions of the corporeal streamer have social, cultural, political, and economic significance and demonstrate how authentic streaming persona is produced as a human-nonhuman assemblage.

Subscriber emotes that are designed to reflect the streamer's likeness are elements of the curated self that have social and cultural significance as performative extensions of the corporeal streamer attached to the Twitch platform. A member of chat may pay a monthly fee to subscribe to a stream and gain access to that streamer's set of subscriber emotes. When a subscriber sends a message in chat containing the name of one of these emotes, the image appears instead of the text. Figures 10 and 11 contain CBC's and Fufu's sets of subscriber emotes respectively, and demonstrate a common trend of subscriber emotes designed to reflect the streamer's likeness. These design choices authentically connect subscriber emotes to the streaming persona through their representation of the corporeal streamer. Further, streamers often have live conversations with their audience around the curation of the set – discussing potential future design choices or the popularity of particular emotes for example – which produces the labouring self as ultimately making and enacting these decisions. In an unusual twist on this dynamic, Fufu altered her physical body in a way that more closely resembled her pre-existing emotes by dying her red hair a brighter orange-yellow gradient. This alteration is an authenticating act that aligns her body with emotes as virtual extensions of that body, thereby crafting a more unified curated self. In addition to whom they depict, subscriber emotes are also often designed to communicate action or affect. These are performative in the Austinian sense, whereby "in saying what I do, I actually perform that action" (Austin, 2013, p. 22). These actions can be quite literal ─ for instance, sending cbcLUL indicates that the sender is laughing or sending kffcSweat suggests the sender is sweating ─ however emotes are more often used figuratively to communicate affective responses and provide tone to chat messages through the streamer's curated self. I therefore label emotes as the somewhat oxymoronic *virtual speech acts* to characterise this less literal interpretation. Through virtual speech acts, I

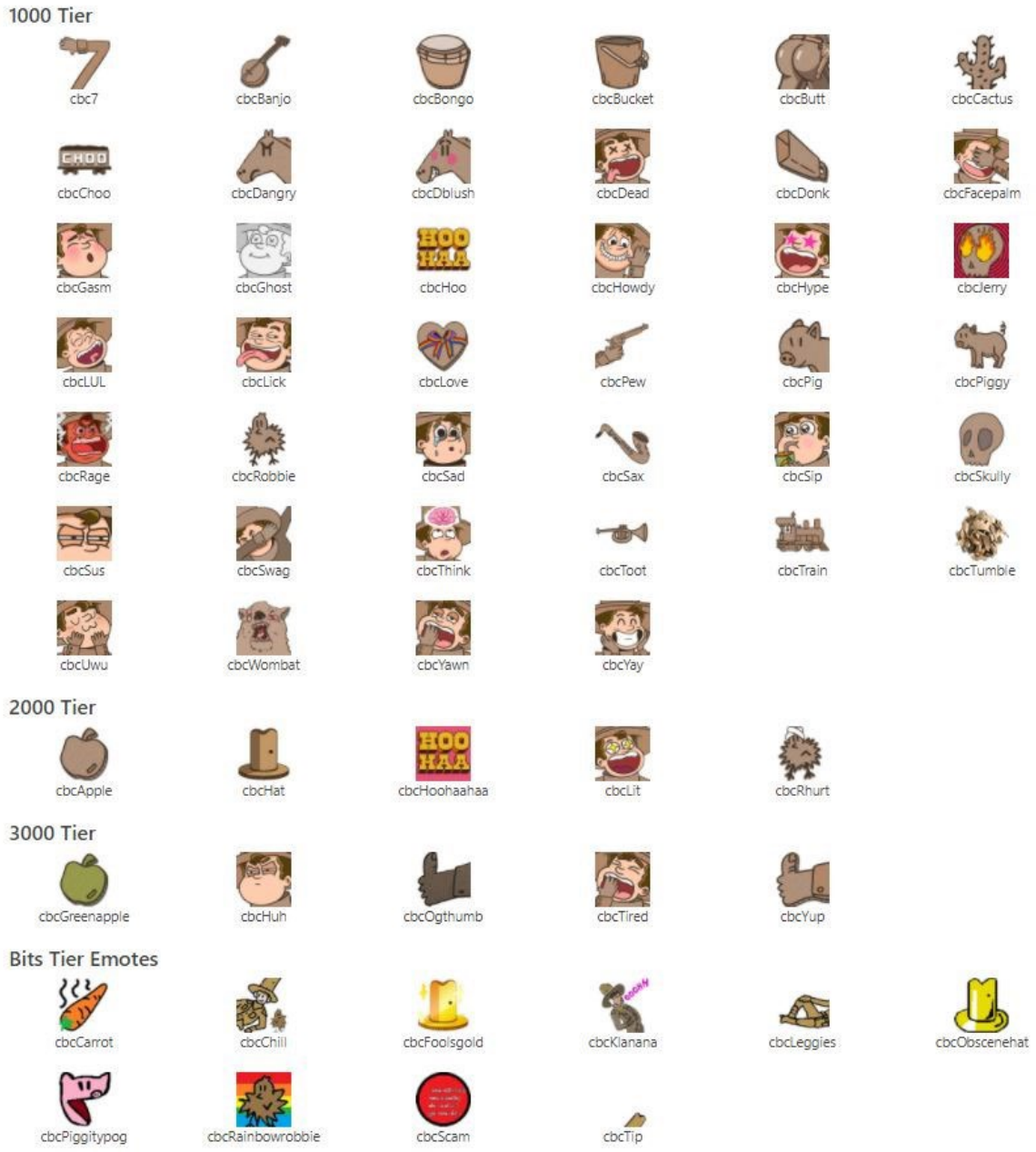

Figure 10. CBC's emotes (Twitch Emotes … Cardboard_Cowboy, n.d.).

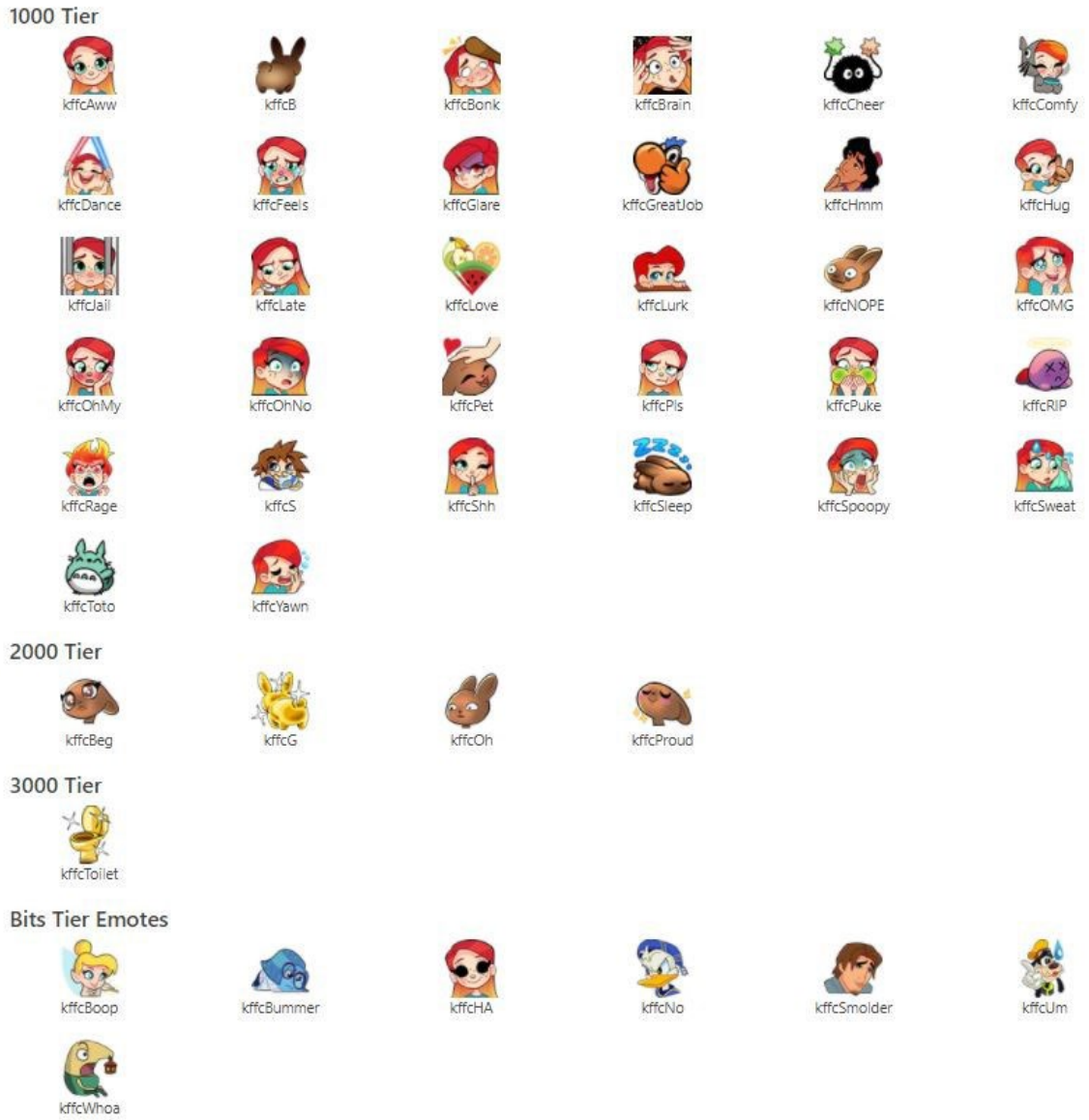

Figure 11. Fufu's emotes (Twitch Emotes … kungfufruitcup, n.d.).

capture the mutual understanding (between sender and recipient) that the communicated action is performed virtually and not (necessarily) physically, but that this distinction does not affect the authenticity of the message. For example, a spectator is likely not literally sweating when sending kffcSweat, instead their virtual sweating indicates an affective or empathetic response to a stream occurrence that might elicit such a physical response, such as nerves or high

temperatures. The social and cultural significance of emotes on Twitch rests upon a tacit understanding of their performative function.

Relationships between human and nonhuman agencies stem from this understanding of emotes as virtual speech acts, producing authenticity that is not of the streamer but *through* the streamer. This connection between performativity and agency is articulated by Leeker et al. (2017) when they argue that the traditionally "neat separation of human agency and non-human 'procedurality' has become untenable. Human bodies and technological apparatuses enter instead into a relation of performativity" (p. 10). In this context, subscriber emotes are themselves nonhuman and are facilitated by the nonhuman Twitch platform but carry messages between humans and through representations of human bodies. This entanglement between human and nonhuman exhibits precisely the relational performativity of which Leeker et al speak. Leeker (2017) further characterises this performativity when she notes that "the performatives live within the things, which serve as agential callings to their users" (p. 33). Subscriber emotes carry these 'agential callings' for subscribers through their designs, as well as their function as virtual speech acts. For example, cbcLUL and kffcOhMy depict performances of laughter and embarrassment respectively. As such, subscribers are called to use these emotes, as virtual speech acts, to communicate their associated affects through the curated self of the streamer. While some authenticity is produced by similarities between subscriber emotes and the corporeal streamer, the use of subscriber emotes primarily produces perceptions of an authentic sentiment from a subscriber through the streamer's curated self. Streaming persona is still produced as an Authenticity-Effect of the curated self through subscriber emotes, however the sensation of something "sincere and genuine and therefore credible" (Garde & Mumford, 2016, p. 70) is sourced from a subscriber rather than the

streamer. The production of authentic streaming persona is thus altered by alternative avenues for authenticity provided by virtual extensions of the corporeal streamer.

This production of authenticity extends beyond particular streams as the function of emotes as virtual speech acts forms part of the sociality and culture of the Twitch platform. The agential callings of particular subscriber emotes are familiarised to users through emote templates upon which subscriber emotes are commonly based, thereby authentically connecting the curated self (and hence streaming persona) to that culture. For example, cbcLUL is named for and visually resembles the global Twitch emote LUL, a play on the acronym 'lol' that depicts late videogame reviewer and Twitch streamer John 'Totalbiscuit' Bain laughing. Streamers commonly draw upon this template with emotes depicting their likeness performing the same gesture. As such, if cbcLUL was used outside of CBC's stream or if a newcomer to CBC's stream saw it in chat, CBC's adaptation of the LUL emote increases the likelihood that its intended meaning is understood. As a consequence, CBC's streaming persona becomes familiarised when the potentially unfamiliar extended corporeal streamer is seen (virtually) performing a known gesture. Additionally, a streamer's inclusion of appropriated emotes in their collection produces perceptions of a labouring self (and consequently streaming persona) that has curated their emote collection through an authentic connection to the culture of Twitch. As such, emotes appropriated from known templates are more broadly recognisable, communicating not only the associated affect or action, but also allegiance to and support for the streamer, in turn advertising the stream. Subscriber emotes consequently generate authenticity specific to the social and cultural landscape of Twitch through their function as platform-specific vernacular.

In contrast, streamers also often include more esoteric emotes that produce an authentic streaming persona through a curated self distinct from others. CBC's subscriber emotes included his animal friends – such as Robbie the chick in cbcRobbie and cbcRhurt, and Doug the horse in cbcDangry and cbcDblush – as well as a number of instruments that he sometimes 'plays' on-stream. These emotes reflect the stream narrative, and carry agential callings unique to the curated self, as can be seen through the cbcSax emotes in the chat in Figure 6. Their designs invite subscribers 'play' saxophone along with CBC or participate in the retelling of moments of his stream narrative involving Robbie or Doug. Similarly to the narrative itself, these emotes conjure an image of the labouring self issuing the invitation to interact through the emotes. Further, the streaming persona is an Authenticity-Effect of these more esoteric emotes as they are unique, and hence perceptibly authentic, to the curated self. As such, streamers can combine template subscriber emotes with more esoteric emotes to produce an authentic streaming persona that is both unique and connected to the culture of the platform.

Returning to the corporeal streamer, perceptions of streamer presence are complicated when subscriber emotes reflecting the corporeal streamer are deployed as virtual speech acts. As discussed in previous sections, the corporeal streamer is most strongly associated with streaming persona. The actions and behaviours of the corporeal streamer produce streaming persona as an Authenticity-Effect of both the curated and labouring selves. Certain subscriber emotes are extension of the corporeal streamer that communicate on behalf of spectators and through the stream chat. Streamer presence can then be perceived independently through the human performance of the corporeal streamer and the nonhuman performance of (re)presentations of that corporeal streamer via its virtual extensions. The streamer may in turn be doubly present through the use of subscriber emotes in their chat. A further complication:

streamers can also be singularly present through the use of these emotes in other streams (within which their human body is absent). One way of understanding this situation is that a streamer may be present without being in attendance. In the absence of the corporeal streamer, the curated self is perceived through these emotes and images of the labouring self are conjured through the corporeal streamer to which they refer. In this situation, the streamer does not necessarily have any knowledge or control over their own presence – it is subject purely to subscriber agency. And this distinction between subscriber and streamer agencies strongly affects the production of authentic streaming persona. While both the curated and labouring selves are perceived, the use of these emotes is not authenticating without streamer agency, as such the virtually extended corporeal streamer does not inherently produce an authentic streaming persona. Although stemming from and constantly referring to the corporeal streamer, the curated self – and hence streaming persona – is not exclusively bound to that corporeal streamer. Without this bind, there is insufficient display of streamer agency to communicate Authenticity-Effects.

Other than subscriber emotes, there are a number of ways that the corporeal streamer may be virtually extended to produce authenticity when more strongly connected with the actions of the corporeal streamer, thereby blending human and nonhuman agencies. Streamers may use custom stream scenes before a stream begins, after it ends, or at any point during. When Fufu is taking a break during stream, to go to the bathroom or to get food (that she often brings back with her to eat on stream) for example, she switches to an animated BRB – 'be right back' – stream scene containing an animated illustration of her in her kitchen making tea (Figure 12). Like emotes, this scene virtually extends the corporeal streamer. However, unlike emotes, this extension's presence is a product of Fufu's agency; she chooses when it appears

on stream. Moreover, this scene performatively depicts her taking a break. When she triggers the scene, spectators perceive Fufu's labouring self performing the action depicted on-screen even if they cannot see it. So while the labouring self is typically produced through visible persona labour, here the labouring self is produced through actions depicted by the nonhuman curated self. This arrangement authenticates this virtual extension of the corporeal streamer, which is even further authenticated when Fufu returns with a cup of tea and a snack. Virtual extensions of the corporeal streamer most strongly produce Authenticity-Effects when they operate in concert with the corporeal streamer.

Figure 12. Fufu's 'be right back' screen (2020).

A very different dynamic emerges when virtual elements such as emotes point towards the corporeal streamer without extending it. Taylor (2018b) identifies one example of this dynamic when discussing the global Twitch emote TriHard, which depicts black streamer trihex. She notes that the emote "has come to serve not only as an enthusiastic cheer but also a

stand-in for calling out the race of a broadcaster or in lieu of a slur" (p. 113). In other words, the emote is used to disparagingly point towards the skin tone of either a streamer or in-game character. A similar example that I observed is the BOOBA emote (Figure 13). BOOBA is an animated emote available through the BetterTTV browser extension depicting Pepe the Frog with its eyes popping out of its head.[13] Like TriHard, although BOOBA is not a subscriber emote, it is performative and it points towards a body on-stream – although the latter does not represent a human body. As the name might suggest, BOOBA has been associated with (often large) breasts, particularly those of female-presenting streamers and game characters. Emotes like BOOBA are deployed as virtual speech acts to comment on streamers' bodies and in relation to which the curated self operates. Although most uses that I have seen suggest that BOOBA is not intended to be derogatory or as a slur, the emote still draws attention to a female-presenting body in a way that reduces it to a single element that is sexualised. BOOBA thus perpetuates the association of large breasts with heterosexual desire, thereby devaluing the bodies of streamers who have large breasts but do not want this attention. Further, BOOBA can devalue the bodies of streamers who are side-lined or undermined for not possessing these 'desirable' traits. Over a relatively short period of time, BOOBA transformed from a metonymic reference to an emote to vernacular for breasts. These associations affect streamer decisions around the presentation of the corporeal streamer, thereby impacting the production of authentic streaming persona. Emotes are about bodies, whether they are performatively acting on behalf of the spectator, conjuring streamer presence, or providing commentary on the

[13] Pepe the Frog is an anthropomorphized frog commonly used in memes that has since been commonly associated with alt-right sentiments. See Glitsos and Hall (2019) for an overview of the meme as a cultural object, including its political associations.

bodies of others. While some dynamics more clearly communicate authenticity through streamers' curated and labouring selves, these associations with bodies always bleed into on-stream interactions and become part of the culture within which authentic streaming persona is produced through the corporeal streamer.

Figure 13. A still from the animated BOOBA emote.

In summary, virtual extensions of the corporeal streamer demonstrate the relational performativity that exists between the human Twitch users and the non-human elements of the streaming persona. These extensions thus exhibit streaming (and the streaming persona) as a human-nonhuman assemblage. Twitch presents the material world in a virtual setting, facilitated by hardware, software, and online network connections. But the platform struggles to escape the human body (cf. Johnson & Jackson, 2022). However it is transformed by the nonhuman – however it is virtually presented, represented, and extended – the body is the human grounding through which streamers and spectators create presence, clarify meaning, and perform culture and politics. The virtually extended self is commodified – available for use in exchange for a monthly fee – thus making the corporeal streamer part of the Twitch economy and directly benefiting both the platform and streamer. These virtual extensions of the corporeal streamer form part of the curated self through which spectator and streamer authenticity is produced, and produce the labouring self through their performed connection with the corporeal streamer. Questions of streamer agency are also raised by these virtual extensions, thereby creating a link between perceived agency and the production of

Authenticity-Effects. Through virtual speech acts, perceptions of authenticity shift as the curated self is subject to spectator and nonhuman agencies. As such, virtual extensions of the corporeal streamer demonstrate the interplay of human and nonhuman agencies, and authenticities that culminate in streaming persona.

Persona Beyond the Streamer

This chapter has laid the foundation for an understanding of streaming persona on Twitch through streamer choices and tensions emerging from problems of authenticity in the construction and performance of streaming persona. Questions of authenticity emerge through everyday streamer practices, which I demonstrated through a number of introductory examples that unveiled how deeply interwoven the curated and labouring selves are and how authentic streaming persona is produced as an Authenticity-Effect of both. I argued that authenticity is generated or denied by these selves through perceived access to the corporeal streamer that is mediated not only by technology but also streamer performance and platform politics. The latter I demonstrated by contextualising the impacts of gendered expectations on Twitch through postfeminist scholarship. These layers of mediated access are at times contradictory, and I disentangled these contradictions by identifying and analysing layered Authenticity-Effects over which the streamer enacts control as part of the labouring self. I then explored how the curated and labouring selves culminate in a singular streaming persona by theorising the authenticity gap as a concept that articulates the multitude of dynamics between the curated and labouring selves as they extend, parallel, contradict, and undo each other.

I emphasised throughout my framework of authentic streaming persona that authenticity is constructed and perceived but never verifiable. The labouring self is most strongly visualised through visible persona labour, which is often visible either implicitly

through the curated self or explicitly through its live performance as part of the curated self. The authenticity gap is consequently significant as it enables distinctions between the curated and labouring selves to be readily made in their production of authentic streaming persona. Additionally, while my observations often suggested that spectators sought to perceive authenticity, there were cases when the opposite was true. In particular, the presentation of female-presenting bodies often elicited challenges to authenticity that stemmed from gendered cultural assumptions on Twitch. These assumptions were often related to sexual subjectification or the production of a heterosexy aesthetic, which gave rise to an authenticity ambivalence, whereby female-presenting streamers were expected to adhere to heternormative standards of attractiveness and interests associated with games, however were treated with scepticism when they did.

One of this thesis' key contributions is in its consideration of nonhuman stream actors, which will be present in every discussion beginning with this chapter's two concluding sections. In these sections, I examined the roles of nonhuman actors who perform and perform through the corporeal streamer. Firstly, the corporeal streamer is transformed by what I call mediating objects as nonhuman stream actors and streamers perform persona labour in ways that trade authenticity between the curated and labouring selves through these nonhuman stream actors. Secondly, the corporeal streamer is virtually extended through emotes and other digital representations of the streamer body. These virtual extensions complicate the production of authenticity and streamer presence by expanding the curated self beyond the corporeal streamer, again transforming streaming persona through the agency of nonhuman stream actors. Perceptions of authenticity are produced by and through these nonhuman stream actors in ways that build upon and integrate seamlessly into streamer production of curated and

labouring self, and do not always seem consciously perceived by human stream actors. The corporeal streamer can only be communicated during streams through mediating objects and virtual extensions of the corporeal streamer such as emotes, as platform vernacular that have sociocultural significance to Twitch users. This chapter's concluding sections are the first instances of many throughout this thesis wherein nonhuman stream actors are essential in enabling the successful production of a cohesive streaming persona. These nonhuman actors are part of the streaming persona assemblage that transforms what is perceived as authentic. While I presented particular examples to focus upon the curated and labouring selves, the authenticity gap, and the role of nonhuman stream actors, each of these concepts is active in every example. Streaming persona is played out through the human-nonhuman production and denial of authenticity in every moment on Twitch.

With the foundations of streaming persona set, I move on to the contributions of other aspects of streaming and other stream actors to this persona. The decisions that I have discussed in this chapter are not made in isolation and are not made solely by streamers, as I have touched upon throughout this chapter. In Chapter 5, I shift my analysis towards these influences and argue that stream spectators not only influence the streaming persona but perform persona through the features and affordances of the Twitch platform and the streaming mode. The arguments presented in Chapters 4 and 5 are then combined to demonstrate how stream actors construct and perform streaming persona through boundary-work, temporality, and games as nonhuman stream actors in Chapters 6, 7, and 8 respectively.

5. Ensemble Play:

Non-Streamer Labour and Playful Antagonism

"I like to think of [streaming] like the modern day equivalent of playing games at a friend's place. In this case, I might be that one friend who never hands over the controller, but ultimately, those game nights were never really about the game we were playing anyway. It was always just a convenient excuse to get us all in the same place at the same time."

- Juliet

In the previous chapter, I developed a framework for the analysis of streaming persona in terms of streamer performance and the production of authenticity. To that end, I drew upon Marshall et al.'s (2020) note that a "persona 'operator' is not always the same as the persona 'referent'" (p. 95) to delineate between a streamer's curated and labouring selves. Through that framework, I demonstrated how persona labour performed by the streamer constitutes persona play and established relationships between authentic streaming persona and the sociality, culture, politics, and economics of the Twitch platform. I additionally emphasised the roles of nonhuman stream actors in the construction and performance of authentic streaming persona that separates my concept of streaming persona from traditional understandings of the term. A further separation that I explore in this chapter is in the collective nature of streaming persona. I remind the reader of my definition of streaming persona: a negotiated social identity that is performed by individual and *collective* (human and nonhuman) actors within a stream. This chapter contributes a new perspective on Marshall et al.'s persona 'operator' and 'referent' as enacted on Twitch that emphasises the collective nature of streaming persona: streamer as

persona *referent* and non-streamer actors as persona *operators*. While streaming persona would most obviously be associated with the streamer, it is in fact constructed and performed by all stream actors. This social construction of identity is significant both to scholarly understandings of Twitch and the sociality and culture of the platform, and so I dedicate this chapter to a focused analysis of the relationship between spectators and streaming persona, which is underpinned and accompanied by nonhuman stream actor performance.

One of my primary interventions in this chapter is establishing *stream ensemble* as an effective term for the collective consisting of all human and nonhuman stream actors. Stream ensemble emphasises the conscious performativity of stream participation, accounts for spectators' vastly different motivations for attending and participating in streams (Lin et al., 2019), and offers insight into some of the tensions between individuals and collectives that tend to emerge in the construction of online identity. These tensions between individual and collective demonstrate fundamental ambivalences underpinning presentations of online identity in the form of conflicting agencies, as – to return to Phillips and Milner's (2018) persona-as-mask metaphor discussed in Chapter 2 – while an individual chooses their 'mask,' collectives enact agency over the shape of that mask by, for example, "point[ing] out the [mask's] details that still need tweaking" (Phillips & Milner, 2018, p. 62). Through the term *ensemble*, I emphasise the performative nature of stream participation and the sense of collective ownership from which these agentic forms of negotiation emerge.

After establishing and justifying stream ensemble as a more appropriate alternative to the commonly-used *community*, I examine how ensemble behaviours construct and perform streaming persona. This examination begins by framing spectator persona play as a form of labour that not only shapes streaming persona but also affects the sociality and economics of

Twitch as an expansion of the relationship between persona play and labour on Twitch that was introduced in Chapter 4. Spectator labour contributes towards the streaming persona in a variety of ways, from participating in line (or consciously out of line) with the streaming persona to making decisions around stream content with or even on behalf of the streamer. Individuals establish their roles within stream ensembles through their relationships with norms and vernacular, and I argue that abiding by norms and deploying vernacular in socially acceptable ways are forms of spectator labour that also function as persona play. As part of this argument, I identify a prominent practice that I label *playful antagonism*, whereby ensemble members perform the role of exaggerated adversary to the streamer. As playful antagonists, ensemble members feign conflict that additionally contributes towards the streaming persona by encouraging engagement and demonstrates how persona play may consist of simultaneously-performed contradictory behaviours and attitudes.

Though I argue that stream ensembles are not communities, they are in many ways community-like. As such, I explore in detail the similarities and differences between stream ensembles and communities through scholarly definitions of 'community' and 'sense of community' alongside the ways that I observed stream ensembles perform like communities. I argue that similarities are produced when ensemble members perceive themselves as community members and therefore act like community members. I further argue that financial motivations necessarily distinguish stream ensembles from communities, as viewers' financial contributions enable streamers – particularly full-time streamers – to create content and consequently facilitate the continued existence of the stream ensemble. Stream ensembles, I resolve, are community-like and that a *sense* of community is a strong motivator for ensemble participation. I make the case that stream ensembles are akin to communities of play (Pearce,

2011) with constructing and performing persona being group play activities structured by the social, cultural, and technological limits of Twitch. Persona play is built upon negotiated agencies of ensemble members, for example through playful antagonism, during which streamer agency may be challenged when the antagonism is perceived as less playful and more genuine.

This chapter's analysis of streaming persona as collectively constructed and performed culminates in the function of Text-to-Speech (TTS) during streams, through which I demonstrate the social and economic impacts of human and nonhuman ensemble membership. TTS is often used on Twitch as a reward for financial contributions to stream and operates as a singular nonhuman voice for the collective of human ensemble members. A close analysis of this feature serves to demonstrate my expanded definition of streaming persona as performed by collectives of ensemble members, but is also novel in its own right as no such analysis has been performed to date.

This chapter thus presents an expansion of the concept of streaming persona as examined in Chapter 4 by tapping into Twitch's inherently collective nature. The relationship between persona play and labour resurfaces in the context of stream ensembles to emphasise that although streamers may be viewed as the central figures of Twitch and streaming persona, streams are in fact built and maintained by all stream actors. As such, streaming persona is constructed and performed collectively, and these ensemble dynamics are central to the sociality, culture, politics, and economics of the platform.

Stream Collectives as Ensembles

In this section I introduce the term *stream ensemble* to refer to stream actors collectively and establish it as the most accurate term for the analysis of the collective aspects of streaming

persona. Ensemble members include the streamer and spectators, as well as nonhuman actors such as the platform and any game that is played on-stream. These collectives diverge sufficiently from many existing formations and terms to warrant a distinct label. The term stream ensemble emphasises the conscious performance of ensemble members. As is the case with their theatrical and musical counterparts, stream ensemble performances are collaborative efforts within which ensemble members may take on different roles at different times. Ensembles may have a single, consistent dominant member or focus upon different individuals or groups within the ensemble at different times. Regardless of their specific structure, ensemble performances are enabled by the entire collective and each member contributes to that collective performance. The term also fits neatly with persona play as ensemble members play together as instrumentalists or actors in other settings. Throughout this section, I engage various theories of and references to community in order to establish ways that stream ensembles are community-like while differing enough to not achieve full community status, beginning with streaming scholars and expanding to considerations of Pertierra and Turner's (2012) examination of the term *community* and McMillan and Chavis' (1986) *sense of community*. I conclude with parallels between Pearce's notion of communities of play and stream ensembles. In particular, I refer to her notion of intersubjective flow as an expression of balance between individuality and collective membership, which I observed as a desirable state for stream ensemble members expressed through their performances of streaming persona.

One key intervention in my use of stream ensemble is to destabilise the use of *community* as a default for the social dynamics on Twitch, which can be ambiguous. References to communities on Twitch are not always clear and consistent, due to extensive existing

theories of community, and they can presuppose the existence of community. Bingham (2020) argues for "the foundational nature of community to the normative theory of Twitch streaming" (p. 10) when developing a normative theory of livestreaming. He implicitly characterises the notion of *community* when he makes claims like "the relationship between community member and streamer is more akin to a type of friendship" (p. 15). However, by never explicitly addressing the meaning of the term, Bingham leaves theoretical gaps both in precisely what such a community entails and even whether *community* is an appropriate term for this social arrangement. Taylor (2018b) describes community as one of six motivations for watching streams, stating that "it is common to hear long-time viewers remark on how they originally started watching primarily for the streamer yet ultimately became part of the larger community on the channel" (p. 41). Taylor explicitly de-centres (without diminishing) the streamer's role in the channel community, in contrast with Bingham who refers to the streamer as separate from the channel community. This distinction in itself is problematic, as it suggests inconsistencies in the use of the term. Taylor later considers the term *community* more closely, noting that variety streamers tend to use it more than esports players, who more often refer to an *audience* (p. 90). Taylor builds an understanding of what community means to both viewers and streamers, in particular the central role of the streamer in its formation and growth. However, like Bingham, Taylor defaults to *community* as a way of describing the connections between users on Twitch without interrogating the implications of the term's use or questioning how accurately it captures the sociality of the platform from a theoretical standpoint. By using *stream ensemble*, which is drawn directly from my observations of Twitch actors, I provide an unambiguous term that uniquely captures the sociality of streaming and its relationship with streaming persona as an expression of individual and collective identities.

Theories of community can be applied to demonstrate how stream ensembles adhere to certain, but not all, aspects of the concept. For instance, cultural studies scholars Pertierra and Turner (2012) pre-empt some of my concerns around the use of *community* in reference to Twitch in broader contexts when they criticise "the relatively undisciplined manner in which the term *community* is often used in media and cultural studies" (p. 62). They trace the history of the term, arriving at a paradox associated with its use in the context of digital media. The authors state that *community* places

> emphasis upon located, everyday, reciprocal and 'lived' relationships through which the common good (of a group, a culture, a space or place) is prioritised and protected, and the assumption that unmediated, natural and face to face relationships provide insurance against the more abstract rationalities of a modern society (p. 66).

Virtual communities thus simultaneously resist and are aligned with "the very things that many regard as threats – new communications systems, new economies, increased migration flows, and globalising markets" (Pertierra & Turner, 2012, p. 66). I acknowledge that the paradox that the authors identify *does* present a challenge to the community status of stream ensembles, without indulging moral panics around hypothetical threats that media and technology pose to the formation of community and connections between individuals. As I discuss in detail in this chapter, the removal of the "unmediated, natural and face to face relationships" on Twitch coincides with the integration of an economy into the social system. Rather than heralding the end of Twitch communities however, references to communities on Twitch should be understood as references to the elements that make stream ensembles community-like, and it is these elements that I consider constituent components of stream ensembles. Stream

ensembles are located virtually in their home streams. Stream ensemble relationships are also everyday, reciprocal, 'lived,' as well as motivated by (what is perceived to be) the 'common good,' as my analysis throughout this chapter demonstrates.

Even if stream ensembles do not meet the threshold for full *community* status, the community-like dynamics contribute to collective identity and hence the streaming persona. Without presupposing the existence of community, Hilvert-Bruce et al. (2018) discuss the value of a *sense* of community to livestreams, finding that a sense of community is key to viewer engagement. Psychologists McMillan and Chavis (1986) define sense of community through four elements: membership (a sense of belonging); influence (a sense of mattering); integration and fulfilment of needs; and shared emotional connection. Stream ensemble members may behave as members of a community if they feel that they are part of one. Membership and influence in particular are both afforded by Twitch features that enable users to perform the streaming persona. Ensemble members experiencing a sense of community may be more willing to contribute while also adhering to social norms and Stream Rules, namely acting in the interests of the ensemble. These behaviours then characterise the streaming persona. The sense of community actually contributes to the community-like nature of stream ensembles. Additionally, He et al. (2022) find that viewer-viewer and viewer-broadcaster interactions are both positively related to membership and immersion as facets of a sense of virtual community within livestreaming. They further find that both of these forms of interaction are moderated by viewer-platform interactions, emphasising the Twitch platform as an ensemble member. Stream ensembles are thus characterised by elements of both cultural studies and psychology perspectives on community, without completely adhering to either.

Ensemble members negotiate their identities as individuals and members of the stream ensemble when performing streaming persona, which can be understood through the parallels between stream ensembles and communities of play. In this context, persona play consists of the enactment of ensemble member agency bounded by the technological limitations of the platform and the social limitations of the stream ensemble itself. When Hamilton et al. (2014) refer to "communities of play" on Twitch, they refer to a framework introduced by Celia Pearce (2011) in her study of the Uru Diaspora. Pearce defines communities of play in terms of "the organisational and sociological aspects of group play and the ways in which communities use digital and networked media to support play activities" (p. 129), focusing on those communities that emerge from play practices. While stream ensembles are distinct from communities, this framework becomes relevant through the community-like nature, organisation around play, and social nature of stream ensembles. Hamilton et al. (2014) imply that play on Twitch comes in part in the form of the playful nature of social interactions, which is a form of persona play. Through persona play, it thus becomes clear that streaming persona is both the ensemble play activity and an expression of identity by ensemble members.

Pearce's examination can also be extended to dynamics between stream ensemble members through her concept of intersubjective flow. To develop this concept, she begins with DeKoven's CoLiberation as an ideal psychosocial state of balance between individual and collective identities. In a state of CoLiberation, players "feel at once a positive sense of their own individuality, while still feeling connected to the group" (Pearce, 2011, p. 132). Pearce then proposes intersubjective flow as a social counterpart to CoLiberation that "situates the flow state *between* people rather than within the individual" (Pearce, 2011, p. 133, emphasis in original), intersubjectivity here referring to the shared connection between community

members and their mutual awareness of that connection. Intersubjective flow promotes a sense of group cohesion elicited through play, and this affects streaming persona. Throughout this chapter, I draw upon my own experiences and observations of intersubjective flow between stream ensemble members to demonstrate its role in collective performances of streaming persona. Pearce also discusses the importance of shared values in group cohesion. She describes a kind of boundary-work that is enabled by shared values within a group, through the creation and enforcement of rules (p. 135). From the standpoint of stream ensembles, streaming persona is created and sustained by intersubjective flow, which is then solidified through shared values and boundary-work.

Stream ensemble captures the dynamics within streams and between stream actors that is sensitive to the streaming mode. In this section, I have developed this novel concept both with reference to the term *ensemble* and through a conscious resistance to default to these collectives as *communities*. I recognised that stream ensembles are community-like with reference to three distinct scholarly perspectives on community while also distinguishing them from communities. These similarities and differences both recur throughout my analysis in the remainder of this chapter. There are two major differences in particular that I revisit throughout this chapter and the remainder of this thesis: the economics of Twitch and nonhuman stream actors as ensemble members, the latter in particular standing as a major contribution of the concept of streaming persona. Through the language of stream ensemble, I accompany the more conventional understanding of persona presented in Chapter 4 with streaming persona as constructed and performed *collectively* by human and nonhuman stream actors.

The Labour of Spectatorship

All ensemble membership, including stream spectatorship, is a form of labour. Stream ensembles differ in the specifics of this labour, and as such spectator labour constitutes expressions of streaming persona. This labour in turn warrants analysis as it shapes social and economic elements of streaming through streaming persona as facilitated and performed by the Twitch platform. In this section I examine these links by characterising ensemble persona play as labour. I analyse how this labour contributes to streaming persona through familiarisation processes for new ensemble members, the roles of social and financial contributions to streams, the impact of the Twitch platform as a nonhuman ensemble member through the Channel Points and Predictions features, and the practice of lurking. Together these practices highlight the blurred lines between labour and persona play, and ways that ensemble persona play reflects how the intertwined sociality and economics of Twitch is part of the platform's culture.

Scholarship around agency and participation on Twitch also merit consideration when discussing the role of non-streamer labour the sociality and economy of the platform. Mark R Johnson and I have elsewhere theorised an *agency gap* that emerges in the absence of a human streamer, which is filled through the labour of other (human and nonhuman) stream actors (Johnson & Jackson, 2022). I extend upon that work here by examining the agency afforded to human and nonhuman stream ensemble members, and whether and how that agency is enacted. Other scholars have emphasised the commodification of audience labour. For example, Taylor (2016) characterises live esports spectatorship as a form of labour in terms of its economic value, which Carter and Egliston (2021) extend into virtual Twitch spectatorship. Taylor (2018b) argues that while spectators are aware of the economic implications of their participation, "they may not always fully wrangle with the extent to which their engagement is

a market commodity" (Taylor, 2018b, p. 47). All of this is to say that stream spectatorship is inextricably bound to the labour and economics of the platform, which underpins Taylor's warning about over celebrating interactivity. In this and the coming sections, I therefore draw upon my experiences throughout this project to critically examine the work that spectators perform as stream ensemble members and its impact on streaming persona. I direct my analysis more equally towards the social and economic implications of spectator labour than some recent scholarship. I do this not to blindly celebrate the affordances of participation without acknowledging the platform economy, but rather to emphasise the roles of the social and economic in shaping each other and in shaping stream dynamics more broadly. Stream ensembles are aligned more closely with communities through the social, and made distinct through the economic, with the interplay between the two contributing towards streaming persona.

To begin with, participating in chat is about more than just sending messages; it is a mode of interacting with members of a stream ensemble, which carries social expectations unique to each ensemble. Part of the labour of playing persona as a spectator involves fitting in. I typically observed and experienced the process of fitting in as a spectator in three layers. The first layer involved developing familiarity with acceptable and encouraged behaviours within a stream. Humour is a useful litmus test on this front, as there are often clear signals that a joke has successfully landed, even setting aside the distinctions between stream ensembles. After some time in a stream – the exact amount varied between streams – I would feel like I suddenly 'got' what was going on. After this time, spectators enter the second layer, which consists of successful participation. Over time, the novelty of streamers reading and responding to my messages in chat wore off. However, the first time that a streamer laughed at, or their

chat responded well to, a joke that I made brought me a small amount of joy consistently throughout this project. This joy came not just from the simple pleasure of entertaining someone, but from the accompanying signal that I had understood what resonated within that stream – I had reached the second layer. This second layer is where intersubjective flow begins, particularly when a single joke turns into extended banter or a conversation. These jokes are individual moments when the flow state is attained between the individual and other members of the stream ensemble. I found that the second layer was generally accessible within most streams that I visited, though this varied depending upon how naturally I was able to connect with the social expectations of the ensemble. My sense of humour is quite dry and relies mostly on the kind of wordplay that generally elicits groans and eyerolls. This resonated quite well with Juliet and her stream ensemble, for example, so it was easy for me to feel as if I understood the dynamic within her streams and feel part of the ensemble. It was not so easy elsewhere, when a streamer might read a message out loud and move on without comment, miss a joke entirely, or even perform not getting the joke. Sustaining, or consistently reattaining the flow state leads into the third layer of stream sociality. This layer involves being recognised by the streamer and other members of chat. At this point, individual interactions are less meaningful as a reputation within the ensemble has already formed. This familiarisation process is a kind of social labour that occurs during streams, and requires regular consideration to (re)affirm ensemble membership.

Though social and economic contributions to a stream are distinct, they are both performances of stream ensemble membership. One of the tangible benefits that a subscriber receives is a badge next to their username indicating the length of their subscription to the channel. Wohn et al. (2019) find that users associate a subscriber badge with community

recognition and proof of loyalty to the streamer (p. 107). This recognition, however, doesn't extend to a user's social contribution to the stream. The production (and display) of membership for subscribers can contribute towards a sense of community for an ensemble member. However (positive) social contributions to the stream ensemble rely upon interactions between ensemble members, including the streamer, other spectators, and the platform. Early in my time watching Laser's streams, a particular subscriber seemed to go out of their way to annoy Laser. They would start arguments with her, and then try to gaslight her by talking about how *"nice"* they were. While they seemed to think it was fun, Laser made it very clear that she didn't appreciate it. Confrontations between them became something of a spectacle, with other chatters following with comments like "*that's like watching your mom [yelling at] a sibling*," others simply sending a performative peepoS emote.[14] Since then, this subscriber has been permanently banned after multiple week-long bans. Immediately before their first ban, they messaged "*I AM A SUB YOU CAN'T DO THIS NOOOOOOOOO PepeHands*."[15] They seemed to believe that the influence (and subsequent sense of community) elicited by their financial contribution to the stream was sufficient to overlook negative social contributions, a sentiment not shared by Laser nor her chat. While this particular subscriber provided the positive social contribution of a figure against whom other ensemble members could unite, their primary social contribution had a value completely separate to that of their financial contribution. Conversely, many members of chat simply don't have the means to subscribe, and this does not preclude them from providing positive social contributions. In fact, these contributions are often recognised when these ensemble members are gifted subscriptions by those who can

[14] An emote of Pepe the Frog sweating nervously.
[15] PepeHands is an emote of Pepe the Frog crying with his hands covering his eyes.

afford it – a example of the reciprocity that makes stream ensembles community-like. The links between financial and social contributions thus construct streaming persona through ensemble member labour.

Any contribution to the stream ensemble is a form of labour, regardless whether that contribution is positive or negative. Chat participation can be classed as a form of visibility labour, a term that Internet scholar Crystal Abidin (2016) defines as "the work individuals do when they self-posture and curate their self-presentations so as to be noticeable and positively prominent," specifying that it is "concerned with analogue affective labour ordinary users perform to be noticed by prolific elite users" (p. 90). In the case of Twitch, this labour isn't always in pursuit of a positive perception among others – as the example with Laser above demonstrates. Visibility labour practices enacted by members of chat extend beyond the content and intent of messages. Some of these practices are rather innocuous, like an excessive use of emotes within messages that may catch the streamer's eye, @-tagging the streamer in a message so that it is highlighted on their screen, or repeatedly sending the same message until they receive a response. Partin (2020) has also commented on how bits, Twitch's own currency for donating to streamers, afford opportunities for users to perform visibility labour by either highlighting their messages or causing alerts to play. As with many ensemble practices, ambivalence emerges when the interests of the individual do not align with the interests of the ensemble. A generally highly frowned upon form of visibility labour that demonstrates this ambivalence – in fact probably the most frowned upon that I observed – is self-promotion directed at other members of chat. This involves a user discussing their stream within streamer's chat as a way of increasing their viewership. These practices may either be accepted,

ignored, or actively discouraged depending upon the stream ensemble, making visibility labour a (highly ambivalent) part of persona play.

The gamification of stream participation emphasises the Twitch platform as a nonhuman ensemble member that affords persona play opportunities to other ensemble members. Early in this project, it was relatively common for spectators to accrue a stream-specific currencies via chat bots through time, participation, minigames, and betting systems. Miia Siutila (2018) examines these and other gamified elements of streams that transform spectatorship into a form of play. In late 2019, Twitch introduced Channel Points, a formalisation of these stream-specific currencies. Streamers can customise their Channel Points by naming them and assigning them a custom icon, choosing what viewers can exchange them for and the costs per redemption. Possible redemptions are limited only by the streamer's creativity, however the act of redeeming is always a form of participation. Additionally, Channel Points are baked into the community-like nature of and the sense of community associated with stream ensembles. Apart from having to actively redeem their points, the redemptions themselves often have an impact either on the redeemer, such as temporarily granting them to access a particular subscriber emote, or the stream itself, through either an audiovisual alert or having the streamer do something. In the latter case, for example, Fufu offers "HYDRATE!!!!" to make her drink water, and "Pet a pup/kitty" to make her pat one of the pets that is usually hanging around. Channel Points are part of the everydayness of stream participation as members accumulate them simply by being present. Meanwhile Channel Point redemptions display membership as an outcome of the accumulation and carry influence as members can use them to affect stream content and other ensemble members.

Subsequently, Twitch introduced a feature called Predictions around one year after the introduction of Channel Points as a new way to both use and earn the latter. A Prediction allows spectators to bet their Channel Points on one of two options presented by a streamer or their moderator, and are given a temporary badge next to their username in chat to indicate what they opted for.[16] Despite carefully avoiding terms like *bet*, *wager*, or *gamble* in their descriptions,[17] this is very clearly a form of gamblification, where the returns are social rather than monetary (cf. Abarbanel & Johnson, 2020). Predictions are avenues for participation and key to a temporal economy on the platform (as I discuss in detail in Chapter 7), and also become ways for the ensemble to perform ambivalent relationships with streamers. For example, Laser's streams often hosted Predictions for spectators to vote on whether or not she would beat a boss within a particular number of attempts. These Predictions split the chat into two: so-called Believers and Doubters. Laser also provided opportunities to perform the associated support and opposition by asking questions like "Any believers?," which generally elicited NODDERS and NOPERS emotes in chat respectively.[18] As well as decision-making labour, these kinds of Predictions are often also accompanied by the labour of performing that decision, including either celebrating a win or bemoaning a loss, whether that is with or in spite of Laser's own success. Stream ensemble membership thus consists of spectators playing persona with and through forms of gamification (and gamblification) on the platform, and enacting relationships with the streamer and in relation to other spectators.

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[16] As of 2022, Predictions may offer up to ten different options.
[17] https://help.twitch.tv/s/article/channel-points-Predictions?language=en_US
[18] NODDERS and NOPERS are animated emotes of Pepe the Frog nodding and shaking its head respectively.

Even forms of non-participation can elicit forms of spectatorial labour, however. Lurking is a spectator practice that involves being present without chatting. Lurking is a passive mode of spectatorship that requires minimal (if any) labour. However some practices surrounding lurking are themselves forms of labour and participation. In particular, there is what Spilker et al. (2018) call *affective switching*, which is a switch between active and passive forms of spectatorship. When transitioning from active spectatorship to lurking, members of chat often announce their switch. Sometimes they'll do this by sending '!lurk' in chat. The exclamation point is an indication of a command for a chat bot, as a nonhuman ensemble member, suggesting that the sender wants a chat bot to announce the switch on their behalf. However even if a chat bot isn't present to formally declare the user's switch to lurking, the '!lurk' message is typically read as 'I am now lurking.' In other cases, the to-be-lurker will send a longer message sharing what they will be doing, which might be eating, travelling somewhere, going to class, or transitioning to a passive spectatorship while going to sleep (signalling that they will continue to watch the stream until they fall asleep but will not be participating in chat). These practices reiterate the link between stream ensembles and communities. Lurking demonstrates the everydayness and 'lived' nature of the relationships between ensemble members. There is an understanding that stream participation is part of ensemble members' everyday lives, and that participation occurs around other aspects of their lives. Additionally, though not happening in the flesh, streams are live and explicit switching acknowledges the value of that liveness. The act of flagging affective switching for other ensemble members suggests either a belief that or a desire for the lurker's absence to matter, or rather that their presence matters. Thus, practices around lurking communicate a shared emotional connection and influence consistent with a sense of community. In this way, user

practices around non-participation carry potential for members of chat to demonstrate ensemble membership.

Ensemble membership consists of many different kinds of labour, which in turn define streaming persona and affect the sociality and economy of Twitch in different ways. I have framed the labour of ensemble members through these effects in this section. Beginning with the familiarisation as a process of establishing ensemble membership, I then turned to different kinds of spectator contributions as labour. By contrasting perceptions and impacts of the social and financial, and then positive and negative contributions, I demonstrated the range of ensemble member labours and the subsequent transformations that these contributions have on streaming persona. I then turned to the platform as a nonhuman ensemble member through the features of Channel Points and Predictions, which facilitate and direct particular kinds of stream participation while also enabling new forms of participation as a reward for continued ensemble membership. Finally, I captured the seemingly-contradictory labour of lurking as a mode of ensemble participation emerging from non-participation. Bringing all of these kinds of ensemble labour together, I turn in the next section to how this ensemble labour is effectively the collective construction and performance of streaming persona.

Turning Labour into Persona

Spectatorial labour on Twitch is in many ways similar to cooking as labour – each recipe requires a different set of skills and the details of the work involved vary from dish to dish. I'm not much of a cook, but I know my favourite recipes and I stick with them, over time tweaking them slightly to my taste and making them my own. Each streaming persona similarly calls for different kinds of interactions: different social norms and different vernacular. Building on the discussions of the previous sections, I tease out some of these differences to

demonstrate how stream participation simultaneously invokes a relationship with the streamer and defines streaming persona. I examine how collective identity emerges from relationships within stream ensembles through stream vernacular and interactions and in relation to the streamer, giving rise to a feedback loop between the streamer and spectators. Social norms provide guidelines for acceptable behaviour within ensembles, as well as establish and maintain group identity (streaming persona). The mundane moments and daily interactions that reinforce normative behaviours within streams speak to Pertierra and Turner's emphasis on "everyday ... [and] 'lived' relationships through which the common good is prioritised and protected" (2012, p. 66). By focusing on specific examples of normative behaviour and vernacular through everyday stream communication, I argue that the labour of spectatorship contributes towards a sense of community as part of stream ensemble membership and that spectator labour transforms into streaming persona.

Stream norms are constantly negotiated through the interactions between the streamer and their ensemble members. In October 2020, Laser countered the claim of a member of chat who stated that chat reflects the streamer. Streamers often create Discord servers in which stream ensemble members can interact off Twitch. During this conversation, Laser commented on how she was unhappy with the tone within her Discord server:

> "It's not that [chat] reflects the streamer. It is my fault ... [but] it doesn't reflect me. I didn't moderate it, so it got out of control. It's not that it's reflecting how I act personally, it's reflecting my moderation and what I allowed."

Laser was more often absent than present on Discord, since it was accessible twenty-four hours per day with members in different time zones across the globe, and more often present than absent on Twitch. The differences in behaviour between Twitch and Discord, given that the

users were largely the same and both were centred around Laser's streaming, suggest that while the streamer may be a key figure in developing and maintaining social norms, there are other factors at play when the streamer is absent. I propose two potential explanations for the differences in behaviour. Firstly, users deliberately breached the social norms of the stream ensemble on Discord as a way of testing boundaries and, without moderation, the breaches became normative. Secondly, users saw their behaviour as falling within the social norms and thus not as breaches, which cannot be corrected without appropriate boundary-work. I would describe the relationship between Laser and her ensemble as playfully adversarial, and so boundary-testing (a concept that I explore in detail in Chapter 6) itself was a normative behaviour within this stream ensemble. As such, my two explanations for the tone of Laser's Discord server are not mutually exclusive. This boundary-testing, which occurred often through streamer-spectator interactions during Laser's streams, suggested that Laser's chat *does* reflect her behaviour – at least while she is live. And so normative behaviour is demonstrated by the streamer, though it can be extended and reshaped by interactions between ensemble members, and hence is reflective of the streaming persona at the time. Social norms on Twitch are thus not fixed, but rather constantly in flux and negotiated between ensemble members.

Playful antagonism is not unique to Laser's channel, and is a practice that demonstrates how persona play can involve both playing with and playing against other ensemble members. In his examination of stream-humour, Johnson (2022) identifies the capacity for humour to be derived at the streamer's expense, and the potential blurring of the line between that kind of humour and humour initiated by the streamer. Playful antagonism consists of a typically-exaggerated performance of opposition between ensemble members that is typically intended

to be humorous (and as such may be considered a kind of stream-humour), though is not always successful. Among the streams that I observed, even those with consistent positive interactions between the streamer and chat, opportunities for playful performances of conflict were constructed when spectators collectively positioned themselves 'against' the streamer. Playful antagonism is thus a way for ensemble members to turn stream participation into a game, consistent with Pearce's (2011) observation that inventing games is an activity regularly performed within communities of play. So rather than playing the videogame being streamed, spectators play (with) streaming persona by performing or enacting an oppositional stance. This play extends the ambivalence created by particular uses of Twitch's Predictions and in-chat poll features into stream interactions. In the latter case, Juliet played *chat-controlled* runs of games in the *Dark Souls* series. During these runs, members of chat voted on how Juliet upgraded her character, effectively determining her health, stamina, and the weapons that she could effectively use. These chat-controlled runs enabled spectators to develop a sense of community through persona play by deploying their influence over game content. Consistently, her chat (myself included) voted for what we viewed to be the most 'useless' stat for her, despite her performing a very strong opposition to this. In this example, ensemble persona play made the game more challenging for Juliet, thereby creating more tension as she progressed and, ultimately, more entertaining content. The entertainment value here did not come (solely) from Juliet's struggle, but the roles of the game and the platform as ensemble members and their interactions with spectators. Not only do Juliet's chat-controlled runs introduce the performance of the streamer against chat, but they also emphasise the ambivalent collectivity that enables individual ensemble members to take contradictory stances. The common goal is

entertaining content, and this does not solely hinge upon success or failure, but rather the ambivalences like playful antagonism that complicate journeys towards success or failure.

Playful antagonism, like other normative behaviours, needs to be fluid in order to ensure that it remains playful. Streamers' moods can change between streams, or within a stream as they get tired or find themselves working through repetitive and challenging game content. With their changing moods, their willingness to tolerate antagonism from chat also alters. Often the antagonism is balanced through the disparity between streamer and spectator statuses, some spectators typically siding with the streamer, and a tendency to occasionally shift the majority in favour of the streamer (to give them a 'break'). Despite this, sometimes the streamer needs to explicitly state the boundaries of this play rather than relying upon social cues. For example, during a stream in November 2021, a member of Laser's chat warned the spectators to "*load your KEKWs*" during a boss fight. The KEKW emote is a close-up on the face of Spanish actor and comedian Juan Joya Borja, whose laughter during an interview with Jesus Quintero in 2007 went viral (see Figure 14). The emote is typically used to represent pointed laughter – laughing *at* someone – in this case, taunting Laser for losing the fight. The viewer expected Laser to lose the fight, and was instructing everyone to prepare to send a KEKW emote in chat to laugh at her. Laser read this message and responded with:

> "I'm gonna ban [chatter] today. Some days I can handle KEKWs, other days I just wanna ban everybody who does it ... Yeah, I'm actually frustrated and so whenever people are doing KEKWs, I'm just gonna get more frustrated today. So it'd be super cool if you guys didn't. Cause KEKW's just a stupid fucking emote to begin with."

> *"no more kekwers* [sic] *guys, when she dies please be supportive and type :) instead, ty,"* the chatter responded.
>
> "I'm not saying to be supportive", Laser clarified, "It's just annoying when it's just KEKW. I'm fine with memeing and everything, but like on days where I'm actually annoyed, KEKW just pisses me off. Cause it's just an annoying emote."

In this case, Laser was setting boundaries for normative behaviour within the stream without compromising the playful antagonism, but rather ensuring that it truly was playful. She was explicitly setting the structure within which ensemble members can freely (playfully) move by very clearly identifying a specific behaviour that she wanted to discourage while also clarifying that the adversarial tone did not entirely need to be dispelled.

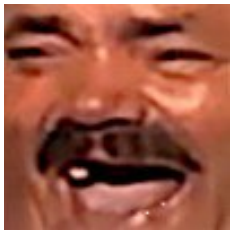

Figure 14. The KEKW emote.

Trauma dumping is a typically undesirable behaviour that spectators engage in as persona play that further demonstrates the relationship between community and stream ensemble. Trauma dumping, as suggested by the name, involves the sharing of personal experiences that are somewhat traumatic in nature (though 'trauma' may be considered somewhat loosely in this context at times), often positioning themselves as victims. Trauma dumping is a form of emotional labour performed by spectators that communicates their sense of shared emotional connection with other stream ensemble members and their desire (and expectation) of a fulfilment of their emotional needs. As such, the practice may be considered

a result of a sense of community within the stream ensemble. However, I seldom observed a response to trauma dumping that extended beyond a brief acknowledgement, thereby compromising the fulfilment of needs that constitutes a sense of community for the stream ensemble member. Also, trauma dumping is a response to the performance of streaming persona as an expression of streamer identity, particularly of gender. Gendered expectations exist around the provision of emotional support and advice, particularly around relationships. These expectations are perpetuated by the production of gendered authenticity through advice vlogs, where female-presenting bloggers perform care for their viewers (Henderson & Taylor, 2019). They are also demonstrations of the ways that "girls and women are interpellated as the monitors of all sexual and emotional relationships" (Gill, 2007, p. 151). I observed many instances of trauma dumping within female-presenting streamers' ensembles, particularly extensive descriptions of failed romantic and sexual advances and relationships. In an interview, Laser told me that "I think it's easier for my chat to open up to me and be more friendly since I am a girl ... But I also think it's easier for them to form a parasocial relationship because of this as well." When she labels these relationships as parasocial, she is emphasising that spectator perceptions of the streamer-spectator relationship are different from her perceptions as the streamer. She is suggesting that her performances of gender contribute towards this distinction, as well as an expectation of emotional connection from ensemble members. Practices like trauma dumping then become part of Laser's streaming persona through ensemble member behaviours.

Emotes are part of Twitch vernacular that vary in popularity and meaning between different streams. They operate as both a form of crowd-speak and ways for members of chat to express themselves. Ford et al. (2017) assert that "participation in massive Twitch chats is

less about individual identity and self-expression than it is about entertaining and engaging with a crowd" (p. 867), which they link with an increasingly common use of emotes within these chats. Very few of the streams that I attended throughout this project met the authors' criteria for 'massive' chats, which was over 10,000 concurrent viewers. However among the streams I did attend, this crowd-speak would still occur. Inaudible cheers echo through chats when streamers (fail to) overcome difficult moments of gameplay, or when something unexpected or unusual happens. Despite any playful antagonism, stream ensembles often laugh, celebrate, and commiserate together – sometimes all at the same time. Further, streamers can craft *scripts* using either explicit requests or subscriber emotes. For instance, the question "Can I get some [emote] in chat?" is a common streamer request for chat participation, particularly when calling for a collective celebration of subscriptions or donations. Subscriber emotes thus demonstrate a link between the social and the economic embedded in ensemble practice, as these scripts are linked to Twitch's subscription model. As discussed in Chapter 4, CBC's subscriber emotes include various figures from his narrative and when these figures appeared in CBC's clips or when he spoke about them, subscribers could contribute to the conversation by using those emote. For example, in Figure 15, when CBC's horse Douglas appeared on stream, members of chat used one of CBC's emotes featuring Douglas. In moments like this, subscribers are able to perform these elements of the streaming persona in chat in a way that echoes what is happening on-stream. This becomes a kind of collective story-telling vaguely reminiscent of a pantomime, where the audience shouts out simultaneously in response to the on-stage events.

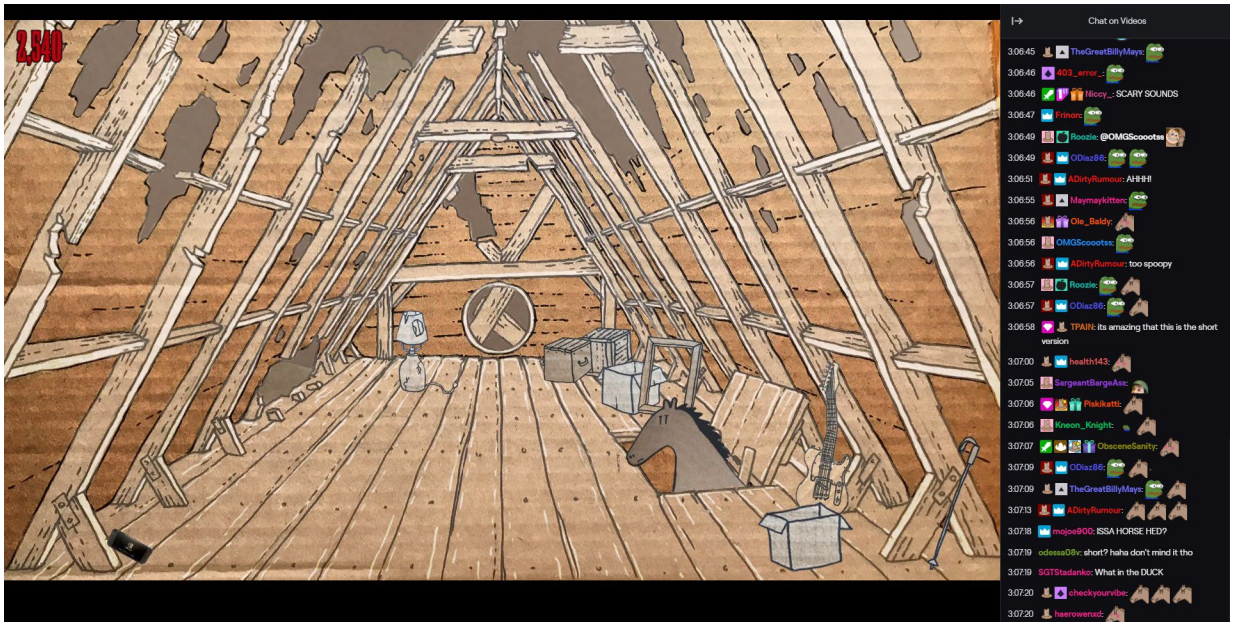

Figure 15. CBC's horse Douglas peeking into CBC's attic (2021).

Emotes can also be used by spectators to express themselves simultaneously as separate from and part of the stream ensemble through layered meanings. Beyond global and subscriber emotes, third-party extensions such as BetterTTV and FrankerfaceZ allow users to send and see other emotes. These extensions are home to, among others, the vast majority of emotes reflecting Pepe the Frog. These emotes find homes in many streams, including Laser's, to the extent that they become so deeply embedded in the stream vernacular that understanding them can become a barrier to participation in the stream. As someone who had never really taken notice of these emotes before, I found myself struggling to follow interactions involving these emotes. During an initial period in Laser's streams, I was reluctant to participate in chat as I felt that I didn't understand everything that was being said. Over time, I grew more comfortable with messages involving Pepe emotes (passing to the second layer in the familiarisation process), but I very rarely used them. And when I did, I found myself a little nervous about whether I had used them 'correctly,' or at least in a way that aligned with the normative

behaviour of Laser's channel. In fact, my uses were almost entirely restricted to either responses to explicit requests from Laser or echoing other members of chat. Upon reflection, I was able to avoid unintentionally breaching social norms by participating in this way as part of the collective *voice*. My reluctance also stemmed from some of the Alt-right associations of Pepe the Frog (cf. Glitsos & Hall, 2019), despite not believing that these values were at play within Laser's channel. Streaming persona is consequently a product of stream ensemble practices, but also informed by broader cultural understandings of those practices.

The transformation from labour to persona highlights the playful nature of stream ensemble membership through which its labours are often disguised. I have worked through the relationship between labour and persona through a number of common normative stream behaviours and their impacts on streaming persona. I firstly developed the notion of *playful antagonism* as a way of crafting streaming persona through a non-genuine and exaggerated adversarial relationship between streamer and spectators. The resulting negotiations between ensemble member agencies will become a focal point in coming sections. I then turned to the role of individual contributions to the ensemble and as expressions of ensemble membership through the practice of trauma dumping, and the use of emotes as both a form of crowd-speak and a demonstration of one's fluency with stream and platform vernaculars. These social labours of stream ensemble membership are culturally significant to Twitch and, as I demonstrate in the next section, are in part motivated by the community-like nature of stream ensembles.

Part of Something Greater

Twitch users are more strongly motivated by their own experiences than they are by theories, and this applies to their perception of stream ensembles as communities. In this

section, I therefore situate individual spectator labour within the stream ensemble by combining users' behaviours with their references to community. In this context, I argue that regardless of whether or not Twitch ensembles *are* communities, spectators often perceive community and act accordingly. I demonstrate how streamers and the Twitch platform (as ensemble members) instil spectators with a sense of community, which in turn leads the latter to perceive stream ensembles as communities and therefore treat them as such. Spectators contribute socially and financially to the stream ensemble with the knowledge that many streamers rely on this support to continue providing content. As such, I extend upon the link between the social and financial aspects of stream ensemble dynamics established in previous sections to analyse how subscribers and donors elicit a sense of community that has value, both linked to and separately from, monetary contributions. Stream ensembles are defined by these links between sociality and economics, which impacts the formation of streaming persona as collective identity and through stream content.

The ways that Twitch users use the term *community* communicates their understandings of Twitch ensembles as communities. There were three particularly prominent uses of the term among those that I observed: casually referencing a streamer's community, making spectators accountable for the ensemble, and pivoting stream attention away from an individual towards the ensemble. During her anniversary stream in April 2021, Fufu responded to a question about growing and interacting with chat by saying that "you need to exemplify an attitude that you want your chat to be like, because your chat will often reflect the energy that you are giving off," which she referred to as "community building." While this seems to contradict Laser's claim that chat does not reflect the streamer, it does support my argument that ensemble behaviour is (and hence community values are) rooted in behaviour demonstrated by the

streamer. Fufu was sharing her view that a goal of streaming is to build a community and that streamer behaviour is the foundation of that community. In June 2021, one of Amber's spectators redeemed their Channel Points to *time out* another spectator, that is to prevent them from sending messages for a period of time – a redemption typically made (and received) in good humour. Someone asked Amber how much longer was left on the time out and she answered playfully:

> "I'm not sure, but you can untime him out if you want to. It's up to you. The power that we hold for each of our teammates."
>
> A beat.
>
> "They're not teammates. Community members. Friends," she corrected.

Like Fufu in the previous example, Amber referenced community in the context of accountability. While Fufu suggested that streamers are accountable for community interaction, Amber highlighted a particular moment of mutual accountability. One spectator was responsible for timing out another, and any ensemble member (with the requisite number of Channel Points), could have ended the time out early. This 'power' explicitly instils a sense of community within ensemble members, and though this comes at the cost of another's participation, it does affirm the individual's role within the ensemble. In July 2021, a chatter came to Dartigan's stream "*to vent in their chat*". Dartigan responded by simply stating that "if we're going to vent, we need to vent as a community". He used the term *community* to draw attention away from the complainant and towards the collective viewership without rejecting the complaints. He was rejecting participation that was (entirely) self-serving and had the potential to negatively affect the tone of the stream. Instead, Dartigan encouraged a shared emotional connection – implying that either the ensemble would support the individual in

fulfilling their emotional needs in the moment or that the concern itself needed to be shared – thereby facilitating a sense of community. I often participated (as a streamer) in and observed similar attempts to encourage conversations that were inclusive of the entire audience rather than focused on a small subset. The uses of *community* on Twitch in these contexts suggest that stream ensemble are perceived as communities, and give some sense of what that means to ensemble members.

Members of chat also give (back) to the ensemble simply by being present and by engaging with the streamer. This idea of contribution is tied to reciprocity, which Pertierra and Turner (2012) identify as core to community and which Taylor (2018b) echoes specifically in the context of Twitch when she notes that "many [streamers] expressed that what shifts viewers from audience to something else, be it community or family, are gestures of reciprocity, familiarity, or intimacy" (p. 91). The labour and persona-crafting discussed in Chapter 4 make clear what streamers give to viewers: they provide entertainment, host a space for viewers to connect (contributing to the 'located' aspect of community), and produce streaming persona for ensemble members to identify with and as. Streamers often make the less-visible viewer contributions explicit. For example, when CBC was playing through some of the challenging post-game content in *Hollow Knight* (Team Cherry, 2017), a member of chat messaged "*I think streaming would be the only way I'd consider playing thru [sic] this game all the way. But it is beautiful in many ways*". After reading this, CBC responded

> "Yeah, I think like the ... main story mode is pretty fun just by yourself, but obviously sharing it with a community, like the journey of trying to kill something, the relentlessness that is needed for it. The stubbornness. It helps having people watch for sure."

I experienced something similar while playing *Celeste* (Maddy Makes Games, 2018), a game with its own difficult post-story content that I had emphasised I would not be attempting on-stream on multiple occasions. And yet, when I got to the end of the story, I was encouraged by a couple of viewers to play more of the later, harder content. As I progressed through these harder levels, I experienced the same perseverance that CBC described, courtesy of those viewers. CBC suggests – and I agree – that sharing this challenging game content makes it more pleasant and manageable. Simply by being there with the streamer, spectators improve the experience of play.

Streamers, particularly full-time streamers, however rely upon the financial support of their viewers to sustain their stream, compromising their ensemble's community status. These financial contributions primarily come in the form of donations, either using the platform's *bit* currency (Partin, 2020) or through a third-party site such as Paypal, and subscriptions, which users can also buy for each other (gift subscriptions). Each option enables viewers to give to the streamer – and by extension the stream ensemble – however what they receive in return varies. I have previously discussed subscriber badges and emotes as demonstrations of membership to the stream ensemble as well as performances of streaming persona. Additionally, members of chat may receive badges indicating their lifetime contributions to the stream in bit donations or gifted subscriptions, and there are leaderboards at the top of the chat window indicating the weekly leaders in bit donations and gifted subscriptions. These platform features contribute to a sense of influence and perceived status. Thus financial contributions enables other perceptions of community among ensemble members. While it is not necessary to subscribe to a stream to contribute to the stream – and streamers do often emphasise that their viewers should subscribe only if they have the means to – these subscriptions and

donations are often essential to the existence of the stream, and strongly influence the identity of the stream.

These financial contributions not only enable the streamer to produce content but may also contribute to streaming persona in different ways. For example, streamers often set donation or subscription goals, make them visible on-screen, and encourage viewers to help to meet them. These goals simultaneously support the streamer and provide a common goal for the stream ensemble to work towards, in itself a 'common good,' though arguably the economic connections separate this from the kind of common good that Pertierra and Turner (2012) envisioned. In contrast, some streamers turn their stream economy into a farce. For example, the phrase 'gimme twenty dollars' is a stream mantra for CBC. These demands for money are part of his persona play, which becomes a source of humour when he implies (or even explicitly states) that he has successfully 'scammed' his viewers. Laser regularly jokes in a similar vein, talking about scamming viewers or 'selling out' when she streams sponsored content, and Ray even has a brownSELLOUT emote that depicts him hold a burlap sack with a dollar sign on it. Even couched in humour, this transparency is acceptable because viewers understand the role of the stream economy in enabling the stream ensemble. Despite its acceptance, there is a significant ambivalence to this transparency however, as it demonstrates how streamers must buy into Twitch's economy through their streaming personas. The economy of the platform, and the streamer's presence on the platform, in turn become self-sustaining when the economics themselves are built into stream content. Streamers' financial needs thus bleed into their streaming personas through both streamer behaviours and the content that they create to accommodate this need.

Subsequently, the sense of community that accompanies spectator financial contributions – in particular, the sense of belonging and influence – carries its own value. Regardless of any pressure a streamer applies when it comes to financial contributions, these contributions (and by extension the contributors) are rewarded through the various attention-directing mechanisms built into streams. These mechanisms can be automatic, such as alerts, can come in the form of acknowledgement or gratitude from the streamer or chat, or both. These forms of recognition and attention can be sufficient returns for a user's contribution, demonstrating reciprocity within the community-life stream ensemble. However, I regularly observed giving to the stream ensemble communicated as its own reward for many viewers. Messages that accompanied donations and subscriptions regularly thanked streamers and referred to supporting the stream, suggesting that donors see their contributions as giving *back* to the streamer for producing content and facilitating the stream ensemble. While one would be well within their rights to say that the very idea of a community grounded in the exchange of capital is perverse, the benefits are real – the sense of community, whether initially fabricated or not – is genuine to contributors. A sense of community incentivises ensemble members to contribute financially, which in turn sustains the ensemble by allowing the streamer to continue facilitating the ensemble by streaming.

In summary, stream ensembles demonstrate complicated interrelationships between economics and sociality that can be understood in terms of their community-like status. Though the central role of the Twitch economy resists the categorisation of stream ensembles as communities, this economy also elicits perceptions of community and a sense thereof. For instance, spectators perceive their participation and financial contributions as acts of reciprocity, and their financial contributions demonstrate belonging and influence among

spectators. As such, while the interplay between the social and financial in the construction and performance of streaming persona denies stream ensembles full community status, it also facilitates a community-like environment. As ensemble members feel like members of community, they subsequently *act* like members of community – behaving in the name of 'common good,' adhering to social norms, and generally playing persona collaboratively. To feel like a community member is also to feel ownership over the community, and so the next section explores how ensemble membership consists of agentic negotiations with and between members.

Whose Stream Is It Anyway?

Despite Twitch's economy producing streamer-centric politics within stream ensembles, ensemble ownership is regularly challenged during streams. Playful antagonism, for instance, describes not only dynamics within individual moments of particular streams, but more broadly captures streaming persona as a product of negotiated agencies of ensemble members. These negotiated agencies are rendered visible when ensemble members' senses of belonging and influence create tensions between stream actors with contradictory desires during playing persona. In this section, I argue that live negotiations between streamer and spectator agencies are acts of persona play that define streaming persona. On Twitch, this relational agency persists through the combination of the liveness and long-form nature of streams unique to the mode. The 'playful' in playful antagonism extends beyond the attitude characterising the antagonism to persona play, with both contexts operating within the social, cultural, and economic structures of particular streams and the Twitch platform. Playful antagonism thus enables intersubjective flow – a positive sense of ensemble members' simultaneous individual and collective identities – within the stream ensemble through

negotiated agency that culminates in streaming persona. Streaming persona is an expression not just of the streamer or spectators, or even of the streamer and spectators as separate entities, but rather of human streamer and spectators and nonhuman platform, and their interactions.

Messages in chat are spectators' most obvious contributions to the stream, which are solidified as stream content through the streamer. While there are exceptions to this, including streamers who draw an audience based on skilled gameplay that requires constant focus and therefore can't as readily read chat, this interaction is the most fundamental difference between streams and recorded gameplay videos. Streamers often clarify the messages that they respond to by either reading the messages (of part thereof) aloud or by including the username of the sender in their response. These practices enable streamers to use their attention as a proxy for the attention of the entire stream. Although I observed many conversations occurring among spectators without streamer attention, conversations did tend to have strong engagement among the ensemble if the streamer drew attention to it or was involved. On a social and performative level, part of the streamer's role is to direct ensemble communications. Though spectators have agency over what they say, streamer agency enables those contributions to be more broadly attended to by the stream ensemble. Though chat messages are *created* by spectators, they are transformed into stream content by the streamer, and hence contribute to streaming persona.

Streamers equally enact their agency over spectator chat messages to exclude contributions from the streaming persona – or demonstrate what the streaming persona *isn't*. In Chapter 4, I discussed how streamer gaze signifies shifts in streamer attention. Extending upon this, I observed a pattern whereby a streamer's gaze would signify a shift in their attention towards chat, followed by a long-but-not-too-long pause before moving on without comment. I believe that these pauses were often time for a streamer to read a message in chat and decide

not to acknowledge or respond to it. It was easy at times to identify messages that were likely being ignored and so when viewers draw these conclusions, pauses become their own message about appropriate conversation topics for the stream. During our interview, Juliet confirmed that she would "usually be skimming slightly ahead [when reading chat messages] to make sure that the content in any given message is stream appropriate". When a message is ignored, a streamer is suggesting that the content either breaches an ensemble norm, or that the content of the message doesn't align with the streaming persona that the streamer wishes to maintain.

Not all unread messages are deliberately ignored, and so-called missed messages can have just as strong an impact on the streamer-spectator relationship as read (and ignored) messages. During one of my streams, I completely missed a message sandwiched between two others that I had responded to, and it was only then that I realised exactly how easy it can be to miss messages as a streamer. At this time, there were fewer than five active spectators in my stream – far fewer than many of the streamers that I observed typically had. It would reasonably be even easier to miss messages during those streams with larger audiences or during particularly active moments in chat. For example, a message is unlikely to be read if the stream is celebrating a recent in-game success with a barrage of emotes and GG's.[19] Edy, who typically streamed to around two hundred viewers, summarised these troubles when she said that

> "I don't want a thousand viewers, I-I would get very overwhelmed. I like ... where I can be able to read what you guys're saying. Like I feel like more viewers I would not really be able to read what you guys're all saying to me right? Am I

[19] 'GG' stands for good game.

> crazy? I feel like more viewers and I would," she shook her head slightly, "Throw up. Maybe I'm insane."
>
> Sometimes on certain nights I already kinda like start freakin' out that I can't read everything and it makes me sad, 'cause I love you guys, and I don't ... want it to be like something I can't, or that I ... can't read what you guys're saying."

She went on to make fun of the phrase 'Hey chat.' The term *chat* is frequently used as a term to address the collective audience, and by making fun of the phrase, Edy was suggesting that she felt that referring to spectators in this way has less valuable than addressing them individually. Viewers often expressed understanding when messages were missed, however the sentiment that Edy expressed – that she placed values on her viewers' voices even when she didn't hear them – was commonly expressed by streamers when the topic comes up. Laser demonstrated a less sentimental and more playfully adversarial approach to missed messages. She was often taunted by ensemble members for missing their messages by claiming that she was deliberately ignoring them. The reactions that this elicited varied from a justification of game-focus to one particular instance when she intently focused on chat, reading and briefly responding to every message. Consequently each message received a cursory, thoughtless response and there was no conversation occurring within the stream. This moment of playful antagonism emphasised the necessity of streamer judgement when selecting messages to read and respond to in the construction of streamer-spectator relationships and the development of interesting stream interactions. Streamers and spectators are related through the practice of reading chat messages, with both the content of the messages and the practice itself becoming a defining element of the streaming persona.

Some streamers emphasise the presence of chat in their streams through visual cues that are perpetually present on the stream screen and can contribute towards a sense of community through collective goals and achievements. In Figure 16, there are three noteworthy elements in the top-left corner of streamer Celina's stream screen. Firstly, there is a copy of the chat that updates as spectators send messages. This is surprisingly common considering that chat messages are quite easily readable through the IRC client on the channel page. This inclusion ensures that chat messages persist in clips and when streamers post recordings of their streams on YouTube, and makes messages visible for anyone watching the stream in full-screen mode, which shows only the stream screen. Through the presence of chat messages onscreen, viewers are constantly reminded of the presence of chat, even if they are participating in it. There are also two numbers in the top-left corner of Celina's stream screen: Celina has 1,690 subscription points,[20] and 207/20 marks the progress in subscriber numbers towards (or in this case in excess of) an incentive. From one perspective, these figures signify the streamer's success, but from another, they signify the ensemble's success in supporting the stream. Streamers give their stream ensemble something to work collaboratively towards by provide incentive goals, such as playing a particular game or dressing in a particular costume. Spectators can collectively influence stream content by meeting this goal. These stream elements become perpetual reminders that there is something for spectators to labour *for*, as well as making that something seem accessible. Additionally, these elements add value to stream contributions that increase the associated sense of the community.

[20] Subscription points reflect the number of subscribers and are weighted to take into account different tiers of subscription.

Figure 16. Celina's stream screen (2021).

Despite the perceived dominance of streamer agency over streaming persona, there are many instances when that agency is challenged or undermined by spectator agency. Streamer ownership over streaming persona is communicated through the dominance of the streamer's username. The stream channel shares its name with the streamer as a Twitch user and subscriber emotes are typically labelled with some variation of the streamer's username. Even in this thesis, I refer to streaming persona as if it belongs to the streamer, despite arguing that it is constructed and performed by all ensemble members. When speaking with another streamer while live, CBC joked about the idea of Twitch viewers being streamer property, saying that "the best thing about Twitch viewers as property is that they pay to be your property". However, spectator agency challenges this ownership, suggesting that spectators pay not to be streamer property but rather to enact agency or control over the streaming persona. A relatively common practice among the streamers that I observed was including the usernames of donors and subscribers somewhere on the stream screen. Laser wrote the names of subscribers and donors

on post-it notes, which she stuck on the wall behind her, during a number of streams. Amouranth and LukeLauncher (Luke) offered the incentive of writing usernames somewhere on their bodies during some streams, which extends the sense of ownership over stream content produced by Laser's post-its to the streamer's body. In exchange for their money, spectators can be seen as claiming part of the streamer body for the remainder of the stream. The body itself is commodified as an object over which spectators are offered ownership, giving the impression that the even the embodied streaming persona is collective. While these offers are enabled and enacted by the streamer, they are forms of persona play designed in order to incentivise spectator engagement. In other words, though the choice to defer to collective agency ultimately rests with the streamer, this choice is required in some form in order to maintain an engaged ensemble. Streaming persona is in this way a constant negotiation between ensemble members' agencies, with neither streamer nor spectator having total control.

Spectators can also enact their agency more clearly through ephemeral audiovisual cues such as alerts, which enable them to play persona *over* other stream content. Twitch alerts acknowledge follows, (re)subscriptions, donations, and other similar contributions, and are typically sporadic and brief. They cover parts of the stream screen and play over stream audio – including the speaking streamer – giving spectators explicit control over stream content (in exchange for money). Channel Point redemptions may also trigger alerts, meaning that viewers are effectively exchanging the time that they have spent in-stream for the ability to disrupt stream (contributing towards a temporal economy that I discuss in detail in Chapter 7). Celina has many of these alerts and, during one stream in August 2021, her audience redeemed a number of them back-to-back as she attempted to welcome a raiding streamer and their chat:

"Okay, my chat's-can everyone-I swear to God." The alerts kept interrupting her.

> “Okay, I swear to God. Just get it out of your system,” she waved one dismissive hand at her camera while she drank from a glass with the other, “Just go ahead and get it out of your system. I swear- I try to not scare the new people off and my chat’s like ‘NOPE’!”
>
> She paused briefly, looking away from the camera as various squeaks and pops played alongside animated emotes and gifs across the screen. She made eye contact with her camera and pivoted her attention towards the newcomers.
>
> “I have a lot of Channel Points redemptions on this stream that happen automatically. And they’re really really tasteful when they happen,” she looked to the bottom corner of her screen, seemingly staring at an image of a large hand patting an image of her in a costume, “When they happen one at a time. But when they’re spammed at all once-Okay.”
>
> She gave up on the explanation as a cascade of small pink squid-ghosts named Bob (the character in the bottom-right corner of the stream screen in Figure 16) frowned their way down the stream screen.

In this moment, Celina and her regular viewers introduced her streaming persona to the raiding viewers by way of persona play. This introduction said more than anything that Celina could deliver by herself. Newcomers were able to witness the relationship between Celina and her viewers through this display of playful antagonism contesting both the attention of the stream and control of the stream space. These viewers were also exposed to the content of the alerts as stream features and as elements of the streaming persona. While streamers are able to decide if and how these elements appear in their streams, they have little control over when. This

temporal element rests entirely on the shoulders of the collective audience, who are able to play persona with and against the streamer as they please.

Streamers also defer some choices to their collective viewership, strengthening spectator agency over stream content. These choices include in-game decisions such as Juliet's chat-controlled runs, as well as broader choices like which game they will play that day. Laser often started her streams with up to an hour in the Just Chatting category, during which time she may start a poll to allow her viewers to decide what she would play. When streamers remove themselves from the decision-making process, they shift the playful antagonism so that it is only between members of the collective viewership as they compete for their preference. These kinds of decisions aren't part of every stream, but occur often enough to produce perceived value for viewer preferences and spectator agency. Across both Juliet's and Laser's streams, however, there is a running gag of tied polls. Within both channels, ensemble members are uncannily skilled at collectively making no decision by delivering two results with exactly the same number of votes. Despite setting up a decision-making process that ought to, at least on the surface, divide the audience, they unite in their efforts to make the streamer decide. In this way, the audience performs antagonism (within itself) through the split decision as a form of playful antagonism directed at the streamer. As this recurs, it reflects the streaming persona enacted by spectators and the Twitch platform as ensemble members. As such, ensemble members are often largely ambivalent about game content and strongly motivated by their ability to affect the streamer and streaming persona. Spectators care about playing persona and playing the streamer, rather than playing the stream. Although the streamer is often perceived as the central figure in streams and that stream decisions ultimately belong to them, streams

regularly express collective agency and identity when streamers create an environment that facilitates and prioritises spectator agency.

I commenced this section with a brief return to playful antagonism, through which I raised questions of agency among stream ensemble members. Throughout the section, I looked to the roles of streamer and spectator agencies, and their facilitation through nonhuman ensemble members, in shaping streaming persona. Streamer agency tempers spectator agency through the process of sending, receiving, and acknowledging chat messages. However, the visibility of messages to all ensemble members presents opportunities to challenge this tempering. Streamer agency may be further challenged by spectators in numerous ways such as alerts, or even be deliberately forfeit by deferring decision labour to spectators. These negotiations between the agencies of ensemble members, which define the relationships between ensemble members as well as their statuses within the stream ensemble, become acts of persona play that ultimately challenge the assumed singular ownership of the streamer over streaming persona.

Many Minds, One Voice

Questions of agency are even more complicated by nonhuman ensemble members than discussed in the previous section, such as by the use of text-to-speech (TTS) during streams. Microsoft Sam was my earliest encounter with TTS. Microsoft Sam was the very first default Microsoft text-to-speech voice, introduced in Windows 2000 computers. As a child at this time, it was fun to make Microsoft Sam mispronounce words by misspelling them or to just type out a bunch of random letters and see what 'he' managed to make of them with his vaguely human-sounding voice. In this section, I make the novel argument that while this fun persists through the integration of TTS on Twitch, TTS is also a socially and culturally significant actor

on Twitch that produces a singular embodiment of the ensemble voice and a way for spectators to collectively play persona. TTS is most commonly used to automatically read messages accompanying (re)subscriptions and donations but has also been added as a Channel Point redemption by some streamers. As well as being one of the ephemeral reminders of spectator presence discussed in the previous section, TTS is a tool for spectators to converse with and over the streamer (cf. Consalvo, 2018). It has become a way to play persona by allowing individuals to speak using the collective voice, bringing playful antagonism to life through a sense of embodiment separate from the streamer. I assert that the costs associated with this, either financial through subscription and donation costs, or temporal through Channel Points, are justified for users by the opportunity to contribute to, and be heard by, the ensemble.

Skully was a character that had been present in CBC's narrative since before I started viewing his streams in 2020. He was first encountered by CBC at the bottom of a well when he was little more than a skull. Skully's role in CBC's streams evolved over time, including a period as a skeleton who sat opposite CBC on the stream screen and spoke with him during streams (Figure 17), with his outfit changing for every twenty dollars cumulatively donated and his voice being chat-controlled TTS. This meant that as well as being part of the streaming persona, Skully was both a character separate from CBC and an embodiment of the voice of chat. The relationship between CBC and Skully also became an extension of the relationship between CBC and his chat, characterised in particular by the same playful antagonism recurring through this chapter. During one stream in July 2021, a member of chat suggested that CBC's and Skully's roles should be switched, since Skully was being much nicer to chat:

Figure 17. CBC talking to Skully (2021).

"Switched?" CBC responded, "You want the roles switched? Alriiight fine, uhhh let's see." Skully's image bobbed across the screen as if Skully was walking over to CBC's spot.

"Skully you're in my way."

CBC then moved himself to Skully's spot. He flipped both images so that the two figures were still facing each other, with CBC on the bottom right and Skully on the bottom left.

"This is the skully stream now," Skully said courtesy of a viewer's donation, then began to repeatedly say "poo poo pee pee."

"Hey everybody, I'm Cardboard Skully." another viewer chimed in, "UWU. Give me twenty dollars. ka-bang. shot in the dick. I did not eff a lamp. You're my favorite prime. Sorry, I'm out of VIP slots."

> This last message consisted of a series of things that CBC regularly said, providing a condensed (and mocking) version of what it meant to stream as CBC for this viewer. After a few more messages, CBC responded.
>
> "I guess I should do your thing, huh Skully?" he shifted his voice into a higher register, "Cookies. Cookies. Cookies. Cookies. ALALALALALALALALALALA-Cookies. Cookies. Cookies. 7777777777777777777777777-Cookies."
>
> CBC's final comments in this example referred to previous TTS messages during this stream, when Skully shared with the stream a recipe for cookies, ending with him repeating the phrase "bubble cookies okay?" two dozen times, as well as the tendency for spectators to make Skully repeat the same thing many times.

Eventually CBC switched the roles back, but not before CBC and Skully had more than their fair share of fun impersonating the other. This example, and Skully more generally, demonstrate TTS as a tool for the construction and performance of streaming persona by spectators through the Twitch platform. Skully is the voice of the ensemble – created by CBC, scripted by spectators, and performed through the Twitch platform – and through him, viewers enact their relationship with CBC, and perform their understanding of that relationship and what it means to play persona.

TTS like Skully articulates the collective spectators' voice, thereby representing chat and allowing spectators to co-opt the attention of the stream. In the example above, human ensemble members are playing with the streaming persona. The mocking tone was an example of playful antagonism as CBC and spectators make fun of each other and this was consistent

with Skully's and CBC's typical relationship. More than this, however, the reversal of CBC's and Skully's typical roles became a subversion of the streaming persona and a reflexive commentary on how the ensemble understood the streaming persona. This subversion became an unusual example of intersubjective flow, as the collective viewership united to simultaneously take on CBC's role as streamer and make fun of him. Each TTS message that Skully spoke was the contribution of an individual member of chat and yet they culminated in a consistent expression of identity that reflects CBC's streaming practices, namely CBC's streaming persona. CBC's own response to this, taking on Skully's role, communicated that Skully had a role to take on to begin with – that there were identifiable tropes that CBC could parody. Even if this only consisted of repeated words and sounds, it is still a consistent identity produced by CBC's spectators. Through TTS and its use to subvert typical stream dynamics, streaming persona as collective identity is emphasised as an ensemble performance.

When personified by spectators, TTS performs as an individual ensemble member who becomes part of the streaming persona. Though it was not hidden that Skully's words are written by spectators, since his words are visible in chat messages, Skully was treated as if the words were his own – as if he were living being with his own personality and agency. He was treated this was by both CBC and chat, which meant that when spectators wrote messages for Skully to speak, they were playing persona through the character of Skully. This kind of persona play includes spectators developing a consistent tone for Skully and tied into his role in CBC's narrative. I don't mean to suggest here that members of chat were painstakingly crafting messages to perform Skully's character (though it is certainly possible). Instead, Skully's personality was the result of group cohesion. Spectators took cues from each other through the words that Skully spoke and from CBC through his interactions with Skully.

Spectators used Skully as a proxy to demonstrate their membership to the community of play through knowledge of ensemble vernacular and sense of humour. Therefore, Skully makes TTS an important part of CBC's streaming persona as collective identity.

Even if the TTS speaker isn't as fleshed out in many streams as Skully was in CBC's, TTS still plays an important role in the direction of attention and challenging the dominance of the streamer's voice. During Laser's streams, the TTS voice was named Tim, but otherwise was not as explicitly personified as Skully. Like Celina and her many Channel Points redemptions, Tim was regularly put to use to interrupt Laser. He was given onomatopoeic sounds to speak, for example the sound of a sprinkler which can be emulated through multiple different arrangements of letters repeated. Or, when Laser hit one thousand subscribers in June 2021, one viewer made Tim repeat "1000 SUBS" and the name of one of Laser's emotes fourteen times. While this was all in the name of fun and undoubtedly intended to mimic some of the same playfulness that I experienced with Microsoft Sam as a child, these moments represent spectatorial enactments of agency that interrupt the flow of the stream. If Laser was talking, her dominant status in the stream was momentarily challenged and she was forced to either wait to continue, or to speak over Tim. In either case, viewers are able to challenge her control over stream flow using TTS, again demonstrating how streaming persona is negotiated among ensemble members.

Spectators' willingness to pay the cost of contributing to a stream through TTS also suggests a relationship between TTS and a sense of community. In most streams TTS costs money, either through the cost of subscription or a direct donation. The costs are flexible, with streamers sometimes shifting the cost up to avoid spam or down as an incentive. For a short while, Laser had a TTS Channel Point redemption for 25,000 points. For a subscriber, this is

the equivalent of around sixty-five hours of active watching time (which requires the viewer to click a highlighted icon every fifteen minutes). However they pay, users are paying to influence stream content, which suggests that they see value in contributing to streams through TTS. There is a separation between sending a TTS message as a result of donating and donating in order to send a TTS message. In the former case, the message is a kind of 'bonus' for contributing to the stream and elicits a sense of community as any other financial contribution. In the latter case, given that all that a user receives is their typed message read aloud by a bot, the value is likely in the attention that this draws to them as an ensemble member, or simply the act of contributing to the streaming persona, or a combination of both. Like other financial contributions, TTS becomes a form of influence and also elicits a sense of belonging if the message is received well. Thus TTS has a social value to users that is tied to their ability to play persona and perform collective identity.

TTS is a pinnacle of the construction and performance of streaming persona through ensemble play. Despite the prominence of TTS within streams, it has received very limited scholarly attention, making my analysis extremely novel. Further, it represents the culmination of my arguments around ensemble membership and streaming persona. TTS is a demonstration of the collaborative labour of human and nonhuman ensemble members in the production of streaming persona. Feelings of influence and belonging that elicit perceptions of community are politicised by the integration of required financial contributions, as TTS becomes the voice of those who can afford to be heard. Finally, TTS embodies the negotiated nature of stream ensemble agency as a collective voice for all non-streamer ensemble actors that often matches, if not overrides, the streamer's voice during streams.

Streaming as Ensemble Play

In this chapter, I have demonstrated how streaming persona is not only performed and constructed by the streamer but by all stream actors individually and as a collective. I termed this collective the *stream ensemble* to capture the conscious performativity involved in stream participation and to emphasise the performance of streaming persona as a form of collaborative play. The contributions of the stream ensemble to streaming persona naturally extend upon those of the streamer as an individual, and frame streaming persona as understood in relation to the streamer but defined beyond them – a significant contribution of streaming persona and consequently this thesis. By drawing upon theories of community, I likened stream ensembles to communities, both through the roles that ensemble members play in contributing to and participating in the ensemble and the ways that a sense of community is elicited by and communicated through persona play. I have maintained a distinction between stream ensembles and community through the inextricable role of the economy in persona play.

The financial and social elements of performing ensemble membership characterise spectatorial labour, and I demonstrated how these financial and social elements are intertwined and feed into each other as part of the production and performance of streaming persona. Further, this chapter argues that spectator labour is transformed into streaming persona in part through normative behaviours and vernacular specific to streaming and the Twitch platform. *Playful antagonism* is another key contribution of this chapter that drives streaming persona as performed by stream ensemble membership. I mobilised playful antagonism to capture ambivalences within stream ensembles and between ensemble members, to demonstrate that even when (persona) play is not cooperative, it is still collaborative, and to challenge the assumption that streamer agency is necessarily dominant. By conceptualising stream ensemble

and playful antagonism – which will continue to appear throughout the remainder of this thesis – I have highlighted that streaming persona is negotiated among a human and nonhuman collective, which is part of my definition of streaming persona and is now understood as (part of) a stream ensemble.

Finally, I used Text-to-Speech (TTS) as an example of ensemble performance that blends streamer, spectator, and platform together as stream actors to produce a sense of embodied ensemble. The expanded collective demonstrated by TTS and the interactions therein consolidates streaming persona as reflective of the sociality, culture, politics, and economics of Twitch, and how these aspects of the platform related to each other. The culture of the platform emerges from the social interactions and relationships between ensemble members and these relationships are grounded in practices, vernacular, and norms unique to Twitch. Ensemble membership and the economy of the platform mutually affect each other as the exchange of capital enables ensemble membership, and a desire for ensemble membership motivated capital exchange. These interactions are illuminated by the incorporation of TTS into streams but are ultimately present in all of the aspects of stream ensembles discussed in this chapter.

In the coming chapters, having now addressed each aspect of the definitions of streaming persona and persona play in some form, I mobilise streamer performance and stream ensemble to examine streaming persona more critically. In Chapter 6, I pick up the thread of boundary-work introduced through playful antagonism. In particular, I engage the parallels between the boundaries of streaming persona – demarcating behaviours and practices that do and do not align with particular performances of streaming persona – and the structures that bound persona play through explicit moderation and commonly contentious practices. As a

constantly negotiated identity, streaming persona is not static but rather always in flux. This flux is examined in my temporal analysis of streaming in Chapter 7. And finally, games are stream ensemble members that are quite distinct from those examined in this chapter, and so in Chapter 8 I analyse their roles in constructing and performing streaming persona.

6. Playing With or Playing Against: Boundary-work as Streaming Persona

"You get reported on this fuckin' website at the moment, and you've done somethin' wrong: bye-bye to your account chat. So you might wanna play by the fuckin' rules."

- The_Happy_Hob

Stream ensembles construct streaming persona collaboratively, not cooperatively. Ensemble members do not always agree or work towards a unified streaming persona, but streaming persona is a result of their interactions and disagreements taken together. Sociality, culture, and politics are all affected by behaviours that are accepted, rejected, and encouraged, and particularly by ways that the boundaries between those behaviours are established and managed, who abides by, who enforces, and who challenges those boundaries. I reiterate that streaming persona is defined as a negotiated social identity that is performed by individual and collective (human and nonhuman) stream actors. As this identity is negotiated between ensemble members, careful consideration of how the boundaries of streaming persona are established and enforced is of great significance to this thesis and to an understanding of the sociality, culture, and politics of Twitch. This chapter contributes to this thesis and Twitch research more generally by examining performances that work to strengthen or challenge the boundaries of streaming persona on Twitch. Through so-called boundary-work I extend upon the examination of interactions between ensemble members produced thus far and move away from the language of *positive* and *negative* contributions used in previous chapters. Instead, I frame contributions in terms of how they move towards or challenge a consistent, cohesive

streaming persona – behaviours and attitudes that operate inside and outside of the boundaries of streaming persona. This chapter thus extends upon the boundary-work of playful antagonism introduced in the previous chapter to frame normative behaviours in relation to streaming persona. More broadly, boundary-work establishes the limits of streaming persona within which ensemble members may freely move.

The significance of my examination of boundary-work on Twitch can be demonstrated through The_Happy_Hob's (Hob's) return to Twitch after a two week ban from the platform in February 2021. Hob had transformed his performances of streaming persona upon his return – he was more polite, had replaced all previously-grey block text in his stream design with golden script, wore a vest and glasses, and positioned his camera feed against an image of a home library furnished with leather chairs, ceiling-high shelves filled with books, a fireplace, and a chandelier. These streams were periodically interrupted, however, by greyscale flashes of clips from past streams including Hob shouting and swearing. Over the next ten days these flashes continued, with cracks gradually appearing on the edges and corners of the stream screen as if it were strained glass preparing to shatter. After reading some negative comments in chat, the shattering came with visual explosion effects and a shattering sound. Finally, the golden script 'The Happy Hob' on a black background shattered and exploded, replaced by his old grey block lettering. "To this fucking c*** in chat," he said, "*Fuck you!*" Hob had returned. Hob's entire performance was an exaggerated parody of abiding by Twitch's Terms of Service. This entire event was a metaphor for boundary-work that demonstrated the need for boundaries to be vigilantly maintained lest they shatter and destabilise cohesive streaming persona. Moreover, this event was an exaggerated performance of struggles that I regularly observed occurring on a smaller, less obvious scale. This chapter's contribution to this thesis is in

bringing these more mundane practices forward, which are enormously significant to the sociality, culture, and politics of the platform as they shed light on how streaming persona is bounded and ensemble membership (de)legitimised through everyday interactions between stream actors.

Boundary-work is a form of persona play on Twitch, and the social, cultural, and even technological dynamics of the platform are products of the playful interactions between ensemble members and these boundaries. Many forms of play have rules that delineate between acceptable and unacceptable behaviours, and the rules of persona play similarly function as boundaries that determine behaviours and practices that adhere to or resist the streaming persona as constructed through ensemble behaviours examined in Chapters 4 and 5. Boundary-work extends into the social and cultural bounds within which play occurs, as Carter et al. (2015) argue when adapting the concept to the development of informal rules. The authors demonstrate how boundary-work is used by players to "demarcate between play which is legitimate or illegitimate and to establish and maintain informal game rules" (n.p.). The boundaries to which the authors refer are these informal social rules that govern how players interact with games and each other. It is through this process of demarcating between legitimate and illegitimate forms of participation that I present boundary-work as persona play.

So what are the boundaries of streaming persona, and how are legitimate and illegitimate forms of stream ensemble participation defined? One of this chapter's key contributions of boundary work as persona play begins by answering this question with my framework of persona play alongside Cater et al.'s (2015) concept of boundaries as informal social rules and the associated work of establishing and enforcing, where the latter translates to the context of streaming with minor adjustments. Persona play presents the performance of

streaming persona – the negotiated identity that is performed by individual and collective (human and nonhuman) actors within a stream – as playful. Recall that play in this context is inspired by Salen and Zimmerman's (2004) definition of "free movement within a more rigid structure" (p. 304). The boundaries of streaming persona are the various elements, in particular the informal social rules and their formalisation as so-called *Stream Rules* to be examined in this chapter, that structure the free movement that is persona play; they influence ensemble actions by presenting an image of a cohesive streaming persona. These boundaries demarcate between behaviours that contribute towards the realisation of that image and those that challenge its realisation – between ensemble members who play with and those who play against each other in the construction and performance of streaming persona – legitimate and illegitimate forms of participation respectively.

The boundaries of streaming persona are set out initially by the stream itself. When a spectator enters a stream, they are entering the space of the streaming persona. The concept of the magic circle is often used as a way to bound the time and space within which play occurs. It has been described in terms of the rules of games, which are parameters that distinguish between what players can and cannot do in the world of the game (Zimmerman, 2008). The magic circle has also been challenged for its rigidity and denial of the impact of the world outside of the game on play (Consalvo, 2009). While the Twitch platform and individual streaming personas within have rules – implicit and explicit parameters governing the behaviours of stream actors – the boundaries of streaming persona begin with initial conditions determined by the virtual space of the stream. When entering the stream, spectators are operating within the world of the stream ensemble, and therefore must abide by the rules of the

stream and the platform within which the stream operates. As such, the environment of the stream itself structures stream actors' persona play.

This chapter's analysis begins by demonstrating how legitimate and illegitimate – acceptable and unacceptable – forms of stream participation are established and bounded, firstly by rules and secondly through moderation. Stream Rules, a formal list of parameters provided to spectators by streamers through the Twitch platform, spell out for ensemble members behaviours that are legitimate forms of stream participation and those that are not. Norms are less formal than rules but also govern persona play, being behaviours that are implicitly accepted by ensemble members as legitimate forms of stream participation. While I primarily demonstrate how Stream Rules and norms shape the boundaries of streaming persona, I also argue that Stream Rules can become normative on the level of the platform. This transition occurs, for example, when a rule's prominence across the platform leads ensemble members to abide by it outside of streams that it is explicitly identified as a rule. This chapter's examination of rules and boundary work therefore contributes an understanding of Stream Rules as of sociocultural significance to the Twitch platform. After establishing the relationship between Stream Rules and the boundaries of streaming persona, I argue that human and nonhuman ensemble members perform boundary-work through moderation that upholds and enforces these rules. While Twitch moderation has been examined by a number of researchers thus far (Cai & Wohn, 2019b; Seering et al., 2017, 2019; Taylor 2018b), I offer a new perspective by arguing that boundary-testing is persona play and that those who operate outside of the boundaries of streaming persona are ensemble members who contribute as significantly to the streaming persona as those who abide by Stream Rules and norms. This chapter is further significant as it identifies boundary-work as enacted distinctly within stream

ensembles while also feeding into the sociality and culture of the platform through commonalities and differences between different ensembles. The chapter demonstrates how setting, communicating, and enforcing Stream Rules are acts of persona play that shape and reshape the boundaries of streaming persona as they are tested by ensemble behaviours.

Twitch's sociality, culture, and politics are shaped by the behaviours that are deemed acceptable and those that are ruled out across the platform. Boundaries of streaming persona can position stream ensembles in relation to broader platform culture, which is in part defined by ambivalent practices. The first such practices that I examine are *spoiling* and *backseating*: game-related practices that 'ruin' play by sharing unwanted details and strategies. This chapter offers the first close scholarly examination of these two significant sociocultural practices on Twitch, through which I argue that boundary work is often performed by and with spectators who regularly demonstrate an investment in the streamer's play experience, above even their own at times. I demonstrate how ensemble members are 'cheated' by these practices, in turn making explicit the boundaries of streaming persona and unveiling spectatorial investment in ensemble membership. By looking to a variety of different anticipatory and responsive decisions in relation to both spoilers and backseating, I demonstrate how being cheated produces streaming persona and is a social construct, evident through its variable nature.

I conclude this chapter by examining the boundary work associated with a second set of ambivalent practices, namely so-called *toxic* behaviours. Toxicity is defined in terms of its inherent negativity and contagious nature (Bacon, 2022). This chapter intervenes in scholarship on toxicity by arguing that although it is contagious on Twitch, the impacts of toxicity streaming persona are not inherently negative. After demonstrating how scholarly understandings of toxicity relate to the observed behaviours of stream actors, I look to the

moderation of targeted toxicity, which I playfully refer to as *waste management*. I argue that toxic contagion enables the spread of toxicity through and despite waste management. In particular, I engage postfeminist theories to critique gendered toxicity embedded into the culture of the Twitch platform that leads to stream actors challenging the boundaries of female-presenting streamers' streaming personas who challenge that same culture through acts of postfeminist hyperfemininity and sexual subjectification.

A consideration of boundary-work is essential to my framework of streaming persona, particularly given my framing of the construction and performance of streaming persona as playful. It is through boundary-work that ensemble members establish the limits of streaming persona – what is acceptable and what is not, how far those limits can be pushed, and the corresponding degrees of enforcement. There are many similarities between the examples of boundary-work that I present in this chapter. Each example positions streaming persona in relation to some aspect of the social, cultural, or technological dynamics of the platform, in turn affirming the significance of that aspect. And each example of boundary-work further contributes to streaming persona through the demarcation it performs and how that demarcation is established and enforced. On the other hand, their differences together also paint a picture of the sociality, culture, and politics of the Twitch platform. The diversity of and contradictions between stream ensembles on Twitch emerge in part from rules and the processes through which they are established and enforced. Boundary-work as persona play is therefore an essential lens through which these similarities and contradictions may be analysed and thus contributes significantly to understandings of Twitch, in particular through its operations as a collection of interconnected stream ensembles.

Setting Boundaries

In June 2020, PaladinAmber (Amber) titled a stream "lesson on 'how not to be an idiot on the internet' starting now," seemingly in response to some issues on Twitter. "If you need rules on the internet, chances are you probably shouldn't be on the internet at all," she told her audience. However, she also asserted the need for rules in response to a chatter stating that anyone should be able to say anything without restriction.

> "Nope", she disagreed, "I think that there are fucking restrictions. I think that you should most definitely, absolutely have restrictions."
>
> She counted on her fingers.
>
> "If it's harmful, if it's hateful, and if it's not helpful, don't fucking say it."

Amber claimed that rules should not be needed because acceptable behaviour should be obvious (and not because all behaviour should be acceptable, as her chatter interpreted). But this claim does not hold generally, and certainly not on Twitch, as acceptable behaviour is neither obvious nor universal. Like other forms of play, persona play on Twitch occurs in relation to rules. On top of Twitch's Terms of Service and Community Guidelines, each streamer sets their own Stream Rules. These rules encourage spectators to engage in certain specific behaviours and to avoid others. Rules have social and cultural significance as boundaries that demarcate between acceptable and unacceptable behaviours. In this section I argue that the construction and visibility of rules within a stream constitute boundary-work that communicates for ensemble members behaviours that do and do not align with streaming persona.

Stream rules are chosen by streamers with an ideal audience in mind, and these rules appeal to some viewers and not others. As such, streamers are actually crafting an audience, and hence a stream ensemble, by using rules to create a particular stream experience. Many different aspects of stream ensemble membership are affected by Stream Rules. For example, Stream Rules often prohibit targeted hateful language including sexist, racist, homophobic, and transphobic slurs, or discourage swearing, or restrict spoilers or backseating (telling the streamer what do to) in the game that the streamer is playing. The dynamics of Stream Rules echo those that Pearce (2011) describes in her examination of communities of play: rules express group members' shared values, and the commitment to these shared values strengthens a sense of group cohesion for its members (p. 242–243). Stream rules express values, position the stream ensemble in relation to the broader culture and politics of Twitch, and hence work towards group cohesion among ensemble members. However, Stream Rules are set *by* the streamer *for* the ensemble meaning that adhering to Stream Rules is adhering to group cohesion in terms of the streamer's ideal ensemble. Further, Stream Rules often define persona play by labelling behaviours that are outside of the boundaries of streaming persona, rather than within. For instance, when talking about rules in her own streams, Juliet told me that

> "I generally like to avoid divisive or contentious topics ... I've tried to create a relaxing stream environment for everyone, and I'd hate for viewers to feel alienated from one another because of differing views."

She also emphasised to me that discussions around these divisive topics are important, acknowledging that "there are some absolutely brilliant politically geared streamers out there." From these comments, it is clear that Juliet has determined that conversation topics that might fracture the group cohesion among ensemble members fall outside of the boundaries of her

streaming persona. The boundary-work here is two-fold. Firstly, spectators who want to discuss divisive or contentious topics – or more specifically, cannot accept not discussing those topics – are positioned outside of the stream ensemble. Secondly, group cohesion is fostered among those who remain through unifying conversation topics. Consequently, even though the behaviour in question – particular conversation topics – is characterised as outside of the streaming persona, the boundary is maintained from both sides. Therefore, by choosing rules with an ideal (rule-abiding) audience in mind, boundary-work is persona play.

Once a streamer chooses their Stream Rules, they collaborate with nonhuman ensemble members to make these rules, and consequently the associated boundaries of persona play, visible. While norms are typically policed by ensemble members, rules are often presented more explicitly. In a study of 125 micro-community channels on Twitch, Cai et al. (2021) found that spectator perceptions of stream transparency were positively correlated with the frequent posting and explanation of rules, which in turn created a more supportive and enjoyable environment for users. While choosing rules erects the boundaries, ensuring that those rules are consistently visible reinforces those boundaries. Often this reinforcement is performed by or through nonhuman stream actors. For instance, when a user clicks on the stream's chat box for the first time, a pop-up with the title 'CHAT RULES' appears. This pop-up contains a customised message from the streamer, which can vary from a list of essential rules for the stream to something shorter, more general, and maybe less serious (Figure 18). In order to proceed, a potential chatter must click a button with the text 'Okay, Got It!'. These pop-ups are written by human streamers but are communicated to viewers by the nonhuman platform. Further, rules can be expanded upon or made visible in many different ways. For example, streamers can dedicate space on their stream screen or Twitch profiles to Stream Rules, and

chatbots can post reminders or explanations, either on a timer or upon receipt of a particular prompt in chat. In these cases, the Twitch platform and chatbot respectively are nonhuman ensemble members who perform the boundary-work of maintaining the visibility of rules. Deciding upon rules signals an intention to align the actual ensemble with an ideal ensemble, and active boundary-work begins with the implementation of these rules. This implementation often relies upon the persona play of nonhuman ensemble members who broadcast the boundaries of streaming persona.

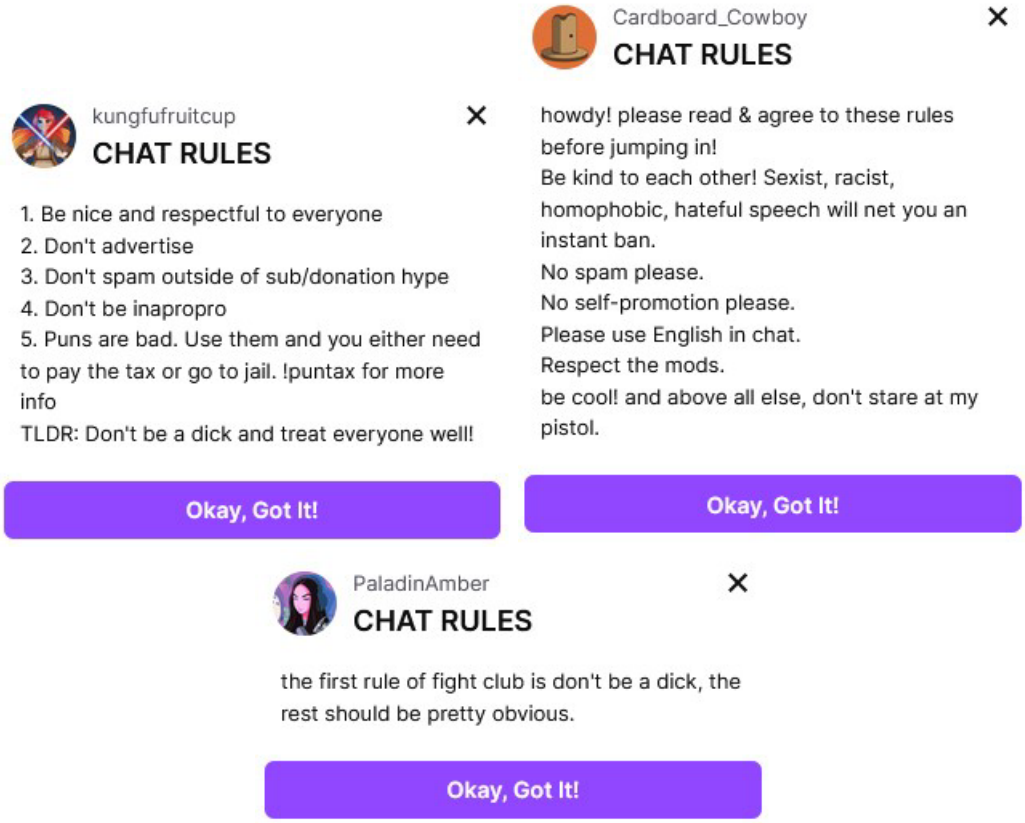

Figure 18. Three examples of the 'CHAT RULES' pop-up.

Stream rules not only demarcate between acceptable and unacceptable behaviours when playing persona, but also between different streaming personas and stream ensembles. This point extends Quinn and Papacharissi's (2017) argument that boundary-work separates groups

from each other in social media settings. This separation is evident in Juliet's comment that although she avoids potentially divisive conversation in her streams, there are many streamers who encourage these conversations. She is not only articulating the boundaries of her streaming persona through acceptable and unacceptable behaviours, but also emphasising how those boundaries distinguish her streaming persona from others'. Stream rules are consequently key in separating stream ensembles from each other, and thus determine a streaming persona's relationship to the broader culture of the platform. This relationship demonstrates the close ties between Stream Rules and norms. Particular rules may be considered normative within Twitch's culture, and abiding by a stream's rules can become normative within that individual stream. When spectators move between streams where norms are not explicitly communicated, they therefore must take cues from the streamer and nonhuman actors who establish and communicate Stream Rules. Additionally, they may observe rules that are not clearly articulated through normative behaviours performed by ensemble members. Juliet described this process when she said that "you can get a fairly good idea of the type of language and content that's considered appropriate in any given channel by the comments posted by their core community." In other words, ensemble members are assumed to abide by Stream Rules as part of their performances of streaming persona. Through rule-following as a normative behaviour, they situate the ensemble within Twitch culture and position it in relation to other stream ensembles.

In summary, Stream Rules form boundaries of streaming persona. These boundaries demarcate acceptable and unacceptable stream behaviours, in other words determining how ensemble members play persona. Streamers collaborate with nonhuman stream actors in order to establish Stream Rules and render them visible, thereby maximising their impacts upon the

behaviours of ensemble members. Moreover, Stream Rules function as boundaries that demarcate between stream ensembles and situate individual streaming personas within Twitch's broader sociality and culture. Rules set within individual streams can collectively affect the platform, particularly if they are prominent among different stream ensembles. Having established the processes by which rules are established as persona play, I move in the next section to the enforcement and moderation of Stream Rules as boundary-work.

Playing with the Rules

Moderation on Twitch involves identifying particular acts as breaches and enforcing Stream Rules and norms. Rule breaches and decisions around their moderation are some of the most common interactions between ensemble members and boundaries of streaming persona. As such, testing boundaries through breaches and reinforcing them through moderation constitute boundary-work that demarcates between acceptable and unacceptable forms of ensemble participation. Ensemble members require tools and methods for this boundary-work, as Herron and Sutton-Smith (1971) identify in their work on children's play. The authors emphasise that children have a range of approaches towards maintaining boundaries beyond just abiding by the rules. Similarly, as I discuss in this section, stream ensemble members deploy numerous methods to maintain, sharpen, or reframe the boundaries of streaming persona. Breaches and challenges to Stream Rules are socially and culturally significant acts of persona play that call for human and nonhuman moderation in turn altering stream dynamics. Ensemble members' responses to and preparations for breaches and challenges to Stream Rules, as well as the acts of breaching and challenging Stream Rules, are examples of boundary-work. As we will see below, these forms of persona play add nuance to streaming persona by introducing ambivalences and ambiguities that can frame breaches as desirable acts

of streaming persona, as in the case of Hob presented above. Similar forms of boundary-work also occur across the platform. The interactions between ensemble members and the boundaries of persona play – abiding, challenging, breaching, enforcing, reinforcing – not only shape the streaming persona but give rise to platform-wide roles and social functions.

When a spectator breaches Stream Rules, they are challenging the boundaries of streaming persona, and how these breaches are managed is as much as part of the streaming persona as the rules themselves. Boundary-work thus occurs both in the form of breaches and in responses to those breaches. This particular boundary-work – the process of enforcing Stream Rules and norms by identifying and addressing breaches – is called moderation. In Chapter 5, I examined a stream moment from October 2020 during which Laser banned an ensemble member. I revisit that moment in closer detail here to extend upon the previous analysis of positive and negative contributions from ensemble members. In this moment, Laser demonstrated the power of live moderation as boundary-work, as well as its potential for other forms of persona play. After a number of confrontations, she had enough of a particular chatter:

> "Next time [chatter] says anything negative," she warns, "Like I can take people being rude and whatever but [chatter], all you do is say negative things, so I'm gonna ban you next time [chatter] ... I'm over you."
>
> Within thirty minutes, this chatter makes fun of Laser for dying to a boss.
>
> "[Chatter] is dead," another viewer writes,"FeelsBadMan."[21]

[21] FeelsBadMan is an emote of Pepe the Frog with his eyes partially closed and looking downwards, as if sad.

“Chat, it’s time, are you guys ready? Chat. Are you guys ready?” Laser has been typing something on her computer, “To do what should’ve been done a long time ago? We’re gonna ban [chatter].” Laser cues some dramatic music.

“Chat, I should’ve done this a long time ago. Are you ready? Time after time I’ve given him warnings. Time after time I have told him.”

“I AM SUB YOU CAN’T DO THIS NOOOOOOOO PepeHands,” the chatter messages.

“That is the beauty of Twitch,” Laser responds, transitioning the stream screen to an extreme close up of the upper half of her face, “I can and I’m going to.” She speaks directly into the microphone now.

“Because time after time I’ve warned you: if you said something stupid I would do it. And guess what. You did. So here we go. Come back in a week with an unban request and maybe I’ll give you another chance [chatter], but for right now, I’m done with you. I’m done. He’s gone chat. He’s gone ... [Chatter], if in a week you wanna be unbanned, put in an unban request alright. And I will read onstream and we will determine if we should unban you alright? And maybe you’ll be reformed in time. Maybe you’ll be reformed. But probably not.”

“Just behave guys,” Laser reasons, “That’s all I ask. Obviously if I’m not in the mood for this stuff and you keep doing it, things might happen.”

In this example, Laser moderated her stream by firstly drawing attention to the chatter's consistent negative commentary and identifying it as a breach in the form of a warning ("I'm gonna ban you next time"). When the chatter failed to heed her warning, she proceeded to turn their ban into an event and a lesson, concluding with the ominous warning that "things might happen" to those who repeatedly test boundaries. This occurrence communicates Laser's streaming persona in a number of ways. The content of the breaches – negative commentary targeted at Laser – is less important than their nature, namely that they were repeated over an extended period of time and were not sensitive to the context, in particular Laser's mood. Her transformation of the moderation into something of a ceremony that disrupts the flow of the stream, with dramatic music and altered camera and microphone proxemics, prevented the moment from being overly serious, thereby embedding the humour of her streaming persona into her enforcement. Finally, although Laser framed the future decision to unban as resting with the ensemble, she emphasised her own responsibility and control over rules and their enforcement through her use of singular first-person pronouns. The boundaries of streaming persona are shaped from the outside by rule breaches and from the inside by moderation. As demonstrated through this example however, the moderation process can craft more nuanced boundaries through the negotiation that takes place within boundary testing. With each warning, Laser reinforced boundaries of her streaming persona: she identified a breach, but one not severe enough to merit action. With the final breach, she reshaped the boundaries of her streaming persona by identifying a breach severe enough to merit a ban, which she performed consistently in tone with the streaming persona. As such, the relationship between ensemble members and Stream Rules crafts streaming persona by shaping and reshaping its boundaries.

While streamer moderation shapes the boundaries of streaming persona, the majority of this boundary-work is typically performed by dedicated moderators. Moderator is a role that streamers can allocate to particular users, who are subsequently identifiable through badges, depicting a white sword on a green background, next to their usernames in chat. These moderators have the ability to issue bans and timeouts, and so have higher status as ensemble members than most spectators. They are seen as representatives of the streaming persona as they regularly enact judgement around whether or not particular messages fall inside the boundaries of streaming persona and enforce penalties when they do not. While moments like Laser's moderation discussed above do occur with some frequency, the vast majority of moderation is performed discreetly by moderators without disrupting the flow of the stream. As they act on the streamer's behalf in this regard, moderators also enable the streamer to focus on other aspects of streaming. However, this is not all that they do. In their examination of moderation on Twitch, Seering et al. (2019) note that "moderators engage personally in dealing with a variety of nuanced problems, guide conversation in positive directions, and are a regular, stable presence in their communities" (p. 1434). That is, moderators have a social function within streams; they not only enforce boundaries by managing breaches but also by demonstrating acceptable behaviour. Moderators play persona through boundary-work of demonstration and enforcement with and on behalf of streamers respectively.

In fact, moderators are often typically volunteers who have a demonstrated membership to the stream ensemble and willingness to abide by Stream Rules and norms. Chaifly (Chai) is a Twitch streamer who identified himself as a "moderator first and a streamer second" when I spoke with him. As well as streaming, he moderated consistently for four streamers and occasionally for a number of others. Chai communicated to me that the vast majority of his

own viewers – myself included – knew him first as a moderator. When participating in his streams, I observed that his stream ensemble intersected heavily with other ensembles; conversations often came back, or were grounded in references from, other streamers' channels. Chai's streaming persona exemplifies the social function of moderators as ensemble members. They become familiar to and with other ensemble members through their consistent and visible presence within streams, which in Chai's case carries into his streaming persona.

Nonhuman ensemble members, such as the chatbots mentioned in the previous section, play persona by aiding these human moderators in their boundary-work. Twitch moderators work collaboratively with nonhuman ensemble members, and though some consider the latter as tools of the former (Cai & Wohn, 2019b), I see them as ensemble members performing persona. To support this framing I refer to Taylor's (2018b) note that

> bot behaviour is malleable and subject to moderator input [meaning that] while they may attimes act autonomously, what they do is deeply tied to both developer and moderator notions of what should be fostered or prohibited in chat (p. 224).

These oscillations between autonomy and collaboration parallel the oscillations between individual and collective identity performances by human ensemble members that I discussed in Chapter 5. So moderation demonstrates streaming persona as a human-nonhuman assemblage in which both human and nonhuman moderators collaborate to enforce the boundaries of streaming persona. An example of this assemblage, in particular the seamlessness between human and nonhuman moderation, occurred in May 2021, during another of Laser's streams. A chatter sent messages calling her viewers *simps* – a derogatory term typically used to accuse a man of being overly nice to a woman purely in pursuit of sex or a relationship. AutoMod, a moderation bot implemented by Twitch to identify particular

messages for moderation, removed the message as the term had received a platform-wide ban in December 2020, to which the chatter responded poorly.

> "Whoever is a mod who deletedy [sic] message for no reason, go get a real job"
>
> "Hey, hey don't be a dick to my mods okay? They deleted it because it's against TOS[22] to say that shit and last time I checked uhh viewers also have to comply with TOS, sooo it's my –", Laser stopped to respond to their next message.
>
> "Dude i said nothing wtf"
>
> "You said a word that's against TOS, especially when like – we're trying to hold back on saying that stuff."
>
> *"its automod actually,"* another chatter corrected.
>
> "It might actually be AutoMod, that's true, but it's not our fault it's against TOS ... we try to kinda refrain from anything that seems a little bit more serious in that term because it is TOS," Laser paused, "But also yeah, don't – uh, don't talk about my mods in that way, because they're just you know doin' what I want them to do or what I ask them to do. It's not their fault."

This chatter's – and Laser's – incorrect assumption that the moderation was performed by a human moderator speaks to the nature of moderation as a human-nonhuman assemblage. As an ensemble member, AutoMod removed the message on behalf of the human moderators, and consequently shaped Laser's streaming persona to be in line with Twitch's TOS. In response,

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[22] Terms of Service.

Laser positioned herself as subject to the rules of the platform while being simultaneously responsible for her own Stream Rules. When the boundary-work of AutoMod was challenged, Laser performed an additional layer of boundary-work by stepping in to affirm her moderators' authority and emphasise that the boundary-work that they perform is on her behalf. These layers of moderation thus give rise to complex social and technological dynamics between human and nonhuman ensemble members who create, resist, and enforce Stream Rules and norms through various forms of boundary-work as persona play.

Responses to breaches add nuance to the boundaries of streaming persona, constituting persona play with and within those boundaries as streamers and moderators choose to respond in ways that most strongly discourage undesirable behaviours. The three primary types of responses to breaches that I observed were combinations of education, removal, and avoidance. Education methods involve confronting viewers who challenge rules with an explanation of exactly what the breach is and why it is unacceptable, while removal methods include deleting messages, timing chatters out, or banning them. Education and blocking (a form of removal) are two of the most effective moderation strategies on Twitch (Cai & Wohn, 2019a). Education and removal methods are often explicitly paired together, as in both the banning and AutoMod examples from Laser's streams during which a chatter and message were removed respectively. In both cases, Laser paired the removal with an explanation that clearly laid out why the breach has been classified as such. Removing breaches by deleting messages or banning spectators that challenge the rules minimises the potential for further potential challenges. In their investigation of preventative and punitive moderation tools, Seering et al. (2017) find that banning any type of behaviour had a significant (albeit short-term) impact on the banned behaviour during streams, suggesting that removal methods have an implicit educational

impact. However, the explicit pairing of education and removal strategies also has other impacts: it transforms boundary-work into stream content; it leaves room for potential future redemption, in turn crafting a narrative arc within the stream; and it makes the boundary-work explicit and consequently part of the streaming persona.

The combination of education and removal strategies to produce stream content can elicit ambivalence around whether particular breaches are not in fact desirable. For example, CBC awards five-minute timeouts for puns. In these instances, the explicit lesson is not to send puns in CBC's chat, however the attention awarded to the jokes and the subsequent claim by culprits that the timeout was 'worth it' upon return implicitly contradict this lesson. As such, ensemble members are encouraged to weigh the punishment for breaching against the act itself. Transforming boundary-work into content consequently has the potential to frame breaches as desirable performances of streaming persona. This is somewhat similar to Amouranth's unban request streams. Unban requests, as suggested by the name, are forms that banned users can submit to streamers for their review. Amouranth occasionally reads and responds to unban requests while streaming. In another example of turning boundary-work into content, Amouranth uses past removals as present education strategies. But again, there is an ambivalence to this, whereby the culprits receive additional attention, which they may decide is worth their ban being maintained for the sake of having their unban request responded to during streams. When streamers engage Twitch features designed for moderation to create content, they are playing persona with the platform as a nonhuman ensemble member. As a result, these streamers redefine moderation strategies as part of their streaming personas. The boundaries between acceptable and unacceptable behaviours then become blurred as the punishments for unacceptable behaviours are incentivised by ensemble attention.

The final common moderation strategy, avoidance, occurs when the stream does not give attention to particular breaches, either by ignoring the breaches or relying on human and nonhuman moderators to deal with them. As demonstrated above, drawing attention to particular behaviours can lead to ambiguities around whether or not they are encouraged. Avoidance strategies thus discourage breaches by not rewarding them with ensemble attention. I observed that Juliet often deployed avoidance strategies in response to compliments on her appearance, and when I asked her about it, she told me that she makes a conscious effort to greet the sender without acknowledging the compliment. Comments on Juliet's appearance are thus positioned outside of the boundaries of her streaming persona, which she communicates without confronting the breach directly. Chatters can deduce that she has seen the message and has chosen to respond only to part of it, particularly if it occurs in response to multiple messages. Avoidance can also be deployed strategically as streamers and moderators anticipate potential future problems. For instance, Chai described for me a moment when he and a streamer for whom he moderated ignored a breach in anticipation of an upcoming sponsored stream. They decided that the potential disruption of the upcoming important stream made it not worth addressing this particular breach. Like spectators who breach rules on purpose feeling that the penalty is worth it, streamers and moderators also balance enforcement strategies against potential outcomes. These balancing acts demonstrate how approaches to the boundary-work of streaming persona can be adjusted with ensemble experience in mind. The severity and context of breaches alongside desired or undesirable outcomes determines which breaches are responded to and the type of response.

Stream rules and norms represent the practices involved in maintaining the fluid boundaries of streaming persona, and ensemble members interact with these boundaries as part

of their persona play. In this section, I have focused upon ways that ensemble members test and enforce boundaries. I established a nuanced understanding of behaviours in relation to streaming persona through boundary-work on Twitch that is sensitive to the context of breaches to Stream Rules and norms. This nuance results from my analysis of interactions between different ensemble members and Stream Rules and norms, including breaches as well as enforcement by a range of human and nonhuman ensemble members. Whether acts are classified as breaches or not and how breaches are penalised are subject to the relationship between the culprit and the stream ensemble, the streamer's mood, the severity of the breach, and consideration of the potential impact of stream content. I argued that combinations of education, removal, and avoidance were common moderations strategies that added further nuance to the idea of moderation as boundary-work. Particular acts of boundary-work, such as timeouts and unban requests, can be deployed for content, thereby blurring the lines between acceptable and unacceptable behaviour. These acts in turn constitute persona play *with* the boundaries as well as *within them*.

Don't Spoil the Game, (Don't) Spoil the Player

I turn now to practices that are so ubiquitous on Twitch that they must be accounted for through boundary-work by all stream ensembles that include games. Spoiling and backseating are two game-related practices that have so far not received much close scholarly attention. Spoiling is the practice of sharing details about a game that others may not know, and backseating involves telling a streamer how to play the game. In this section I argue that variations around the acceptance and definitions of spoilers and backseating necessitate boundary-work to position each streaming persona in relation to these practices. I examine both practices in relation to cheating. Cheating is a social construct, as it is "more than just *breaking*

a rule or law; it [is] also those instances of bending or reinterpreting rules to the players' advantage" (Consalvo, 2009, p. 87, emphasis in original), and so are spoiling and backseating. The social aspects of cheating are the advantage that one bestows upon themselves over other players and variations in acts that constitute cheating. Spoiling and backseating are similarly social constructs but more closely resemble an inverted form of cheating; stream ensembles are *cheated by* these practices. They involve the bestowal of unwanted advantages upon the entire stream ensemble by a single member in the form of game knowledge. What it means to be cheated in a stream – what counts as a spoiler or backseating and whether such practices constitute playing with or playing against the stream ensemble – depends upon the streaming persona, in particular the streamer, the game, and norms within the ensemble. Persona play occurs as ensemble members adjust their standards or attempt to guide others in doing the same when assessing what counts as a spoiler or backseating. Both practices are examples of being cheated that stream ensembles must anticipate and hence perform associated boundary-work around. These practices are prominent parts of Twitch culture and as such demonstrate how boundary-work on Twitch is both responsive to social, cultural, and technological dynamics unique to games and streaming, while also altering those same dynamics.

To avoid being cheated by spoilers, streamers often have to enact anticipatory boundary-work to clearly demarcate between acceptable and unacceptable messages: these then become part of the streaming persona. For example, Fufu tends to be particularly cautious when streaming her first playthroughs of games, putting in place a number of precautions to avoid being cheated of her so-called 'blind' experience. For example, in April 2019, Fufu streamed her first playthrough of visual novel *Danganronpa: Trigger Happy Havoc* (2010). The game contains a series of whodunit-style murder investigations, along with an overarching

narrative that ties them together. With the game relying so heavily upon narrative twists, a single spoiler could ruin hours of play. Fufu hence took multiple steps to avoid spoilers, including a chatbot command that responded to the chat message *"!spoilers"* by posting the following in the chat:

> *"This is Fu's first playthrough of this game! Please refrain from any hints, tips or spoilers unless specifically asked for by her! Most of her questions are rhetorical, so if it hasn't happened yet in-game, don't talk about it! kffcGreatJob*[23]*."*

She also included the text "NO HINTS, TIPS, OR SPOILERS" at the top of the stream screen, and set up a five-second delay in chat. By engaging nonhuman ensemble members like the chatbot, screen message and delay, Fufu performed the boundary-work of identifying and communicating unacceptable behaviour to her spectators. These boundaries reflect the role of game play in Fufu's streaming persona, namely the priority given to spectators' experiences of her blind experience of a game. Additionally, a moderator noted in chat that the five second delay gave spectators opportunities to draw attention to the spoiler for moderator removal. The responsibility for moderation around spoilers was thus extended to the entire ensemble. This highlights that being cheated was defined differently for spectators than it was for Fufu – a spoiler would cheat Fufu out of her blind experience, which would in turn cheat spectators out of Fufu's blind experience (rather than their own). The narrative-heavy focus of the game in question raised the spoiler-related stakes, consequently demonstrating different definitions of

[23] One of Fufu's emotes.

being cheated for different ensemble members and increasing the number of measures that Fufu chose to put in place to prevent spoilers.

While measures like Fufu's are designed to discourage spoiling, they can also have the opposite effect when ensemble members attempt to skirt the rules. A number of different examples of rule-skirting as acts of boundary-testing came up during Fufu's streams of *Danganronpa*, including posting fake spoilers, asking questions that may lead to or contain spoilers (for example, "have you seen X?"), and using coded language to allude to unseen game moments. While the latter two examples are quite clear in their capacity to spoil games, fake spoilers are less so. Fake spoilers involve claiming that something happens in a game when it actually does not, for instance naming the wrong character as a murderer in *Danganronpa*. Fake spoilers can cause the same frustration and disappointment as real spoilers when they are believed. In some cases there is no differentiation between fake and real spoilers as the former eliminates a possibility for what will happen. Fake spoilers are therefore often treated with the same severity as real spoilers; ensembles are still cheated by fake spoilers. When Fufu introduced such stringent standards for and preventative measures against spoilers, the visibility of these measure made spoilers a focal point of the stream. Like some of the ambivalences identified around moderation in the previous section, such boundary-work can encourage the behaviours that it seeks to reduce. While the chances of a spectator accidentally spoiling the game are reduced, such measures can perversely invite spoilers from those seeking to cheat the ensemble and provoke other creative measures (like fake spoilers) from those who seek to test boundaries. Definitions of spoiling, along with the tensions that emerge as preventative measures encourage creative boundary testing, vary between stream ensembles.

Being cheated through spoilers is in this way socially constructed on Twitch as part of streaming persona.

Exhaustive anti-spoiler measures also produce a tension that ebbs and flows around the potential appearance of spoilers and, when they do appear, a tension around whether the streamer will see them. Like breaches of other rules, breaches involving spoilers affirm the boundaries of streaming persona as they trigger spectator-driven boundary-work. While some research has shown that stream participants care about enforcing rules in response to spoilers (Mihailova, 2022), my research showed that what spectators actually cared most about was the ensemble experience for which these rules stand, rather than the rules themselves. As an example, during one of Juliet's streams, a viewer sent a message spoiling a significant plot point in a game that she had told spectators that she was not playing while on stream, purely to avoid spoilers. Though one of her moderators managed to remove the message before she saw it, the tension between the spectators seeing the message and it being deleted before Juliet could see it, was palpable and evident in a viewer commenting that they hoped that the sender was banned for at least a day. In this example ensemble members were clearly invested in Juliet's experience beyond her streams. Wrafferino's (Wraff's) ensemble demonstrates a similar sort of investment in her experience. Part of her streaming persona involves piecing together the lore of games through implicit game elements. Like Fufu, she thus prohibits any spoilers in these streams during her first playthroughs. In July 2021 Wrafferino (Wraff) streamed her first playthrough of the PlayStation 5 remake of *Demon's Souls* (2020), a game whose lore is primarily told implicitly through item descriptions and visual cues in the game world. After ten minutes of Wraff attempting to access a particular area that was visible to her but had no obvious access route, she was hand-drawing a map to try and visualise other potential entries.

At this point a spectator spoiled that she must be wearing a specific outfit in order to gain access. Members of chat responded "*no spoilers please*" and "*Jesus Christ man*." Unlike Juliet, Wraff read the message and paused, slightly frowning and tapping her pencil three times on the paper in front of her before audibly dropping it as spoiler-related tension transitioned into frustration.

> "Fuck sakes," she said very quietly before returning to her typical volume, "Fuck sakes!" She smiled despite her obvious irritation.
>
> "I can't unsee that."
>
> She shook her head and started playing the game again. Multiple viewers chimed in, echoing her irritation.
>
> *"ruined FeelsBadMan"*
>
> *"sadge"*
>
> *"Pepehands"*[24]
>
> *"damn it, :("*
>
> *"wraffSad"*
>
> "Yah, yeah, big sadge everybody," Wraff said, sitting so far back in her chair that she was almost out of frame, "But see now at least you get to share my frustration ... Now everyone in chat's disappointed, perfect."

The stream ensemble was invested in, and had been cheated out of, Wraff's experience - evidence that spectators were there not just to experience the game, but to experience *her*

24 FeelsBadMan, sadge, and Pepehands are all emotes of Pepe the Frog used to communicate sadness or disappointment.

experiencing the game. Wraff has built her persona around exploration and thoughtful engagement with games, and the spoiler compromised that experience. However, it is also clear that this breach reinforced the boundaries of her streaming persona. Spectator expressions of disappointment solidified the ensemble's values, which are led by Wraff but shared by spectators. The negative affects associated with spoilers serve to demonstrate the genuine investment that ensemble members have in streamer experiences and show that spectator experience of streamer play is a priority on Twitch.

Ensemble members sometimes have to balance their desire to be present in the stream with their own experiences of a game. There can be a misalignment between standards for being cheated as a player and being cheated as an ensemble member. A demonstration of this occurred when Juliet gave a progress update on her off-stream playthrough of *The Last of Us Part II* (2020), trying to minimise spoilers by saying that she was "exiting the hospital and facing the large boy." As the game was relatively new at the time and was not being played on-stream, Juliet was being particularly wary of spoiling the experience for spectators as well as unintentionally inviting an extended discussion of the game that might lead to spoilers for her playthrough. She received responses like "*hospital and large enemy confirmed ... game unplayable*," facetiously implying that she had spoiled the game for them. This parody of an over-sensitivity towards spoilers reflects the broader culture around the practice that has emerged on Twitch. Try as they might, it is nearly impossible for one to avoid spoilers cheating them out of a blind game experience on Twitch, a space in which games are streamed in full and people with broad ranges of experiences and standards gather. Spectators often choose to reduce their chances of being spoiled by avoiding streams involving games that they want to play in the future, simultaneously negotiating boundaries as individuals and as ensemble

members. Often in these cases, ensemble members will maintain their membership by saying hello and noting that they won't be around due to spoilers at the beginning of a stream. Doing this is more difficult for moderators, who are usually present to ensure that the stream runs smoothly. Fufu's experience of *Danganronpa: Trigger Happy Havoc* relied upon moderators to remove spoilers, and Wraff's mishap with *Demon's Souls* occurred when there were no moderators around to remove the spoiler before she saw it. Chai described moderating during a streamer's playthrough of a game that he was also playing as "jumping on a grenade," when he had narrative elements spoiled on behalf of the streamer. While the streamer emphasised to him that he did not need to be there, he knew that his presence contributed towards the best experience of the game for the stream ensemble and so chose to risk his individual experience for the sake of the ensemble. The decisions that ensemble members make in relation to exposure to spoilers are about negotiating individual boundaries with those of streaming persona and are often subject to many factors including their relationship with the game and their role in the stream ensemble in question.

While backseating – the social practice of telling a streamer what to do while playing – is treated largely similarly to spoiling, there are a number of differences between the two practices to which I attend through the remainder of this section. Firstly, backseating more often stems from a desire to positively contribute to the game experience than spoiling, though ensemble members may similarly be cheated by it. Backseating is connected to the history of spectated game play, evolving from arcades, where

> a common arrangement is a primary player assisted and supported by one or more co-pilots ... [who] nonetheless demonstrate a level of interested and experiential

> engagement with the game that, while mediated through the primary player, exceeds that of the bystander or observers (Newman, 2002, p. 409).

Streaming is the contemporary version of this arrangement, with stream spectatorship bringing its own pleasurable and affective experiences while maintaining a capacity for spectators to engage playfully with games (Taylor, 2018b). Backseating is rooted in this history of active game spectatorship as an evolution of Newman's 'co-pilot,' making it a more ambivalent practice than spoiling. When their goal is not to spoil, backseaters are enacting the historical dynamics of arcades and game spectatorship. Since disallowing backseating is effectively fighting against this history, streamers often have a much more difficult time performing boundary-work around it than they do spoilers. Backseating is regardless often treated either as a form of spoiling – as was the case for Wraff while playing *Demon's Souls* – or prohibited alongside spoilers – like during Fufu's *Danganronpa* playthrough. The greatest challenge of backseating is that often the feeling of and standards for being cheated hinge upon impact over intention.

Backseating tends to have a milder affective impact on ensemble members than spoilers, though irritation is prevalent in streamer performances of persona. For example, Ray's brownBACKSEAT subscriber emote depicts a baby in a car seat (literally in the back seat), holding a controller, and crying with their mouth open. This comparison between backseaters as children throwing tantrums is an insult to the practice that also provides subscribers with an avenue to address it. The use of the brownBACKSEAT emote is a form of boundary-work through stream design that, like many of the examples discussed in this section, thus far relies upon the entire stream ensemble. As a further example of the affective impact of backseating and the necessity of associated boundary-work, while playing *Hollow Knight* (Team Cherry,

2018) in June 2021, CBC and his moderators had attempted to reduce backseating by including warnings in stream titles and through a chatbot message, but also by regularly banning backseaters. CBC's struggles with the game, and his discoveries therein were clearly intended to be part of the content. However, when he finished the game and the credits concluded with the line "Extra Special Thanks to 2158 Backers & Kickstarter," referring to the game's crowdfunded origin, CBC deliberately misread, "2158 backseaters, did you see that? I didn't know it kept that stat! Seems about right though." Both Ray's and CBC's reactions to backseating were flippant and acknowledge that the practice is pervasive, as if it is a mild irritation and that it is easier to make fun of it than try to change.

I conclude this section by returning to being cheated as a social construct that varies depending upon numerous factors, even within the same stream ensemble experiencing the same game. While Wraff was attempting for the first time what is arguably one of the most difficult segments of *Demon's Souls*, she was becoming increasingly dispirited. Under certain circumstances the game gets harder as the player performs more poorly and Wraff was struggling as this increased difficulty was preventing her from progressing. During this struggling, while Wraff was expressing her concerns that she would not be able to beat this part of the game, a Twitch Partner stopped into her stream. The Partner, identifiable by a purple badge with a tick on it next to their username in chat, drew Wraff's attention to another game mechanic (of which she did not know) that would enable her to readjust the difficulty. Another viewer chimed in, "*what [Partner] said is true if you want a little backseat*," and Wraff responded:

> "But the thing is like I don't want to do that, because I wouldn't know about that [if the Partner hadn't mentioned it]. You know what I mean? Like I don't wanna

do that. Also, I'd have to look it up online or ask someone in chat to me. No. I refuse. Completely refuse either of these."

Contrasting this with the previously-discussed spoiler in Wraff's stream, the Partner was cut quite a lot of slack in this instance. Her unwillingness to take the advice suggests that she was not happy with the backseating, however it is unclear whether her milder response was because of the backseater's Partner status, that Wraff knew them quite well, that she was feeling frustrated with the game, or something else entirely. Her refusal to take the suggested course of action emphasises again how important discovery is to Wraff's streaming persona ─ since she would not have discovered it herself, she refused to use the new information. Whether intentional or not, despite refusing to take the advice, allowing the backseating without comment introduces some flexibility into Wraff's anti-backseating policy that demonstrates how this kind of boundary-work – the very definition of being cheated – varies based on context.

The notion of being cheated through spoiling and backseating, and the associated boundary-work, is socially constructed through and as part of streaming persona. In this section, I examined how the social dynamics of Twitch operate in relation to streaming persona through boundary-work related to defining and moderating spoiling and backseating. Through this boundary work, I argued that spectators regularly demonstrated an investment in streaming persona through streamer experiences of play, even above their own. I demonstrated how being cheated produces streaming persona through its variable nature and a different performances of anticipation of and reaction to spoiling and backseating. In the final two sections of this chapter, I examine the sociocultural significance of boundary-work in relation to toxic behaviours, another highly variable and heavily moderated form of stream participation.

What Counts as Toxic?

Thus far, I have demonstrated how boundary-work as persona play often elicits ambivalences like where particular messages fall in relation to streaming persona boundaries, what constitutes a breach, or how a particular breach should be moderated in line with streaming persona. I now build upon these ambivalences through demarcation problems associated with toxic behaviours. Toxic behaviour is an umbrella term that describes a range of behaviours that negatively affect others. In their examination of toxic behaviour in the game *Dead by Daylight* (Behavior Interactive, 2016), Deslauriers et al. (2020) identify the challenges associated with pinning down a definition of toxic behaviours as they are defined "in relation to constantly renegotiated and evolving social norms" (par. 7). In this section, I demonstrate how this definitional problem creates ambivalences on Twitch through differences between stream ensembles. I use as a foundation the definition of toxic "as an adjective … used to describe the negative side of a subject or category – toxic masculinity, toxic people, toxic relationships" (Bacon, 2022, p. 1), noting the definitional problem of the term that "in some respects, the definition of toxic would seem to be emptied of any meaning, drained by its very ubiquity" (p. 1). While toxicity is defined to be negative, that negativity is also relative – and it is in this relativity that the boundary-work of streaming persona and its impact on Twitch's sociality and culture emerge. In other words, what counts as toxic, and whether it is permitted or not, varies between stream ensembles.

Contagion is also a defining characteristic of toxicity and can be used to understand the sources of toxic behaviours on Twitch. As Bacon (2022) puts it in reference to masculinity, "toxic does not just describe the negative side of certain behaviours, but also their contagious natures and how this lets the behaviours spread and infect all areas of contact" (p. 4). Given its

strong ties to gaming, Twitch's toxicity can be seen as contracted from gaming cultures. Alluding to its contagious nature, Paul (2018) notes that toxic behaviour in gaming originated with player behaviours within *League of Legends* (2009), however he also identifies that "a problem with behaviour in any single game is a symptom of deeper problems in the culture around video games as a whole" (p. 70). Further, Condis (2018) links toxic masculinity expressed through alt-right politics to hegemonic masculinity in mainstream game culture when she asserts that "#GamerGate is just as much a product of mainstream gender politics as it is of video game culture" (p. 97). Toxic behaviours therefore have many roots, complicating their spread. These distinct sources further lead to different kinds of toxicity that in turn produce different treatments of different toxic behaviours. On Twitch, these differences are enacted through boundary-work, or a lack thereof, which contributes towards streaming persona both through the live moment and in relation to the histories through which toxicity has spread. These relationships shape Twitch socially and culturally through toxic contagion built into everyday moments and its resistance.

The inherent negativity in the definition of toxicity does not necessarily translate to its impact on streaming persona. In fact, the term is often deployed during streams as a source of entertainment or humour, which simultaneously positions the streaming persona in relation to broader standards while also complicating the social function of toxicity (both the term and associated behaviours). For example, in August 2020, CBC played *Fall Guys* (2020) with another streamer, during which players were split into four teams, each tasked with collecting eggs and placing them in their own team's basket. Given that the team with the lowest score would be eliminated, CBC described his strategy:

> "You wanna steal from the basket that has the least amount of eggs in it, so [that team] get[s] actually wrecked ... Absolutely destroying them ... making them so demoralised they uninstall [the game]. Getting rid of the player base. That's what you wanna be doing. You wanna be messing them up so they don't bother you in the next game. That's the meta-strats."

CBC's approach to many of *Fall Guys'* mini-games adhered to this mentality whereby he didn't need to win as long as others lost. Viewers regularly called out his strategies as toxic, however they also signalled that they were entertained and accepting of this toxicity through other messages, for example denoting laughter. While identifying a particular in-game strategy as toxic might perform the boundary-work of preventing a streamer from deploying it (as a social rule), CBC accepted his strategies as toxic, giving his stream a somewhat cheeky tone and positioning him as a rule breaker. Additionally, there is some ambiguity around toxicity in this example. On a purely technical level, CBC's strategy was legitimate. So, it is possible that it was only by couching it as demoralising and suggesting that he sought to stop others playing that made it toxic. As such, the toxicity was identified as part of his performance of streaming persona and not genuine play and may have contributed to its acceptance from ensemble members. Its function as a recurring gag and framing CBC's streaming persona in relation to social play demonstrates how toxicity is not inherently negative on Twitch.

The ambivalent nature of toxic behaviours on Twitch also stems from the context and intent of the behaviour. Stream ensembles define and identify toxicity in different ways, and the Twitch platform has its own overarching norms that impact this process, visible through the use of emotes as vernacular. In their examination of emote uses in toxic chats on Twitch, Kim et al. (2022) find that "the kinds of emotes frequently used in toxic chat are not

fundamentally different from the list of popular emotes" (p. 9). On one hand, these findings might suggest that toxic uses of emotes are popular. However, my observations suggest that popular emotes have toxic uses dependent upon intent and context. This claim is supported by Laser stating that KEKW is a toxic emote during a stream in October 2020, only to be refuted by a spectator who said that "*it's USED toxically, but itself is merely a progression from LUL to LULW to KEKW* "[25] These contradictory interpretations demonstrate the norm-dependent nature of toxicity, and make a distinction between KEKW as a digital object and its meanings. In this example, there is also an implicit acknowledgement of the negativity of toxicity being undesirable – in contrast with CBC's *Fall Guys* strategy – which highlights the variable connotations of the term in relation to streaming persona. Spectators continued to use KEKW in response to Laser's in-game failures even after she made her interpretation of the emote clear. Given her established interpretation of the emote, these uses were more clearly intended to perform an investment in Laser's failure, a behaviour that she had identified as discouraging. In this dynamic KEKW's function shifts between playful antagonism and genuine toxicity leveraged against Laser, echoing Johnson's (2022) note that stream-humour can transition to be at the streamer's expense. Taking this and the previous CBC example together, there is a connection between identified toxicity and entertainment. This connection can disrupt the inherent negativity of the term, revealing an ambivalent relationship between toxic behaviours and streaming persona. This ambivalence then becomes a factor in toxicity's social function and cultural definition on Twitch as they change between stream ensembles, in turn calling for boundary-work.

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[25] LUL, LULW, and KEKW are emotes indicating laughter. For the latter, refer to Figure 12 in Chapter 3.

Boundary-work is often deployed selectively to contain toxic ambivalence and prevent its contagion from overwhelming the stream ensemble. One potential reason to choose not to moderate toxic behaviour is the risk of declining viewership (Groen, 2020). This is a justification that Laser both acknowledged and simultaneously distanced herself from in October 2020. After banning a subscriber who had been directing toxicity at her, Laser admitted that she would have struggled to make the same decision in the past, because

> "Old [Laser] was a coward and didn't have a backbone, and she thought that 'oh this sub is here and I can't ban another viewer 'cause I need the view count.' No! Fuck that. I'm gonna ban whoever I wanna ban."

She had overcome the fear of losing ensemble members at the cost of moderating toxic behaviours, and hence regulating toxic contagion, thereby performing a rejection of toxicity through moderation as persona play.

Toxic messages do however sometimes require a more thoughtful response, particularly when the toxicity is unintentional. During a stream in February 2022, Celina deleted a spectator's message that asked her if a particular Pokémon was her spirit animal, noting the cultural significance of spirit animals to Native American people and problematic appropriation of the phrase. Despite being unintentional, this would certainly be considered toxic as a form of cultural appropriation. She had waited some time before deleting the message and explained that

> "Sometimes this happens on stream, where like I never know – and I think other streamers have probably experienced this – like you never know if you should like address it or not. 'Cause sometimes it's better to just like," she waved her arm in front of her face three times, "Let the moderators deal with it.

> "Sometimes it's like, I don't know how to respond to this. It feels wrong or like uncomfortable umm but I don't wanna say the wrong thing, so either moderator deals with it or you know, I sort of like think about it offline and think how can I respond to this in the future, how can I be better in the future?"

Celina took explicit ownership over her stream through the content that she allowed and the way that she addressed – or chose not to address – problematic messages, and how she reflected upon that process. While both Laser and Celina deployed a combination of removal and education methods to moderate toxicity and framed the decision to moderate as the more difficult but correct choice, the tones of the boundary-work differed as a reflection of the perceived underlying intentions of the toxicity and their streaming personas more broadly. In other words, both the severity of the breach and the relationship between ensemble members and streaming persona affected the performance of boundary-work. The choice to moderate toxicity, and every aspect of the approach to its moderation, is a performance of streaming persona that maintains the boundaries of persona play in relation to particular toxic behaviours. Toxicity more generally however is neither entirely positioned inside or outside of the boundaries of streaming persona. These boundaries are then positioned ambivalently around toxicity through the selective removal of, and uncertainties around, messages that are considered toxic.

A specific definition of toxicity is hard to pin down, mostly because of the breadth of behaviours that could be considered toxic and the underlying values that shift between collectives and over time. In this section I examined how the term *toxic* is used and how stream ensembles respond to behaviours that fit that broad definition. I found that the contagious and slippery nature of toxicity calls for flexible approaches towards its role in the construction and

performance of streaming persona. Toxicity was sometimes used for the sake of entertainment or as a form of playful antagonism, while other times it was used to target another ensemble member (such as the streamer) or innocuously deployed as part of conversation. In each of its forms its acceptance, denial, or even encouragement, were acts of persona play that shaped the boundaries of streaming persona in relation to toxic behaviour. These ambivalences affect the role of toxicity on Twitch, which in turn affects the sociality, culture, and politics of the platform. The latter in particular becomes an issue in more targeted and deliberate enactments of toxicity, to which I turn in the next section before concluding this chapter.

Waste Management

Targeted toxicity, in particular toxic contagion, can affect streaming persona as well as the culture and politics of the platform through streamer and spectator behaviour. In their examination of toxic geek masculinity, Salter and Blodgett (2017) provide a detailed account of emergent toxic behaviours resulting from geek culture's shift into the mainstream. They discuss the outright hostility with which geek men responded as they felt their self-identified marginalised status being diluted. Female-presenting streamers and their stream ensembles are often the targets of this hostility, which is enacted through toxicity on Twitch. Research also suggests that players (Cote, 2020) and streamers (Uttarapong et al., 2021), particularly those who are from marginalised groups, develop harassment management strategies. Those harassment strategies are boundary-work that positions toxicity in relation to streaming persona – a kind of waste management. This boundary-work carries its own risk of toxic contagion both through "opposite though equally toxic reaction[s]" to moderation (Bacon, 2022, p. 5) and normalised negativity within toxic cultures. Others are encouraged to enact toxic behaviours that are in turn carried to other environments through toxic contagion.

Streamers can weaponise toxicity against itself, though moderating toxicity with toxicity can lead to escalation and can transform acts of resistance into toxic contagion. In other words, aggressively moderating toxic behaviours can also be considered toxic, thereby undermining attempts to expel toxic behaviours from the streaming persona. A number of perspectives on toxicity and the moderation thereof were visible in Amber's response to a spectator in July 2019:

> *"Are you straight? Bi? Single ?"*
>
> "Um, I am not gonna answer that, 'cause here's the thing right. Breaking news. Hold up, this is what this is actually for."
>
> She played a short transition clip into her Breaking News stream scene (see Figure 19).
>
> "Welcome in," she shifted to a tone appropriate for a newscaster, "I am a female on the internet, but I don't wanna date any of you. This just in":
>
> She fade transitioned to a second camera – an extreme close-up of her face – followed immediately by a transition to a third camera over her left shoulder.
>
> "It is possible for people to be on the internet," back to the second camera, "And not want to do the horizontal tango with one another. Or with any of you guys."
>
> Back to the Breaking News scene.
>
> "So I'm not gonna answer that. It's none of your fuckin' business. It doesn't matter. I'm a gal being a pal on the internet, and if you like my content –"
>
> Second camera.

Figure 19. Amber's Breaking News stream scene (2019).

"You can hang out –"

Third camera.

"You can even subscribe –"

Second camera.

"You can even just not do that and just hang out and watch. That's cool too."

The Breaking News frame.

"But don't ask me about my sexual preferences and dating. Back to you guys."

Streamers are expected to perform emotional availability and vulnerability, however the stakes are quite different for female-presenting streamers than male-presenting streamers (Ruberg and Cullen, 2019). While Amber's streaming persona otherwise met this expectation, her strong responses to toxic messages – including spectators hitting on her (as in this example),

objectifying her, or providing generally misogynistic commentary – is seemingly intended to keep gendered toxicity in check. However, Breaking News, and other similar performances of Amber's, may themselves be perceived as toxic. The extended call-out framed in an exaggerated format, combined with swearing, could all be perceived as insulting or aggressive. Further, once this particular moment went viral, it led to an influx of new viewers. Amber then performed this kind of response more often, thereby making them – and their potential toxicity – more prominent parts of her streaming persona.

Another related impact of the moderation of toxicity is that it can encourage further toxic behaviours rather than discouraging them. Mobilising toxicity for humour – as in Amber's case above – can implicitly encourage the very toxicity that it explicitly discourages, complicating the relationship between toxic behaviours and streaming persona. After Amber's Breaking News scene went viral, not only did she receive an influx of new viewers who found the moment highly entertaining, but she also received toxic chat messages sent with the intention of being similarly moderated. The moderation of toxicity that had become a prominent part of her streaming persona was only sustainable while toxicity was present in her chat to moderate. The exaggerated moderation was therefore counter-productive as boundary-work since toxicity was treated as outside streaming persona boundaries while simultaneously being incorporated into Amber's streaming persona. This moderation was highly productive in the construction and performance of streaming persona through ensemble persona play as well in drawing attention to broader gender politics on the platform. Through her Breaking News frame, Amber demonstrates the potential for weaponising toxicity against itself as an act of streaming persona, as well as an enactment of gender politics on Twitch.

Moderating toxicity with toxicity in this way is reminiscent of Dobson's (2016) *hot and hostile* mode of postfeminist hyperfemininity. When referring to young women's self-representation on Social Network Sites, she characterises hot and hostile as occurring when "postfeminist female objects of desire are ... posed to suggest a willing, playful, or 'aggressively defended' sexual self-exposure, rather than a passive mode of being 'on display' for a male gaze" (p. 66). This dynamic becomes particularly relevant to my analysis when Dobson posits a potential function of hot and hostile images as "to challenge the presumption that a profile owner who engaged with heterosexy images, or even codes herself visually in explicitly sexual ways, is *sexually available to viewers*" (p. 67, emphasis in original). While Amber did not code herself in explicitly sexual ways, her streaming persona includes the same tension between inviting and rejecting toxic masculinity, where the attention provided to the behaviour through the act of rejection becomes an invitation. So more appropriately than hot and hostile, one might refer to this as *available and adverse* while maintaining the general dynamics therein. These dynamics do not render Amber at fault for the toxic messages in her chat but rather stem from their inevitability and her performance of willing engagement with these messages demonstrates enable her to claim some power over targeted toxicity and leverage it against itself for the sake of entertainment. This toxicity becomes part of her streaming persona as consequence. The ambivalence that simultaneously invites and rejects toxic masculinity through boundary-work results in toxicity spreading into streaming persona in response to toxic behaviours positioned outside of it.

The ambivalent relationships between individual streaming personas and toxic behaviours parallel the relationships between the Twitch platform and behaviours framed as toxic through platform rules. While content creators have been imbued with power courtesy of

their professionalisation on platforms like Twitch, this professionalisation also comes with challenges such as content needing to be deemed "acceptable" by the platform (Burroughs, 2019). Boundary-work is thus not only an issue of negotiation between streamers and spectators but also streamers and platform that similarly defines the contemporary culture of streaming through streaming persona. Previous studies have demonstrated the ambiguities and prejudices built into Twitch's approaches to and definitions of sexual content grounded in cultural biases around the presentations of female bodies through analyses of its policy documents (Cullen & Ruberg, 2019; Ruberg, 2020; Zolides, 2021). One ambiguity that these studies discuss is dress appropriate to the environment, for example bathing suits are appropriate for beaches but not typically bedrooms. In other words, Twitch's governance creates boundaries for streamers' performed bodies based on their surrounding space. As an act of (heteronormative) sexual subjectification that adhered to these guidelines, female-presenting Amouranth incorporated an inflatable pool into her stream space, thereby allowing her to stream in a bikini without breaching platform rules, thus pioneering hot tub streams as a stream genre despite the absence of any actual hot tub.

Amouranth reconfigured the boundaries of her streaming persona through *performative shamelessness* (Dobson, 2016, p. 48) as an act of resistance against the boundaries of the platform, and as a result produced an entirely new stream genre. An outfit that would otherwise be considered a breach of platform rules was thus considered acceptable because these boundaries are predicated upon space. Amouranth was consequently heavily criticised and accused of breaching community guidelines by producing content labelled as sexual. This criticism is consistent both with the gendered tensions alluded to by Dobson (2016) that emerge from expectations for women to perform sexual subjectification and being met with accusations

of immorality and toxicity when they do, and Gill's (2007) claim that "the body is present simultaneously as women's source of power and as always unruly" (2007, p. 149). Amouranth's body was positioned by critics as unruly. Her body resisted containment by the value system that deemed it unruly as Amouranth challenged the boundary-work of the platform through conducting alternative boundary-work within her own streams. The perceived unruliness of her body was precisely the source of her success on Twitch, as she willingly subjected herself to the male gaze as an act of agency. Despite the criticisms that she has received, she is still one of Twitch's most successful content creators, with an average of nearly ten thousand concurrent viewers in 2021 (*Amouranth—Statistics and analytics in 2021—SullyGnome*, n.d.). In May 2021, Twitch released a blog post to communicate the platform's official stance on hot tub streams, stating that "being found to be sexy by others is not against our rules, and Twitch will not take enforcement action against women, or anyone on our service, for their perceived attractiveness" (*Let's Talk About Hot Tub Streams,* n.d., par. 2). In this way, Amouranth's boundary-work extended beyond the relationship between presented body and space to the boundaries and culture of the platform itself; Amouranth's performances of streaming persona shifted the boundaries of the platform.

The ambivalent relationships between individual streaming personas and toxic behaviours can lead to the spread of toxicity to other streams, and consequently affect the culture and politics of Twitch. As I previously mentioned, definitions and levels of acceptance of toxicity are context-dependent, and boundaries do not seamlessly translate between streams and streaming personas. Toxic contagion can lead to behaviours that are accepted or encouraged in particular streams spreading to other streams, where they are not accepted as part of the streaming persona in the same way. For instance, a message that Amber might

moderate using Breaking News may cause a more negative form of disruption within another stream that does not have such mechanisms in place. I observed precisely this dynamic in response to hot tub streams. In April 2021, Fufu and Laser – neither of whom participated in hot tub streams – independently discussed their views on hot tub streams while streaming. Fufu said that

> "If it's not against TOS and that's what you wanna do to get an audience, like pffft all power to ya. It's a bummer when it makes other people on Twitch look bad, but then that's other people like '*Oh* somebody's in a hot tub, that has to be all of Twitch'. That's *your* fucking problem if you think that's all ... that Twitch is. That's not my problem."

Laser made a similar observation that

> "Sexually suggestive content on Twitch ... has people that watch that come around to other girl streamers and be like 'hey when you gonna do this?' or say sexual things in my chat, or you know, send me stupid DMs[26], or like just don't take me seriously because I am a girl."

While they present their positions in relation to hot tub streams and sexual subjectification more generally, both Fufu's and Laser's critiques were rooted not in the sexual subjectification itself, but rather in hot tub streaming as a source of gendered toxic behaviours in their (and other) streams as a result of toxic contagion. In particular, hot tub streams attracted toxicity in response to sexual subjectification, which spread to their streams by virtue of their

[26] Direct Messages.

performances of gender. Consequently, the impact of hot tubs streams on the culture of Twitch was enormous, as they caused particular spectators to ignore the boundaries of individual streaming personas. In turn, female-presenting streamers created boundaries within the platform itself demarcating between hot tub streamers and others, and then positioned themselves in relation to those boundaries. Ruberg (2022) argues that particular gendered terms can be deployed as slurs to "delegitimise [female-presenting streamers] by indicating that they are merely webcam models posing as video game streamers" (p. 5), however some of these terms have also been co-opted by female-presenting streamers as an act of empowerment (Tran, 2022). Hot tubs streams similarly are sources of postfeminist empowerment and tools for disempowerment, particularly as they position female-presenting streamers against each other. Thus, toxicity has the potential to exacerbate issues within the culture and politics of the platform, making its relationship with the boundary-work of streaming persona quite volatile.

While the persona play of boundary-work demarcates between behaviours that are and are not consistent with the streaming persona, the very nature of toxicity resists easy categorisation. Toxic contagion enables toxicity to pass through boundaries through its incorporation into moderation and to push against the boundaries of streaming persona more strongly through its normalisation within the culture of the platform. By looking particularly at targeted and gendered toxicity, in this section I have demonstrated how toxic contagion plays out in boundary-work. Through Amber's responses to toxicity, I argued that moderating toxic behaviours can either encourage further toxic behaviour or be perceived as toxic itself. In either case, rather than separating the toxicity from the streaming persona, her moderation strategies bind the two together. I then examined the postfeminist ambivalences of hot tub streams, in particular asserting that critiques of sexual subjectification are the results of gendered toxicity

spreading across the platform and consequently challenging the boundaries of female-presenting streamers' streaming personas while those streamers also challenge the very culture of the platform. Toxicity therefore demonstrates how the boundaries of streaming persona can be bypassed through interactions between ensemble members and how a feedback loop exists between streaming persona and ensemble member that keeps the boundaries of streaming persona in flux.

Boundaries as Streaming Persona

The work of demarcation between legitimate and illegitimate forms of stream ensemble participation – the boundary-work of streaming persona – is as much about positioning streaming persona in relation to the platform's sociality and culture as it is about shaping cultural practices and social structures on the platform. In this chapter, I have explored different types of boundary-work to argue that boundary-work is a form of persona play that demonstrates and contributes to the social, cultural, and technological dynamics of the platform. Stream rules perform the social function of demarcating between acceptable and unacceptable behaviours for ensemble members, boundary-work that consequently shapes streaming persona. Ensemble members define what constitutes legitimate forms of stream participation by creating, reshaping, and reinforcing the boundaries of streaming persona and they play with and play against each other. They also playfully maintain the structure of streaming persona by testing and challenging those boundaries. The moderation of Stream Rules is a collaboration between human and nonhuman ensemble members that then reshapes and solidifies these boundaries in response to these boundary-testing behaviours. Persona play thus consists of a constant back and forth between ensemble members negotiating behaviours

that are acceptable and those that are not, making boundary-work a culturally significant form of stream participation on Twitch.

Varied definitions and willingness to accept spoilers and backseating – videogame-related practices whose social contribution I theorised as being cheated – further emphasised the capacity for Stream Rules to demarcate between stream ensembles. More than that, however, boundary-work related to spoilers and backseating demonstrates ensemble members' investment in the streamer's experience of games. Through this I argued that boundary-work not only demarcates between legitimate and illegitimate forms of streaming participation but also unveils platform-wide social dynamics including a tendency to prioritise the experience of the streamer as an ensemble member. In addition, boundary-work is not only about framing ensemble member behaviour in relation to streaming persona, but also the construction and performance of a cohesive streaming persona. Finally, while definitions of toxic behaviours are context-dependent, toxicity has social, cultural, and political significance due to its capacity to create rifts and adversity between platform users. By analysing boundary-work in relation to toxicity and associated politics on Twitch, with a particular focus on gendered toxicity, I found numerous ambivalences that ultimately served to disrupt any attempts to establish a uniform platform culture or standard. Associated boundary-work within individual streams therefore actively affects Twitch culture, particularly when considering the active acceptance or encouragement of toxic behaviours between ensemble members.

My examination of boundary-work refines and adds nuance to the work of Chapters 4 and 5, and is in turn further nuanced in the remaining discussion chapters. This chapter expands on the basic premise of Chapter 4's analysis of streaming persona as emerging from the decisions that streamers make by analysing the impacts of streamer decisions on spectator

behaviours and consequently streaming persona. Further, this chapter picks up the thread introduced in Chapter 5 when discussing playful antagonism through the notion that pushing against the boundaries of streaming persona from both sides constitutes persona play. In fact, boundary-work is only meaningful when the boundaries are reinforced from both sides. The boundaries of streaming persona are constantly in flux as they are negotiated between ensemble members and over time. This caveat is precisely the focus of Chapter 7. By presenting a temporal framework for the analysis of streaming persona, in Chapter 7, I demonstrate how changes over time affect the streaming persona, including its boundaries. Lastly, my definition of spoilers and backseating as being cheated focused upon ensemble members acting upon each other and affectively transforming their experience of the stream in relation to videogames. In Chapter 8 I will extend upon this by framing videogames as ensemble members and examining how they play persona through and with other ensemble members.

7. Playing Time:

Temporal Arrangements and Experiences

Nothing is fixed within digital cultures. Platform rules and aesthetics, user norms, pop culture references, and vernacular all change over time. Platforms themselves even come in and out of fashion: from Twitch's emergence as a games-focused offshoot of the broader streaming platform Justin.tv to the gradually increasing popularity of non-gaming content on Twitch, it is clear how change is ironically the most constant characteristic of contemporary digital culture. Much like Twitch itself, every aspect of streaming persona examined in the preceding chapters is also subject to change over time, and so this chapter examines the temporality of streaming persona. It analyses how streaming persona is constructed and performed through arrangements and experiences of stream time and the subsequent facilitation, direction, and characterisation of interactions with and on Twitch.

With the movement of performance from physical into virtual spaces came a shift from the synchronous to the asynchronous experience of performance through recordings, and Nelson et al. (2010) observed an accompanying transition from investigations of and experiments with space to those of time. They noted that

> this present moment ... is enduring beyond any one individual experience of the moment. ... The past is as accessible as (and perhaps indistinguishable from) the present and it behaves the same way temporally; its time depends only on the strength of my online connection (p. 90).

Twitch returns a focus to synchronous performance while maintaining a virtual setting and so appears to undo this temporal blending of past and present. Streaming as a mode seems to

emphasise itself as of the present through its liveness, yet various platform features and game content call upon experiences of the past and anticipate experiences of the future to affect the present. These temporal tensions are addressed by Bay-Cheng et al.'s (2015) taxonomy of distortion which involves "classifying the distortions of each performance according to its specific manipulations of space, time, and bodies" (p. 46). In particular, they posit a distinction between

> *linear time*, or real time, and *mediated time*. Linear time evolves without interruption or disruption. It follows the chronology of 'real time,' the acknowledged, shared time of the audience from the moment they enter into the performance until its (uninterrupted) conclusion. *Mediated time* exists independently of linear or real-time chronology, and instead deploys techniques of simultaneity, repetition, and recursions facilitated by media (p. 52, emphases in original).

As this chapter shows, Twitch streams are grounded in linear time and embellished by mediated time. Stream actors perform linear time through the live present with its own rhythms and temporality. Yet time is also mediated on Twitch as this liveness is performed alongside and through clips that re-perform past moments, game rhythms, and interactions that refer to past stream moments.

Time is arranged as part of the construction and performance of streaming persona, and as such streaming persona creates time. In other words, as ensemble members play persona, they play time. But who has time to play? Twitch is built around the leisurely activity of game play and having time to spend (actively or passively) watching someone play games taps into questions of temporal power. Temporal power describes how one's experiences of time are

dictated by the social, political, and economic contexts within which one operates (Sharma, 2014). The more temporal power one has, the greater their capacity to affect how their time is used. The mere act of streaming play or participating in a stream demonstrates temporal power, as to stream or spectate is to *have time* to stream or spectate. This chapter explores how ensemble members enact their temporal power (or lack thereof) as they play persona and vice versa.

One's possession of some degree of temporal power, which Kitchin (2023) refers to as *temporal sovereignty* in his exploration of how digital technologies affect everyday experiences of time, enables them to "exert personal control and to resist the temporal aspirations and expectations of others, and to impose temporal relations onto others, indirectly or directly (p. 154)." Kitchin's use of 'sovereignty' to describe the relationship between individuals and time emphasises its inherently political nature and how individuals grapple with each other and technologies for temporal autonomy. In other words, temporal sovereignty highlights how one's temporal power affects others' experiences of time. So how is temporal sovereignty held on Twitch and by whom? Through internal and external temporalities, I demonstrate the temporal sovereignty of streamers as enacted through the choices that streamers make in organising the time that they stream and the real-time nature of streaming, which combined affect spectators' experiences of time. Conversely, stream ensembles can collectively challenge this dynamic. The temporal sovereignty of spectators as a collective is demonstrated by Johnson's (2023) finding that audience availability affects what streamers consider 'good' times to stream. This chapter analyses the temporal sovereignty of ensemble members – streamer, spectator, platform, game – through the ways that they exert control over different aspects of stream temporality at different times and in different ways.

This chapter begins by arguing that the experience of time within a stream can be understood through what I term *internal temporality* – how each moment is understood in relation to other moments within the stream – and *external temporality* – how each moment is understood in relation to past moments between and across streams and influences understandings of moments in future streams. Internal temporality is tied to stream structure, and so I describe streams in terms of constituent temporal segments that form part of the culture of Twitch through their prominence on the platform: pre-stream; playing; chatting; breaks; and a wind-down. I then demonstrate how external temporality is best understood in terms of the evolution of streaming persona over time and connections between stream ensembles. These perspectives together emphasise how time is acted upon by users – how they hold temporal sovereignty – and how time passes independently of user actions and by disentangling these forms of temporality I clarify how time is arranged and experienced on Twitch from within particular streams and between different streams respectively.

Moving beyond streamers and spectators, this chapter attends to ways that nonhuman ensemble members impose temporal relations onto others and thus have temporal sovereignty. Firstly, the platform is complicit in the commodification and manipulation of spectator time in order to encourage users to spend their time and money on the platform. As neither streamer nor spectator have sufficient temporal autonomy to operate without considering the other, the platform operates under, capitalises upon, and profits through the temporal precarity of human ensemble members. A number of Twitch features encourage streamers and spectators to increase the time that they spend on the platform and with particular ensembles, participating at particular times and places. Secondly, games also hold temporal sovereignty on Twitch with their own temporalities that are incorporated into streams and in turn create time through

streaming persona. The various rhythms, speeds, and repetitions of particular games and playstyles affect stream temporality as interactions between ensemble members are negotiated alongside game play. Through this examination of temporality on Twitch I demonstrate how arrangements and experiences of time affect stream ensemble interactions and the streaming persona, and inversely how streaming persona creates time.

Stream Segments and Time-Sense

My temporal analysis begins with what I term the *internal temporality* of a stream, namely the experience of individual moments within a stream in relation to other moments within the same stream. The experience of time in relation to streaming has been framed by Fung et al. (2022) through the term *platform time* in their study of Chinese platform Douyin, which acknowledges how the demands of the platform encroach on the perceived temporal freedom of content creation. For instance, the labour of streaming extends beyond a streamer's live time to include the time that they spend on the platform while not live, for example time spent networking or working on stream aesthetics (Johnson, 2021). These studies point towards the temporal sovereignty of platforms by exploring how they (and their audiences) demand that content creators use their time in particular ways to succeed, however there has yet been no examination of stream time alone nor explicit investigation of temporal power in this context. In this section I fill this gap through the notion of internal temporality, which I use to demonstrate how streams are built from particular segments. I argue that all streams consist of a pre-stream segment before the stream is perceived to commence, game-focused playing segments, interaction-focused chatting segments, breaks, and a wind-down to the stream's end. These segments make up a stream in the same way that rooms make up a house: one expects to find particular rooms in a house but their exact arrangements, size, shape, relative position,

and even the number of each vary from house to house. I further argue that these stream segments are similarly stretched, condensed, ordered, layered, and otherwise transformed as acts of persona play that negotiate the needs of the stream ensemble and determine the experience of time within the stream, binding time and streaming persona together. The act of arranging stream temporality in this way is a performance of temporal sovereignty by the streamer that is at times challenged by spectators seeking to push the chatting streamer to play or the playing streamer to chat. The same segment may be presented differently between channels, between different streams on the same channel, or even multiple times within the same stream. Segments may be different lengths, appear in different orders, or be presented through streamer performance and stream aesthetics. They are recognisable primarily through their individual function within the stream – and hence their recognisability across the platform – and their relationship with ensemble members' interactions and experiences of time. I present these segments in terms of their individual functions and relations to each other as acts of negotiated temporal sovereignties of ensemble members to construct a cohesive streaming persona. Most stream time is dedicated to loops consisting of playing, chatting, and break segments, with normative and aesthetic markers signifying distinctions between segments and shifts from one to another. Ensemble members develop an ability to recognise these markers and contextualise particular moments on the platform in terms of their temporal experience. Further, ensemble members produce, recognise, and respond to explicit and implicit temporal cues related to switching between stream segments, giving this section's analysis social significance. Temporal arrangements and experiences within a stream are expressions of streaming persona that also adhere to a recognisable structure in the form of five stream segments through and within which persona play occurs.

A stream's internal temporality can be understood in terms of Henri Lefebvre's work on rhythm and repetition, namely the relationships between cyclic and linear rhythms, which Costello (2018) and Keogh (2018) apply to games and play experiences. These two rhythms are made distinct by the experience of "oscillation, rotation and return" associated with cyclic processes, and "a sense of trajectory and closure" that emerges from linear repetition (p. 53). For example, individual temporal segments within a stream can be understood as cyclic repetitions consisting of similar dynamics and stream design elements, while repeated in-game actions would be linear in their progress towards a particular event or outcome. Costello emphasises the value of "combining linear completion and cyclic return" (2018, p. 53) to consciously develop stabilising and destabilising rhythmic dynamics in interaction design. When examining these same rhythms in videogames, Keogh (2018) argues that "the rhythms of playing a videogame are found in the coupling of cyclical processes and linear repetition" (p. 146). In other words, play rhythms are neither wholly either cyclic nor linear but some combination of both, and both authors emphasise the value of connecting cyclic and linear repetitions. A stream's internal temporality is built upon these same ebbs and flows between cyclic and linear repetitions as persona play.

Characterised by waiting, the pre-stream period gives spectators an opportunity to gather before the stream is seen to begin while also presenting elements of the streaming persona to spectators in the anticipated presence of the streamer. The pre-stream period is the time between the stream going live and the streamer beginning their on-stream performance. This segment is generally short, and is marked in a range of different ways, from simple overlays to countdown timers to more complicated video introductions. GirlfriendReviews is a channel run by couple Shelby and Matt, who stream and create short, edited YouTube videos

presented with Shelby's voice. Their cisgendered, heterosexual relationship is a key part of their persona as they play Matt's history with and knowledge of video games alongside Shelby's lack thereof in order to foreground her experiences of games as an 'outsider.' Their pre-stream typically consists of a drawn overlay with the words "STARTING SOON ... GIRLFRIEND REVIEWS," and depicts the two of them playing separately but together, surrounded by their two cats and two dogs with visible gaming paraphernalia on the shelves (see Figure 20). This representation of the couple together in a comfortable domestic setting immediately introduces spectators to the streaming persona, even in the absence of a human streamer. Shelby's and Matt's persona play begins each stream with a curated image of their relationship. Combined with a softer colour palette and gentle accompanying music, this overlay sets a relaxing tone for the stream and allows spectators to ease into the stream as they wait for the streamers to arrive. Like GirlfriendReviews, Cardboard Cowboy (CBC) frames his streaming persona through the aesthetic of his pre-stream period. His pre-stream overlay depicts a gramophone in front of a full-screen timer counting down to his arrival. The gramophone in its sepia tones represents CBC's cardboard world and the western aesthetic of his stream. However, he also imbues his overlay with anticipation through the inclusion of the timer. Once the timer has elapsed, a minute-long video clip of CBC walking through his cardboard world plays, with buildings, cacti, and other characters from his narrative popping up as he progresses. This clip is accompanied by a western-sounding track consisting of acoustic guitar, a simple percussion line, whistles, and emphatic vocal 'hoo-haa' chants. This clip operates liminally, representing a transition out of the pre-stream segment, as CBC arrives for the stream to begin. In both cases, the pre-stream period is defined by waiting and anticipation as spectators gather while the stream has begun but is also perceived as having not

yet started. However the aesthetic and design choices made by streamers transfigure the temporal experience for spectators, setting the tone for the stream and subsequently the way that streaming persona is performed by the ensemble during the streamer.

Figure 20. GirlfriendReviews' pre-stream overlay (2022).

Ensemble members' temporal experiences during playing segments are strongly affected by the attitudes towards time and play performed by streamers. The pace at which streamers are expected by spectators to move through a game is therefore a product of their persona play, though tensions can emerge under particular circumstances. For instance, in February 2022 GirlfriendReviews played *Dying Light 2: Stay Human* (2022). Shelby and Matt played cooperatively, which involved the two of them playing in the same game world. However, underpinning these streams was a constant temporal tension between Matt's desire for speedy progress through the game's main quest and Shelby's interest in other elements of

the game that slowed this progress. This tension was further exacerbated by a disparity between their respective skills and game design that required both players to be together in order to progress, which often left Matt waiting for Shelby. I found the voyeuristic quality underpinning this tension uncomfortable at times, for instance during one interaction Shelby stated that she wanted to go shopping in-game:

> "Why do you always wanna go shopping?" Matt responded, "We haven't done anything to need to go shopping. We need to continue the main quest so we can actually unlock some good shit-"
>
> "Why're you mad?" Shelby interrupted.
>
> "I feel like we're stagnating. Oh my goodness."
>
> "Are you mad?"
>
> "Well, I'm mad at the game because I keep wa-I'm trying to get through this main quest and every time I do I gotta wait for someone else [Shelby] to get to the point and I see your little thing [check-marker indicating her location in-game] and you're so far away all the time."
>
> Shelby approached Matt in-game.
>
> "Here we go," he acknowledges her approach, "It's not your fault though, again."

This kind of interaction was typical of this playthrough. The temporal dissonance between the two playstyles occurring simultaneously gave the stream a confused tone but also tapped into their performed relationship as key to their streaming persona. Matt explicitly blamed the game for not being able to accommodate their conflicting playstyles. However in moments of frustration he also criticised Shelby's playstyle. Despite Matt's criticisms, spectators overwhelmingly supported Shelby's approach. They seemed to enjoy her exploration and some

of the unexpected moments that arose from her slower pace. Matt's criticisms however received divided reactions. When they were purely directed at the game they were supported, but when they were directed at Shelby they were rejected. During these streams, a key part of the couple's streaming persona, namely their different experiences of and attitudes towards games, shifted the temporal experience of the stream. While one reading of this might position Shelby as an anchor slowing down progress, the prevalent attitude among spectators positioned Matt as impatiently yanking Shelby forward and away from her own playstyle. When Matt's criticisms were perceived to threaten both the happy relationship and the relaxed atmosphere depicted during the pre-stream segment, they were rejected. The temporal experience of playing segments is thus a form of persona play that occurs between the streamer(s), spectators, and game play but is also shaped by other temporal segments of streams.

Chatting segments are deployed as present-focused temporal segments that prioritise interactions with and through the streamer. While playing segments tend to be quite consistent between streamers with game content occupying the majority of the stream, chatting segments tend to be grounded more strongly in ensemble behaviour and interactions than in aesthetics. Streamers will sometimes make their facecam the largest, or only, visible element on-screen during chatting segments (Figures 21, 22, and 23), which focuses spectator attention on the streamer and stream interactions. This choice further suggests a more focused attention from the streamer, even if a game is visible to them on another monitor. The inclusion of chat on screen, for example in Ray's and Fufu's streams in Figures 21 and 22, adds to the interaction-focused nature of chatting segments. By allocating time to interact with spectators outside of the context of play, streamers produce perceptions of deeper connections between spectators

and the streaming persona. A focus on present interactions through chatting segments thus solidifies ensemble membership.

Figure 21. A chatting segment during one of Ray's streams (2019).

Figure 22. A chatting segment during one of Fufu's streams (2019).

Figure 23. A shrunken CBC walking through his kitchen during a chatting segment (2020).

Chatting segments can further add depth to the streaming persona and produce a cohesive streaming persona in concert with other temporal segments. This depth can emerge from the curation of the stream screen in absence of visible game content, as demonstrated by CBC's incorporation of his cardboard world and narrative into his chatting segments. For example, Figure 23 depicts a walking-and-talking chatting segment typical of CBC's streams. During this stream, a shrunken CBC was progressing towards the machine that shrunk him in his attic in order to return to his previous size. By attaching narrative significance and a goal to chatting segments, CBC's streams are simultaneously present- and future-focused. His chatting segments are then associated not just with interaction but with progress towards the next major plot point in the stream narrative. CBC infuses his chatting time with a constant undercurrent of anticipation, so spectators enjoy interacting with him and each other *now* while also awaiting what comes *next*. Like GirlfriendReviews' playing segments, CBC's chatting

segments build upon the aesthetic and tone created by his pre-stream segment in addition to any underlying anticipation of upcoming playing segments. Just as anticipation is built for his arrival at the beginning of his streams, anticipation for the next moment in his stream narrative is built through his chatting segments. Further, the rhythms of CBC's chatting segments are cyclic in their structure and design and linear in their contributions to the progression of his stream narrative, emphasising how these cyclic and linear rhythms of play together contribute towards streaming persona. Chatting segments thus demonstrate how a cohesive temporal experience across stream segments constitutes playing persona through stream time.

Not all chatting segments are visually distinct from playing segments however, the distinctions in some cases lie in ensemble member behaviour. Streamers sometimes slow or stop their game progress or take advantage of quieter moments during play to prioritise interaction. Though still occurring within the context of gameplay, the shift from playing to chatting here is cued by a combination of in-game and streamer performance. In their discussions of player effort, Elias et al. (2012) specifically discuss busywork and downtime in games and opportunities for sociality associated with the latter. Both in-game busywork and downtime provide opportunities for streamers to shift focus from gameplay to stream interactions, signifying a shift from playing to chatting segments as a response to natural turning points in game rhythm. Ray presents an extreme example of such a shift through his regular 'Achievements and Chill' streams. These streams are often dedicated to completing mundane or repetitive tasks – forms of busywork – in games for the sake of Xbox Achievements. By streaming this content, Ray is able to earn achievements while focusing primarily on interactions with spectators. During streams like these even chatting segments occur within the context of game progress. Similarly to CBC there is an undercurrent of

anticipation built into the ever-present grind towards an achievement. The context of an inevitable, known outcome (the achievement) within a game paints the otherwise-similar temporal experience of underlying anticipation within a chatting segment as distinct. Stream segments are consequently defined by behaviours and associated temporal experiences, while streaming persona is played through approaches towards those behaviours and temporal experiences.

Breaks are yet another distinct stream segment, defined by waiting that is often actively performed by non-streamer ensemble members as a form of persona play. When Spilker et al. (2018) examine affective switching as the movement between active and passive modes of spectatorship on Twitch, they demonstrate how stream spectatorship can shift in ways that accommodate spectators' lives and needs. Spectators can step away to eat, go to the bathroom, or to move around. In contrast, streamers are typically unable to do these things while live and their in-game performance suffers during longer play sessions. The latter point is supported by Matsui et al.'s (2019) findings that high performance players play worse during longer play sessions, particularly while streaming. Breaks are therefore necessary for a streamer's health and for maximising their capacity to entertain their audience. Like the pre-stream segment, breaks are characterised by waiting. While they also afford spectators opportunities to step away without missing any streamer performance, ensemble members perform streaming persona as they actively wait for the streamer's return. One such recurring example that I observed was 'chair cam' or 'chair streams.' As might be expected from the title, chair cam is the name given to streamer breaks during which the streamer leaves their camera on with their empty chair visible (Figures 24 and 25). During chair cam, ensemble members send messages in chat containing subscriber emotes representing the streamer's chair. Waiting is the core

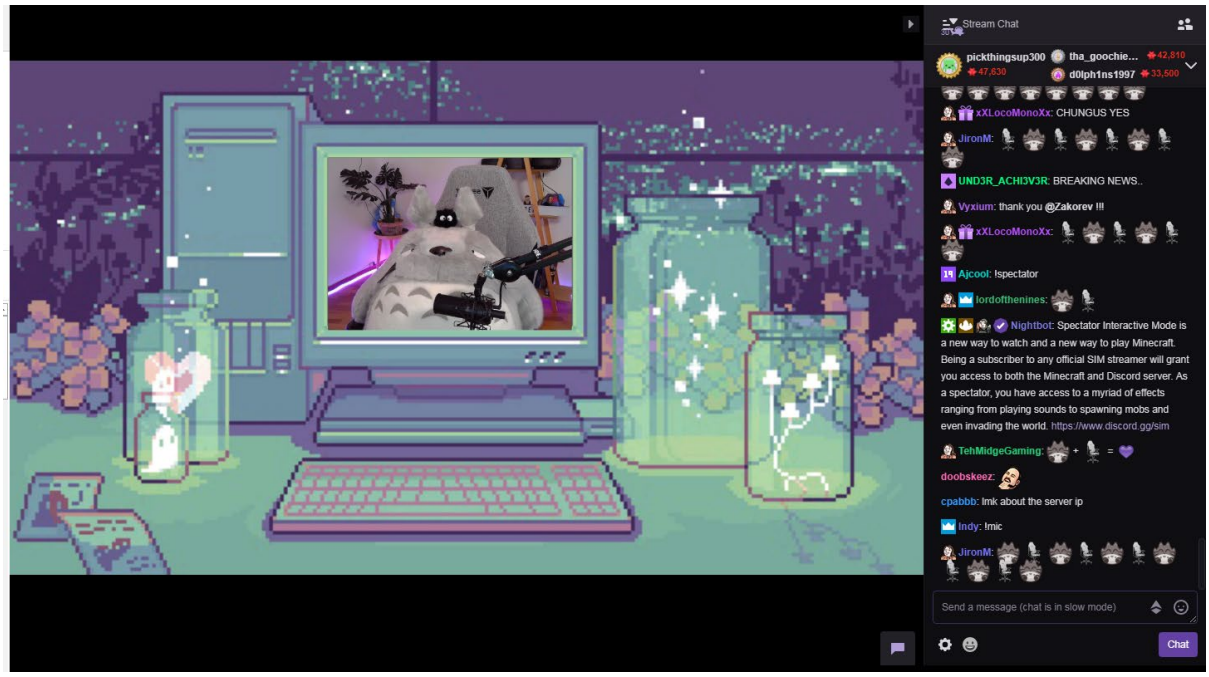

Figure 24. Amber's stream screen during one of her breaks (2019).

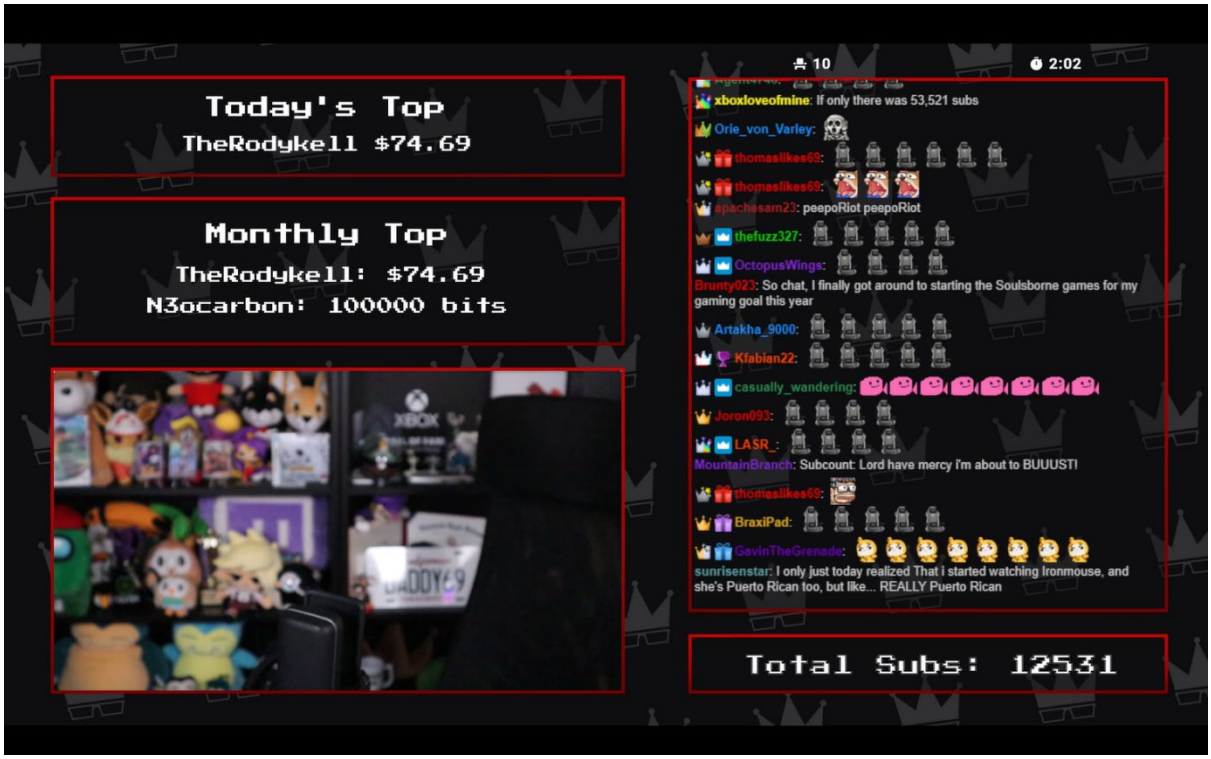

Figure 25. Ray's stream screen during one of his breaks (2022).

temporal experience of breaks though spectators actively perform their waiting through their emotes, which inducts the chair to the stream ensemble. Spectators perform their excitement for chair cam as the break begins and their disappointment once it has ended, making it a playful approach towards creating entertainment in the absence of the streamer. Streaming persona is performed not just by the chair's performance as an ensemble member but also the subscriber emotes, stream design, and physical space within which the chair sits that are simultaneously present during breaks. Breaks are therefore pauses in streamer performance but not in persona play, as other ensemble members actively wait for the streamer's return.

The final stream segment – the wind-down – follows combinations of playing, chatting, and break segments and aims to bring the stream to a satisfying close that also leaves ensemble members in anticipation of their next gathering. An ensemble-specific aspect of time-sense includes knowing how long streams typically last, and thus how much longer a given stream will last. The first explicit cue is often an indication from the streamer that they will be wrapping up 'soon.' At this point it is unusual for a stream to last longer than an hour but the exact amount of time shifts. Different streamers have different practices as the wind-down, and by extension the stream itself, comes to an end. Some streamers search for another stream to raid.[27] Raiding can extend the time that spectators spend together and allow them to interact with another stream ensemble. Some streamers also have outro overlays or clips, similar to those examined with pre-stream segments. Fufu's outro clip sees an animated Fufu walking slowly away from her computer and across a variety of backdrops as the sun appears to be setting the background. While definitely closing the stream, the appeal to the external cyclic

[27] Raiding is a Twitch feature that takes all of the viewers from one stream to another.

repetition through the visible sun and the stars gives the sense that, just as the sun will rise again, the stream will begin once again before long. Taking a slightly different angle, CBC's outro clip is his pre-stream clip in reverse. He walks backwards and the soundtrack plays backwards. Like Fufu, this brings a sense of beginning anew and emphasises the cycle of the stream structure. In contrast with Fufu however, CBC's stream feels as if it is resetting to start over again, more strongly emphasising a more rigid (but still cyclic) repetition. As with the other stream segments discussed in this section, the temporal experience of the wind-down is largely consistent across streams but is given nuance through persona play.

The expected temporal experience of a stream can be subverted or disrupted by many factors. I observed many streams cut short because of, among other things, the streamer feeling ill or tired, tending to a suddenly sick pet, or simply having Internet troubles. These are unexpected interruptions to the structure of the stream that the ensemble is accustomed to. Most ensemble members demonstrate a high level of sympathy during these instances, emphasising that the streamer must put their (or their pet's) health first or sharing in the streamer's frustration with the Internet Service Provider. Underpinning this sympathy is also an acknowledgement that the occurrence has disrupted the stream and that ensemble members accept this disruption. These messages are thus as much gestures of reassurance as anything else. As is often the case with disruptions to routine, abrupt stream endings are dissatisfying for ensemble members. On multiple occasions, Solar expressed concerns about ending streams early. My impression was that she felt that shifts in stream duration, as well as suddenly ending streams, may discourage viewers from returning due to a lack of consistency. Regardless of whether this is true or not, stream duration and the experience of time within streams have a perceived value that ties into ensemble expectations.

A stream's internal temporality is characterised by individual stream segments as well as ways that these segments are connected and interwoven as acts of persona play. Structural loops consisting of combinations of playing, chatting, and break segments provide different opportunities for the creation of time through persona. I have already described in this section common threads carried between temporal segments within the same stream, like CBC's anticipation or GirlfriendReview's relaxed vibe. Structural loops within streams tap into these same performances of persona whilst also responding to stream ensemble performance. Tighter playing-chatting loops are forms of persona play that introduce variety into stream content and are enabled by a so-called time-sense through which spectators recognise shifts between stream segments. These tighter loops are particularly common when streamers play difficult games that involve attempting the same game moment many times before succeeding, as CBC demonstrated throughout his playthrough of *Hollow Knight* in 2021. There were many moments during this playthrough when CBC's play consisted entirely of moving his game character around mindlessly – running back and forth, jumping on the spot, swiping their weapon at the ground. During these moments CBC's game progress came to a halt and he focused primarily on interacting with spectators, often between his attempts to defeat difficult bosses. By flicking between short playing and chatting segments, CBC gave himself reprieves from the difficult play content, broke up the repetitive game content, and ensured that the ensemble's social needs were consistently met. CBC additionally maximised engagement and anticipated the entertainment needs and desires of his ensemble members by exerting control over the internal temporality of his streams. For example, when he punctuated playing segments with chatting segments, the shifting progress-focused and interaction-focused playstyles cue shifts between stream segments for spectators.

This temporal sense echoes Thompson's (1967) concept of time-sense as an "inward notation of time" (p. 57) that is subject to "technological conditioning" (p. 80). Glitsos (2019) applies time-sense to the analysis of a Netflix series to demonstrate how temporalities affect and illustrate time-sense. I extend this application to Twitch to consider how emerging technologies and platforms articulate an individual's experience of a stream's internal temporality. Time-sense on Twitch is conditioned by both the platform and the stream ensembles within which one participates. It consists of ensemble members' abilities to recognise and respond to cues that signal segment shifts. . During CBC's tighter playing-chatting loops, ensemble members demonstrated time-sense by more actively chatting during chatting segments than playing segments. They understood the shift between segments and responded appropriately even though the cues, like CBC's change in playstyle, were implicit. Time-sense thus includes the ability to understand cues that signal shifts between stream segments through an internalised familiarity with stream temporalities more generally, as well as with ways that those cues are altered to reflect individual streaming personas.

Time-sense and internal temporalities often provide a capacity to contextualise stream occurrences that in turn enable ensemble members to respond appropriately. Implicit ensemble cues can be ambiguous. For example, interpreting a drop in the number of chat messages received can depend a lot on stream context. This phenomenon is often described as chat moving 'slowly', creating an explicit temporal association with the transmission of fewer messages. Through time-sense and a tacit understanding of internal temporalities, ensemble members are able to posit more accurate justifications for the chat speed. If stream content has not been sufficiently varied, for instance the same segment has extended or the same moment of gameplay has been repeated many times, spectators may be bored with the stream content

and hence not be actively chatting. Through time-sense, the slow chat becomes a signal for the streamer to infuse more variety into their content by pivoting into another segment, as CBC did preventatively through his tight playing-chatting loops during his *Hollow Knight* playthrough. Alternatively a slower chat can be a result of spectators' collective time-sense as they recognise that game play is drawing too much of the streamer's attention to enable them to read and respond to messages. This variation commonly occurs during intense moments of gameplay, can signal investment in the game content from spectators, and is immediately recognisable when the intense moment passes and a flood of messages appear in chat. A slower chat affects the internal temporality of a stream as chat speed is understood as it changes throughout a stream, however it is not the result of a singular stream occurrence. Implicit cues can instead be correctly interpreted through time-sense, providing the streamer with an opportunity to shift stream segments accordingly.

While time-sense can help streamers to interpret implicit temporal cues, ensemble members may also provide explicit cues to which streamers respond through persona play. Stream segment shifts in response to spectator prompts demonstrate how internal temporality is negotiated within the stream ensemble. For instance, part of Juliet's temporal persona play is her aim to take stretch breaks every ninety minutes. Ensemble members know this and so issue reminders if enough time has passed without a break. The ensemble collaborates to produce a particular stream structure expressing her streaming persona through her streams' internal temporalities. Other stream ensembles connect around time in more demanding ways. For example, Dartigan spent forty-five minutes of his first stream *Dark Souls III* stream in the character creator. Spectators became impatient, sending messages like *"Have you seriously been messing with face settings for 3/4 of an hour? For something you literally will never see*

in-game?" Though Dartigan initially defended his choice, he soon completed the character creation process after other spectators echoed the sentiment of the first. This moment communicated the kind of play that Dartigan's stream ensemble valued, relegating the character creation process to a lesser form of play than the rest of the game that follows, and so reflects the connection between his streaming persona and play.

Stalling has emerged as temporal vernacular that places explicit demands on streamers under the guise of playful antagonism. When chat members tell streamers to stop stalling, they are accusing them of deliberately putting off making game progress and demanding that this behaviour is amended. This very commonly occurs during The_Happy_Hob's (Hob's) streams. Hob typically streams challenging game content, and is often accused of stalling when he slows his progress down as stakes increase. Though this accusation is intended to be playful, there is still a temporal demand being placed on Hob, and this practice has been incorporated into his streaming persona to the extent that he is quite often accused of stalling when he isn't making progress. Explicit cues like these emphasise how time-sense involves expressions and interpretations of ensemble desires for stream structure, consequently affecting the streaming persona through stream content and the nature of the relationship between streamer and spectators.

My observations around stream structures and temporality emphasise flexibility and fluidity, demonstrated in specific moments as streamers adapt to spectator cues but also built into the streaming mode. When discussing the incorporation of non-linear and cyclic rhythms into interaction design, Costello (2018) argues that tensions exist between cyclical and linear rhythms often embedded in cultural relationships with and perceptions of time. When designing "for an audience raised in a culture with predominantly linear rhythmic forms," Costello notes

that “those users will have been raised with the steady beat of 4/4 rhythms and will find other rhythms not only difficult to perceive and perform but rhythmically unsatisfying” (p. 18). Given that many Twitch users fall into the category that Costello describes, streamers are encouraged to embed apprehensions of progress and rhythmic linearity into their streams. However, attempts to do so are challenged by contrapuntal and syncopated rhythms built into streaming through multiple conversations occurring simultaneously and alongside game demands and other stream elements, like alerts. Without appropriate management, the contrapuntal rhythms emerging from all of these elements can become overwhelming and – as Costello notes – unsatisfying for an audience. Through time-sense, streamers develop management strategies for these layers, softening or pausing some while emphasising others, to provide the most satisfying temporal experience for the stream ensemble.

My analysis of stream temporality has revealed five temporal segments that affect a stream’s internal temporality, or how individual moments within the stream are experienced in relation to each other. These segments are: pre-stream, playing, chatting, breaks, and a wind-down to the stream’s end. These segments are recognisable across the Twitch platform due to their core temporal function but are transformed and arranged as acts of persona play. In this section, I presented each of these segments individually and articulated a number of ways that they may be deployed together to produce a cohesive streaming persona, as well as their potential to impact stream temporality beyond their basic function. I also used theories of repetition to examine structural loops of playing, chatting, and break segments that form the majority of most streams, followed by the application of time-sense to Twitch to assert that familiarity with these stream segments is internalised. Time-sense is particularly useful for understanding how ensemble members produce and interpret signals related to the internal

temporality of streams. Fittingly, I concluded with an examination of the wind-down segment and the potential for disrupting expected temporal experiences. Through the concept of internal temporality, I produced a decomposition of stream structures that reflects how stream ensembles infuse platform-wide expectations and knowledges with persona play through temporal arrangements and experiences.

Play Time is (Never) Over

Ensemble members experience time on Twitch not only in terms of the internal temporalities discussed in the previous section, but also in terms of *external temporalities*. By external temporalities I refer to the experience of time between and across streams, or understanding stream moments as they relate to moments within *other* streams. This is in contrast with internal temporality, which emphasises each moment of a stream as it relates to other moments within that same stream. External temporality reflects the simultaneously-experienced temporal modalities that Kitchin (2023) uses to capture the experiences of past, present, and future in and through the present moment. Platform norms and features are constantly in flux on Twitch but many enact temporal power by converting financial capital to social capital (Bourdieu, 2018) as spectators pay for visibility and to demonstrate their continued membership to stream ensembles. This section uses the concept of external temporality to examine ways that stream moments can be experienced differently subject to the context provided by individual ensemble members. Exposure to repeated cycles of particular streamers' presentations of the stream segments described in the previous section strengthen ensemble membership. Ensemble members can begin to trace the history of a streaming persona as they are introduced to variations within these cycles, comparing and contrasting the present with the past. Behaviours, aesthetics, interactions, values, and power structures – within

both individual streaming personas and the platform as a whole – are subject to change over time, and a stream's external temporality traces these changes and their impacts on stream ensembles. Absence from streams has a distancing impact on ensemble membership through the gaps in stream history, which reduce accessible reference points through which external temporality can operate. Not all reference points need to be experienced, however, as Bay-Cheng et al. (2015) note in their definition of mediated time as "techniques of simultaneity, repetition, and recursions facilitated by media" (p. 53). Mediated time within streams facilitates external temporality by providing explicit references to occurrences elsewhere in time and on the platform. On Twitch, the present is mediated by and experienced in terms of pasts, presents, and futures with stream ensemble members, including experiences of and with games in other streams and through individual play. The temporal power that facilitates these mediations of time is held by the ensemble as a whole – the stream history and experience is a collective one and the capacity to impose temporal relations in this context is not held by an individual but the ensemble.

A stream's external temporality varies more strongly with individual experience than its internal temporality due to its consideration of moments external to the current stream. Of particular use in analysing external temporality is Jayemanne's (2017) chronotypology for the examination of performances of videogame play. His typology consists of diachronising and synchronising elements, where

> *diachrony* is produced by apparatuses that separate, disperse or distinguish performative multiplicities, making them most distal. *Synchrony* is produced by apparatuses that bring together, converge or concenter performances, making them proximal (emphases in original, p. 265).

This framework is particularly relevant in examining a stream's external temporality as the live experience of the stream is synchronising: every member of the stream ensemble is experiencing the same moment at the same time. The different meanings that these moments have for different ensemble members – based on their individual history with the stream ensemble, the Twitch platform, and any game being played, for example – makes them simultaneously diachronising. Building upon his chronotypology, Jayemanne (2020) emphasises that "diachrony and synchrony are tendencies and not essences" (p. 815), and that "unstable signifiers are capable of changing and switching between these tendencies" (p. 816). This flexibility carries into temporal examinations of streaming persona, wherein a cohesive streaming persona is predicated upon sufficient synchrony to maintain and build connections between ensemble members. Counter-balancing this synchrony is the diachronising tendencies of stream elements that may be experienced differently by different ensemble members at the same time, or be experienced differently by the same ensemble member at different times, making them largely unstable signifiers. Jayemanne's chronotypology was constructed for the analysis of videogame narratives, however its application to streaming persona bears fruit as a way of understanding how external temporality shifts with an individual's experience.

Each stream is an iteration of the stream structure examined in the previous section, and by experiencing more cycles – that is, by attending more streams – spectators deepen their ensemble membership. Greater experience with a stream ensemble over time triggers a gradual transition from novelty to familiarity, which affects the external temporality of a stream for spectators who have a richer history to affect their experience of particular moments. This richer history heightens the diachronising tendency of repeated elements like recurring gags, emotes, or alerts, as spectators have more related experiences to connect with them. As those

elements shift from novel to mundane experiences, the awareness of those diachronic tendencies diminishes in favour of a stronger synchrony. For instance, a particular alert might be highly diachronising the first few times a spectator sees it. Each time it plays, the spectator experiences it as novel and with reference to their first experience. After a few dozen times however, they may not remember their first experience or have experienced the alert enough that it has lost its novelty. The alert thus becomes synchronising for this spectator whose experience is more strongly rooted in what the alert represents – such as the particular donation or subscription – than the alert itself. Stream elements like alerts are as such unstable signifiers whose temporal experience is affected by repeated stream attendance.

Repeated stream attendance can additionally strengthen ensemble membership through connection with other members, in turn affecting the politics of the ensemble. I witnessed many newcomers transition into regulars who were welcomed enthusiastically by the streamer and other spectators upon arrival. Their demonstrated commitment to the ensemble through sustained and repeated attendance gave them status within the stream ensemble. The most noticeable trend among those users was how unnoticeable this accumulation of status was due to how gradually it occurred. I was occasionally surprised by messages directed at me from other ensemble members. In these situations typically either I had accumulated status due to my time with the stream ensemble that was recognisable by newer ensemble members, or I was accumulating status as I was spending time with the stream ensemble that was recognisable by existing ensemble members. Ensemble status built up over time gives members power within the stream to acknowledge the status of new members while also positioning their approval as desirable among newer members. This build-up of power through recognition is another signal

of the transition from novelty to familiarity that is part of a stream's external temporality and feeds into platform politics via streaming persona.

These politics are solidified through platform features which signal consistent and extended ensemble membership, as well as serve the economy of the platform by glorifying financial contributions. For example, subscriber badges that appear next to a chatter's username can be customised to reflect the duration of their subscription (Figure 26). These subscriber badges communicate the streaming persona through their design as well as reinforcing the idea of status accumulating with the duration of ensemble membership, particularly when subscriber badges become more elaborate the longer the user has subscribed. Subscriber alerts similarly encourage the celebration of ongoing ensemble membership, with the primary distinctions being their ephemeral nature and appearance on the stream screen. While streamers can customise the alert itself, a highlighted message appears in chat (Figure 27):

> *[user] subscribed at Tier [X]. They've subscribed for [Y] months, currently on a [Z] month streak!*

Not only does this message celebrate an ensemble member's (re)subscription, it attaches an additional value to the number of consecutive months that they have been subscribed. The persistent badges and ephemeral alerts signal and celebrate the amount of time that a user has demonstrated their commitment to the stream, both temporally and financially, making subscriptions operate as an exchange of financial capital for social capital. Stream and platform features that allow users to signal their ensemble membership through quantified time like this also encourage the false conflation of these numbers with connections between members. It is certainly not the case that ensemble membership requires financial contribution. Firstly, many users who are not subscribed but have demonstrated their membership through interaction

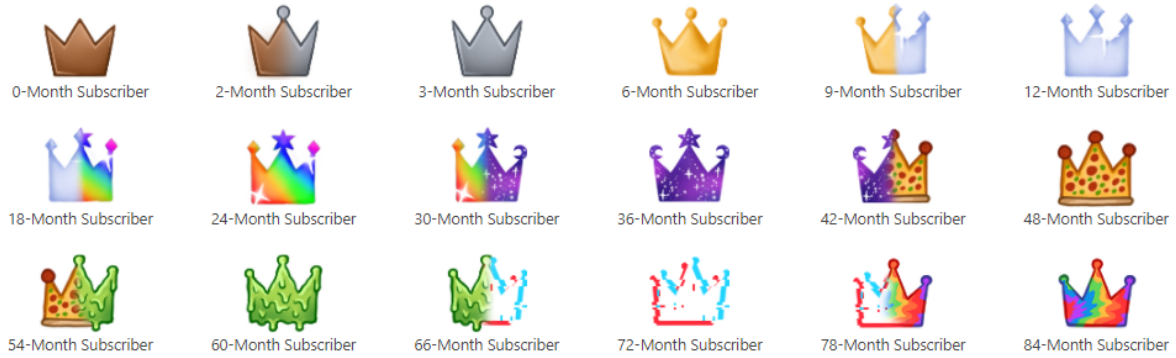

Figure 26. Ray's subscriber badges.

Figure 27. A resubscription notification during stream.

receive gifted subscriptions from others. That is, rather than ostracising an ensemble member for not subscribing, others demonstrate their acceptance into the ensemble by gifting them subscriptions or treating them no differently than those who have subscribed. And secondly, it was regularly made clear across all of the streams that I attended that financial contributions were appreciated but not necessary, though I make room for the possibility that these comments strategically produce a streamer who is perceived as not greedy and therefore more deserving

of financial support. Twitch as a platform thus demonstrates an understanding of the importance of repeated and consistent stream attendance to ensemble membership through attempts to capitalise upon this aspect of external temporality.

Streaming persona is constantly in flux and its evolution over time affects a stream's external temporality as each moment is understood in relation to moments from which it has evolved. Every aspect of streaming persona that I have presented in this thesis thus far changes over time. Streamer performance, ensemble members, normative behaviours, and boundaries all transform as a result of ensemble member interactions and negotiations of agency. Consistent and repeated stream attendance gives ensemble members familiarity with the stream history created as streaming persona evolves. I have elsewhere used the notion of memetic history to argue that "intensities of viewing and membership duration contribute to a connectedness within the collective" (Jackson, 2020, p. 83). By memetic history I mean the way that memes are drawn upon and evolve over time, which I connect with how streaming persona "has evolved and how this evolution is a product of interactions" (Jackson, 2020, p. 83). I extend the notion of memetic history here to a broader concept of stream history that obeys the same social and temporal logic in defining streaming persona. While stream literacy consists of familiarity with aspects of streaming persona at present, stream history captures all of the changes in streaming persona over time. An ensemble member's familiarity with stream history contextualises their experience of the present moment, thereby affecting a stream's external temporality. Repetition over time, both cyclic and linear, consequently feeds into this process as jokes, memes, temporal segments, alerts and vernacular, among other elements, are repeated in different contexts. These contextual changes create new meanings and elicit gradual evolution over time. For example, each resubscription alert repeats the same audiovisual

marker but signifies a new month of subscription for one viewer, thus extending their connection with the stream. Each repetition carries the cyclic elements of return and maintains a stable streaming persona core while each slight shift in context suggests the trajectory of the linear that signals its gradual transformation. Stream history is thus part of a stream's external temporality as individual moments are contextualised by past experiences with the same streaming persona.

Interactions between ensemble members are some of the most influential factors in transforming streaming persona. In previous chapters, I have discussed a (post)feminist resistance built into Amber's streaming persona. Over time the nature of that resistance and its prominence in her performance of persona changed. Over a number of streams in 2020, I noted Amber communicating her frustration and performing more exasperated responses to some of the targeted toxicity discussed in Chapter 6. While she had previously protested loudly and strongly against gendered toxicity within her streams, the nature of her resistance changed over time. Upon a return visit to her stream in 2021, I observed Amber respond to a joke around foot fetishes that was ultimately requesting her to show her feet on stream. Rather than transition to a bit and tear the joker down, as she might have done a year earlier, she simply joked that she would not show her feet "for free on Twitch". As someone familiar with a particular part of Amber's stream history, I interpreted this response in contrast with those I had witnessed in 2020. Her performance still rejected the joke but the vehement denial of the associated objectification was conspicuously absent. The changes in Amber's streaming persona resonate with a feminist tiredness that Sara Ahmed (2017) describes when she notes that "sometimes we are tired or we experience an anticipatory exhaustion: we line ourselves up to avoid the consequences of being out of line because we have been there before or we can't

face it anymore" (p. 55). After putting so much time and energy into pushing against and weaponising toxic masculinity, Amber's streaming persona repositioned itself in relation to those values as a result of numerous similar interactions with spectators over an extended period of time. Interactions between ensemble members can therefore necessitate the evolution of streaming persona if an established cycle has an undesirable impact on the streaming persona.

Changes like those of Amber's described above often occur gradually, providing the streaming persona and hence the stream ensemble with stability, even though a stream may be almost entirely unrecognisable in aesthetics and content given a sufficiently long period of time. When I first watched Laser, the majority of her stream content was the same: playing through the same game repeatedly while attempting to minimise the number of times that she was hit by enemies. She quite often expressed that these runs caused her anxiety but continued to produce the same content as her viewership declined when she attempted to change her content. In order to maximise her enjoyment, mental wellbeing, and viewership, she started to introduce occasional variety streams (playing a broader range of games with more casual playstyles) over the course of months. She was able to minimise the overall cost in viewership and develop a more stable viewership by introducing a significant shift in stream content gradually. Laser enacted a similarly gradual change to her stream aesthetic as she stopped using a green screen and moved into a dedicated stream space, which she decorated bit by bit over the same time period. Between the first stream of Laser's that I observed and the last as part of this project around a year later, her streaming persona shifted drastically both through her content and her performance of space. Together these changes signalled a movement away from purely intense, game-focused content to an integration of more relaxed content with a

greater personal feel. Laser's approach to these changes was such that they did not feel significant or dramatic at the time, but their net impact on her streaming persona over time was significant. Streaming persona is constantly in flux but its transformations are most readily understood through the experience of time across many streams, in other words through external temporality contextualised by a connection to stream history. The streaming persona changes over time – gradually and suddenly – in response to and in negotiation with ensemble desires and demands, maintaining balances between the agency of ensemble members, and between familiarity and novelty.

When streamers change particular stream elements and content, they inject novelty into the stream while often maintaining their core streaming persona. An underlying dynamic or overarching elements of performance or design often persevere beyond surface-level changes. For instance, CBC's stream narrative periodically progresses. An event occurs that leads him to change location in preparation for the next event. The event and new location are novel, however the longer term event-location cycle persists. Whether CBC is stuck at the bottom of a well, shrunken and walking through his kitchen, or sitting on a train, his ensemble can enjoy the novelty of the new visuals and stream elements while also associating them with chatting segments. In addition, the change itself becomes part of his streaming persona as spectators know that they can always expect a new event and a new location. This same dynamic occurs when streamers add new alerts or change stream aesthetics. Consistency provides a foundation for comparison with the stream history as part of a stream's external temporality – it maintains spectators' sense of connection to the streaming persona – while novelty elicits excitement and engagement. These benefits are mostly experienced by existing ensemble members, though the excitement produced by changes can encourage new members to return.

Absence disconnects spectators from the stream ensemble, and returning after an absence requires an ensemble member to familiarise themselves with any streaming persona changes that they have missed. One of the greatest challenges that I faced in collecting data for this project was navigating familiarities with different streaming personas. The nature of this project meant that I developed a strong sense of streaming persona at a particular moment in time and of stream history over a fixed period of time. Once I had moved on to other streams, checking in from time-to-time helped me to trace the evolution of some persona elements, for instance revisiting CBC would give me an opportunity to see how his stream had changed to reflect the latest part of his narrative. However I wasn't easily able to understand how he got to that point. My absence created gaps in my familiarity with the stream history and hence disconnected me from the streaming persona. While CBC frequently played recaps that offset some disconnection upon my return, it was a poor substitute for attending streams from the perspective of ensemble membership and was a practice that relatively few streamers used. Consistent and continued presence had demonstrated value for spectators. It was common for regular viewers to apologise for missing streams. This was never necessary, and almost always responded to by the streamer with the note that, like financial contributions, constant presence is never expected but always appreciated – a line that I had taken up during my own time streaming. My sense was often that these apologies were grounded in the regret that they had missed an opportunity to connect with the stream ensemble and therefore felt their membership was slightly less stable. Ensemble membership is certainly not revoked after missing one or two streams, however within those streams were conversations, new jokes, and other interactions that fed into future streams. The greater the number of streams missed, the greater the disconnection that occurs. The resulting temporal experience is an awareness of diachrony.

References to missed stream moments like a new recurring joke makes the absentee aware that they missed something, thereby eliciting a sense of disconnect from the stream ensemble. Stream absence thus alters the external temporality of streams upon returning as the diachronising aspects of references to missed streams are strengthened for the absentee.

Clips – short videos of past stream moments – connect the captured past with the present audience and context. The act of clipping a moment during stream is diachronising: it separates time into the ongoing live moment and that of the captured clip. Playing a clip, on the other hand, is synchronising: it brings the captured historical moment into the live present, creating a temporal link between the recorded past and the live present. Clips can be incorporated into streams in different ways, each of which alters the temporal connection that the clip creates. For instance, clips taken on the Twitch platform can be shared in chat, where other chatters can access them through a separate browser window. Hob, a streamer known for completing difficult challenge runs of various games developed by FromSoftware, uses these clips to examine moments of failure in his runs. A behavioural norm has emerged within his stream that involves members of chat clipping his failures and posting the link in chat. He plays the clip back and talks through what went wrong and, if possible, how he could avoid that situation in future attempts. Clips used in this way draw upon the recent past to both create present content, and reduce the likelihood of undesirable repetition in the future. Celina uses clipped stream moments in a quite different way. At the time of writing Celina has 38 different special bit amount cheer alerts, which are played based on the exact number of bits that a member of chat donates. Many of these alerts involve short clips from previous streams that call upon that past moment to contextualise, and be contextualised by, the live present. Often these create humour through incongruence, as the alert is interpreted as it relates (or does not relate) to

present stream content. On top of this, the alert arrives unexpectedly and focuses attention intently on a single short moment from a past stream, disrupting the rhythm of the stream. When these alerts appear simultaneously or back-to-back during a stream, the rhythmic multiplicity can be overwhelming and even more disruptive, making a satisfying return to the singular stream rhythm upon the alerts' completion. Clips makes users conscious of external temporality through links between the past and present that impact stream rhythm and content.

External temporality is also affected by movements between multiple stream ensembles, which is facilitated by raids. Raids are Twitch features whereby a streamer takes their entire audience to another stream upon conclusion of their own. Raids invoke the Twitch platform as a nonhuman ensemble member in their facilitation, which simultaneously encourages users to spend more time on Twitch and creates relationships between ensembles. Streamers often select their raid recipients based on streamers that they know that are online, or streamers that are playing the same game as them. As the name suggests, raids are disruptive to the receiving stream, with Zhao et al. (2021) finding that overall engagement increases within the receiving stream but engagement from spectators present before the raid decreases. Often a raid will trigger an alert, and those arriving as part of a raid (so called raiders) will all send the same message in chat to announce themselves. In response, raid recipients often stop what they are doing to introduce themselves to the new viewers and welcome them to the stream. Temporally, raids allow streamers to bring their stream to an end whilst enabling their audience to continue to spend time together elsewhere. The disruption to the recipient stream represents a link between the end of the original stream and the ongoing structural loops of another stream. When raids arrive in a stream immediately prior to a streamer's break or the planned end of the recipient stream, that break or end is often deferred. This is a gesture of

courtesy towards the raiding streamer and viewership, as well as maximising an opportunity to onboard new ensemble members from the raiders. The new arrivals disrupt the internal temporality of the stream as the recipient stream seeks to welcome and accommodate the raiding party. The external temporalities of both raiding and raided streams are also transformed through their connection as the raid becomes an event – a marker in time – for everyone affected.

Experiencing Twitch in terms of external temporality is experiencing each moment within a stream as it relates to moments within other streams. In this section I have described the external temporality of streams as it relates to ensemble membership. Firstly, I framed my analysis in terms of Jayemanne's chronotypology, arguing that stream elements operate as unstable signifiers for ensemble members that move between synchronising and diachronising depending upon the duration and consistency of ensemble membership. I then moved through a number of key factors that affect the experience of individual moments in a stream in relation to moments within other streams. These factors were repeated stream attendance, stream and platform features that make ensemble membership visible, the balance between novelty and familiarity and the role of repetition therein, implementing changes gradually over time, absence from streams, clipping, and movement between streams. Though I presented these factors separately, they are inextricably interwoven in the production of a stream's external temporality. Streaming persona is performed over time through balances between presence and absence, consistency and change, and past and present. External temporality draws upon past streams and experiences across stream ensembles to contextualise the present moment, thus demonstrating how temporality on Twitch is reducible to these moments within individual streams.

Spending Time

Through a combination of time-based currencies and the inclusion of time-sensitive participation features, time has value both separately from and bound to capital on Twitch. In the previous section, I demonstrated how external temporality encourages users to spend more time on the platform. Both streamers and the Twitch platform benefit from this extended engagement as they accumulate wealth and temporal sovereignty. A number of platform features that incentivise this extended engagement and enact temporal sovereignty over spectators have emerged during this project. In this section, I describe these features and examine their impacts on the spectators' experiences of time on the platform. Recall that Channel Points are channel-specific currencies that Twitch users accrue primarily by spending time in a channel.[28] Channel Points foster the desire for deeper connections to ensembles through the commodification of spectator time and the quantification of streamer value. Value is also attached to spectator time, and consequently the streaming persona, as this commodity is spent or even gambled by spectators. Time-sensitive modes of participation such as Predictions, polls, hype trains (which I explore below), and event emotes encourage spectators to contribute (financially or through interactions) at particular times in exchange for rewards or influence over stream content. Through these features, the platform acts as a nonhuman ensemble member and accumulates temporal sovereignty as spectators view their time as a commodity to be exchanged and spent on the platform and particular streamers. While it has been acknowledged that time is a resource for streamers (Bingham, 2020; Johnson et al., 2019),

[28] For a complete breakdown of the different ways that Channel Points are earned, see https://help.twitch.tv/s/article/channel-points-guide?language=en_US

the features that I discuss in this section identify that spectator time is also a resource. Twitch mobilises a fear of missing out (*FOMO*) and the value of participation to ensemble members in order to co-opt the time of its users.

Channel Points give explicit value to spectator time, which in turn becomes expressible through the streaming persona. In 1967, Thompson wrote of a shift from task-focused labour to time-focused labour in seventeenth century England. He observed that "time is now currency: it is not passed but spent" (p. 61). Spectator time is literally spent on Twitch as it is commodified through Channel Points. For every five minutes of live watch time, non-subscribers earn 10 Channel Points. Every fifteen minutes, non-subscriber viewers can click a button to redeem a bonus 50 points for 'active watching'. Subscribers earn an additional 20%, 40%, or 100% of this amount for Tiers 1, 2, and 3 subscriptions respectively, immediately suggesting a capitalist temporal politics where the more one spends, the more valuable their time is seen to be. A Tier 1 subscriber's time is thus valued at 144 Channel Points per hour of presence and up to 384 Channel Points per hour of 'active watching'. Channel Points take on additional value in their use to perform persona through the customised name of and icon representing them. For example, Ray's viewers earn Gamerscore (Figure 28). Gamerscore is the name of the currency that Xbox players accumulate for earning Achievements by completing different tasks in their games. Ray has taken this name for his Channel Points as he regularly plays purely for the sake of accumulating Achievements, emphasising the role of Gamerscore as part of his streaming persona. Ray's Achievements and Chill streams then become a form of ensemble persona play as Ray accumulates Gamerscore by earning Achievements while his viewers accumulate Gamerscore in the form of Channel Points in his

stream. Channel Points therefore give spectators a sense that their time has value numerically as well as in terms that are meaningful to the stream and express streaming persona.

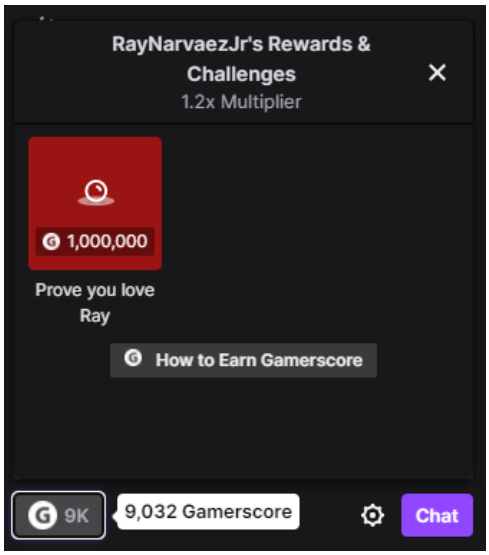

Figure 28. Ray's (2022) Channel Points redemption.

Channel Points can be redeemed for customisable rewards that place a value on spectator time in terms of stream participation. By clicking on their Channel Points within a stream, a list of these redemption options appears (Figures 28 and 29). Streamers can add their own redemption options and customise the costs, but default options include the ability to highlight a single message in chat, gain access to a subscriber emote (for non-subscribers), and modify a subscriber emote using a number of pre-determined modifications. The ability to access subscriber emotes without paying for a subscription has elicited conflicting views. Hob has shared the view that giving any viewer access to subscriber emotes undermines the value of those emotes to the subscribers who have paid from them and by extension reduces the value of the subscription. In contrast, Amber once expressed the opinion that enabling viewers to exchange Channel Points for subscriber emotes was a positive way to reward those who had demonstrated their commitment to the stream but who may not be able to afford a subscription.

How the streamer values their spectators' time, particularly when considered in contrast with their money, reflects the streamer-spectator relationship that is part of their streaming persona. Spectators then perform streaming persona by spending their time on available channel point redemptions. Individual redemptions place value on spectator time through their cost while entire lists demonstrate how streamers value spectator time.

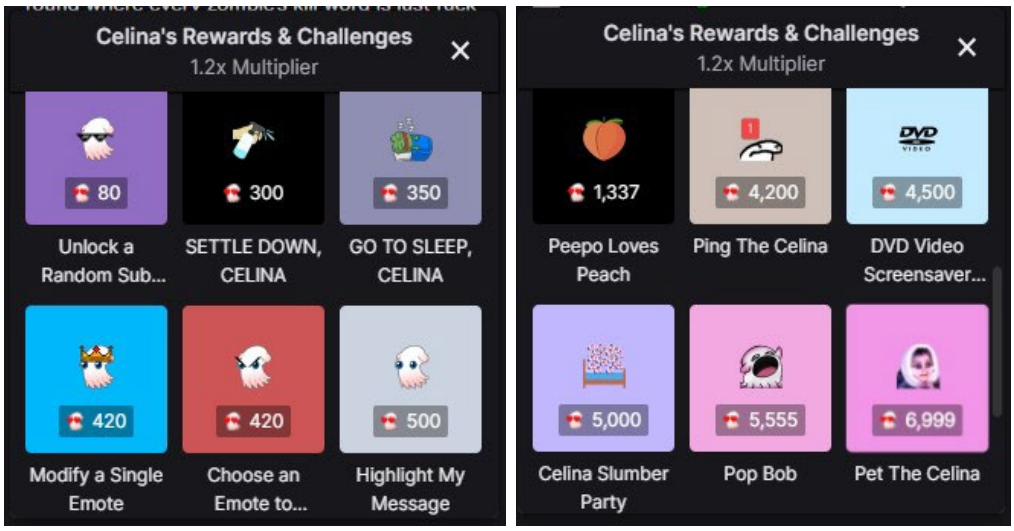

Figure 29. Some of Celina's (2022) Channel Points redemptions.

Channel Points are more than commodified spectator time as they also attach a value to the streaming persona in terms of spectator time. This value is demonstrated when spectators redeem their Channel Points, an act that communicates that an ensemble member has assessed the redemption as worth the cost of their time. Take Ray's single redemption as an example (Figure 28): in exchange for one million Gamerscore, a spectator can 'prove that [they] love Ray'. The shortest amount of time within which someone could afford this redemption would require subscribing at Tier 3 – at a cost of US$25 per month – and actively watching around two hundred complete streams of between six and eight hours, which would take a minimum of ten to twelve months depending on how consistently Ray streams. The accumulation of such a wealth of Channel Points enables spectators greater apprehension of the external temporality

of Ray's streams. Such commitment is also proof in itself that a spectator 'loves' Ray, but Channel Points commodify this commitment and give spectators an avenue through which it can be expressed. Given that it is the only redemption option, Gamerscore's primary value in Ray's stream is to demonstrate the accumulation of one million points. Spectator time is commodified through the accumulation of Gamerscore. Gamerscore also puts a value on Ray's time and streaming persona when the reward is redeemed. When an ensemble member spends one million Gamerscore, they value Ray's streams at one million Gamerscore's worth of their time. This value increases as more redemptions occur. Channel Points thus simultaneously commodify spectator time and quantify a streamer's value.

This dynamic persists when more redemption options including more explicit rewards are offered. In these cases an additional layer of the specific redemption being worth the time required to accumulate the currency is added to the base value ascribed to the streaming persona. Celina contrasts greatly with Ray in that she has a multitude of custom rewards which encourages spectators to spend their Channel Points (Figure 29), and by extension their past time in the stream, in exchange for influencing the present moment in stream. Many of Celina's redemptions trigger audiovisual clips on the stream screen, like the 'Pet the Celina' reward which causes a large hand to appear over Celina's head in her facecam and pet her. Spectators play persona through these custom audiovisual clips as they enact some control of stream content and assess whether the time that they have spent in-stream to earn those points is worth the fleeting reward. Redemptions are also visible to spectators and so they become public displays of spectator commitment and a public declaration of the spectator's assessment of the redemption as worth the cost. So while the streamer is setting the value for spectator time by creating the rewards, spectators are affirming this value when they redeem the rewards. Like

any economy, costs can be adjusted in response to spending. Laser noted that she had increased the cost of particular custom redemptions as she wanted to reduce their frequency. Spectators had deemed the value of the redemptions as far greater than their temporal cost, leading to excessive redemptions that interrupted the rhythm of the stream too often. Twitch's temporal economy is thus fluid and subject to streamer-spectator negotiations around the value of spectator time in terms of streaming persona and vice versa.

The introduction of Predictions extended Twitch's emergent temporal economy by allowing users to wager their time in exchange for participation. As implied by the name and discussed in Chapter 5, Predictions give members of chat an opportunity to use Channel Points in order to bet on the occurrence of one of two different outcomes of a particular stream event.[29] As bets come in, members of chat can view the two options, the cumulative numbers of points bet, the odds and percentage of points bet, the total number of betters, and the largest bet placed, on each option (Figure 30). Betters are given temporary badges until the Prediction is closed and points are distributed accordingly that reflect which option they voted for. Predictions thus represent the gamblification of time on Twitch. Consolidating various contexts and research on gamblification, Macey and Hamari (2022) define it as

> the (increased) presence of gambling (or gambling-related content) in non-gambling contexts in order to realise desired outcomes. It incorporates two main aspects: affective (employing cultural values/signifiers of gambling); and effective, (employing gambling games and activities). (p. 10)

[29] From May 2022, Predictions were extended to enable bets on up to ten different outcomes.

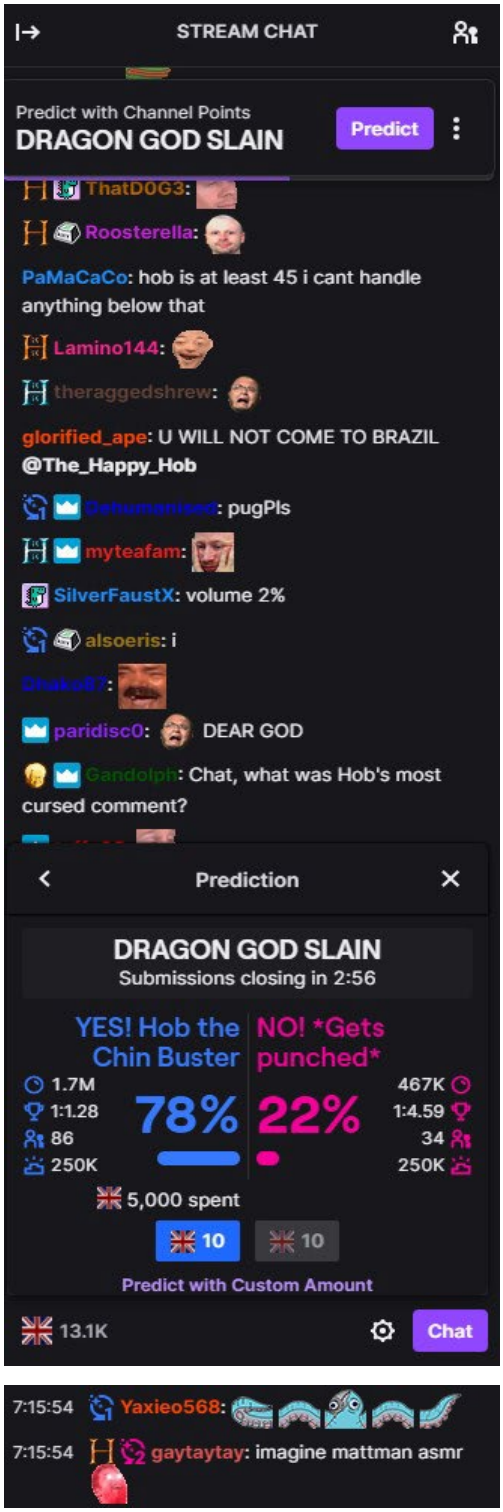

Figure 30. A Prediction during one of Hob's streams (2021, top) and messages from users including Prediction badges (2021, bottom).

Spectators wager a commodity in order to predict the outcome of a stream event, which is effective gamblification. In their work on gamblification on Twitch, Abarbanel and Johnson (2020) examine a number of Twitch extensions and practices that predate Predictions. In particular they observe that it was particularly common for extensions to enable gambling with and for social prizes, including loyalty-based currencies. By incorporating Predictions into the existing temporal economy, Twitch has created a platform feature whose sole purpose is to allow users to essentially gamble their time for the sake of participating in the stream.

The Twitch platform enables the temporal economy and directs users to spend their time on the platform. Channel Points are distributed and maintained by the platform, removed upon redemption, and redistributed following Predictions. But these are not the only temporally significant features. Twitch also enables the use of hype trains, and event emotes that encourage users to spend their time and money in particular ways. Hype trains occur once a particular threshold of subscriptions or bit donations (Twitch-specific currency purchased with money) has been reached within a given period of time. Event emotes are rewards for subscribing or donating bits during a particular event period. Bits are an example of a Twitch feature that challenges similar third-party tools (Partin, 2020). Channel Points similarly challenge many third-party gamification tools (cf. Johnson & Woodcock, 2019b; Siutila, 2018) and as such have expanded temporal economies isolated to particular streams to a platform-wide temporal economy that is customised and localised through streaming persona. Collectively, this suite of temporally significant Twitch features intertwines the temporal economy with the flow of capital. Channel Points give value to spectator time, and redemptions and Predictions enable ensemble members to articulate that value. Hype trains and event emotes meanwhile increase the value of financial contributions at particular times, through which the platform as a

nonhuman ensemble member encourages financial contributions from spectators in particular ways and at particular times. Twitch then performs streaming persona within individual streams by enacting and enabling customisation options and facilitating the interactions between other ensemble members.

Time has value on Twitch. Not only is time spent in streams to solidify ensemble membership but it enables participation through various features, including Channel Points and Predictions. In this section I argued that Channel Points and Predictions represent a temporal economy on Twitch that places explicit value on spectator time. I additionally examined how channel point redemptions can be customised to perform streaming persona and place value on streaming persona as they are taken up by spectators. Predictions then emerged as the gamblification of time on Twitch through the wagering of Channel Points on in-stream events. Finally I combined Channel Points and Predictions with hype trains and event emotes to form of a suite of platform features that demonstrates Twitch as a nonhuman ensemble member facilitating the temporal economy and connecting it with the flow of capital within streams. Stream temporality is consequently not only arranged by streamers and spectators but also the platform itself. In the next section, I complete my temporal analysis of streaming persona by addressing the temporal sovereignty of the only stream actor yet unaddressed in this chapter: the game.

Game Time and Stream Rhythm

Videogames enact temporal sovereignty when they are played during streams as game rhythms drive stream rhythms – human ensemble members' experiences of time are necessarily affected by the rhythms that games encourage and allow. Playing segments are key parts of the temporal organisation of streams, with the features discussed in the previous section being

experienced within, between, and through game play. Even when the game receives less attention than the streamer or interactions between ensemble members, game rhythm still affects stream rhythm. Game rhythms are built into timings of play, in-game movements, sounds, and other design elements. But these rhythms are affected by and experienced through rhythms of play associated with player choices. This means that the games that the streamer chooses to play and the ways that they choose to play them necessarily impact how stream time is experienced by spectators. During digital game play, players "attune themselves to the rhythms of the game and control their bodies to perform them" (Costello, 2018, p. 5). But how do spectators attune themselves to the rhythms of the stream that include those of streamer play? In this section, I examine how the temporal experience of a stream is affected by stream rhythm, which is in turn driven by game rhythm. Streaming persona is shaped through pauses in play, slower and faster paced playstyles, and ways that loops in gameplay are incorporated into and responded to within stream content. Experiences of time within stream – streams' internal and external temporalities – are mediated by in-game temporality in turn affecting interactions between the streamer (as player) and game and subsequent interactions between streamer and spectators. The choices that streamers make when interacting with games create opportunities for different kinds of interactions between ensemble members throughout the stream, which become expressions of streaming persona, particularly when examined through a temporal lens.

Stream rhythm is in part inherited by game rhythm that is experienced and mediated by ensemble members through the streamer's performance of play. Spectators experience these stream rhythms through interactions between the playing streamer body and gaming hardware. These interactions are understood in terms of the limits of the body – in terms of hardware used

to extend the body for play as well as timing and reaction speed, which Egliston (2020b) emphasises in the context of esports broadcasts through the concept of bodily finitude. Live esports broadcasts, like Twitch streams, communicate "the limits of the body at a particular moment, or in a particular material context," including not only "the moments of awkwardness or tension within the gaming body's transformation in relation to its material environment ... but also ... the ubiquitous and real-time capture and relay" (p. 5). Moments of tension and awkwardness result from mistimed interactions between the streamer (as player) and the hardware used to control the game when the rhythms of player and game are not synchronised. These rhythmic dissonances stand out to spectators of digital gameplay, who "develop a keen sensitivity to the physical performance of rhythms of gameplay" (Costello, 2018, p. 71). Rhythms of play are perceived through visible gameplay as well as audible taps and clicks of a keyboard and mouse or the repeated tweaks of controller thumbsticks as they hit their boundaries and flick back into place. These rhythms are then echoed by the rhythms of in-game action, which emphasises the embodied relationship between streamer and game. Game rhythm thus becomes part of stream rhythm when acts of control audibly interlace with the stream alerts, the visible play, and interactions between ensemble members. Some streamers like Laser and VysualsTV include on-screen images of their controllers that highlight when a button is pushed. The act of play is then more visible and strongly connected with the streamer as this image is coupled with a visible or audible hardware interactions. The rhythm of playing is always present during streamed gameplay through the game footage, however these auditory and visual cues draw attention to this rhythm in ways that highlight the link between the streamer's body and the game or the act of playing. The actions associated with play create rhythms that are shared by the act of performing play on-stream.

When streamers use hardware that expands the control scheme beyond movements of fingers and thumbs, they affect stream rhythm through expanded perceptions of game rhythms. In 2021, LobosJr (Lobos) played through *Dark Souls: Prepare to Die Edition* (2012) using an electric guitar as a controller. A computer program associated particular frequencies with keyboard keys, meaning that individual guitar notes triggered particular game inputs. The musicality induced by the electric guitar brought a melody to the stream as well as altering the rhythm of play. While walking forward in-game requires pressing and holding a keyboard key or controller thumbstick, Lobos had to repeatedly pluck the same guitar string to maintain the forward movement. Walking in a different direction became a three-note phrase that was visualised by a change in direction (note one), centring the camera behind the player-character (note two), and finally walking forward in the new direction (note three). Costello (2018) makes a point of the challenges associated with analysing and communicating embodied rhythmic experience in play, and alternative control schemes simultaneously emphasise this complexity while also combating it. The rhythm of Lobos' electric guitar playthrough, accompanied by the audible note changes, broke down game controls by separating actions that could otherwise be performed simultaneously. The individual movements that the player performs in order to produce specific outputs in-game were broken down into their constituent components for spectators to hear and to see. As such the possibilities for and possible speeds of action were reduced making the game more difficult, however the relationship between the streamer's body and game outputs was made more visible through the intermediary guitar. Though the use of alternative controllers is a reasonably popular way to create spectacle among gaming content creators and represents an essential tool for accessibility (cf. Gandolfi & Ferdig, 2019; Johnson, 2019), an electric guitar is certainly not a typical player's controller.

The rhythms however are more typical. The stream rhythms may be more exaggerated and somewhat transformed by the musical instrument but they maintain the core input requirement for successful completion of the game. The rhythms of play thus become more apparent when the streamer body is engaged in play in more expansive ways. During these playthroughs the rhythm of play is a defining element of persona play as Lobos' deployed his guitar skills to demonstrate that there is no universal bodily limit; bodily finitude is an ongoing relationship between human body and nonhuman controller, which in turn emphasises the impact of game rhythm on stream rhythm. This dynamic occurs with any control scheme that engages the body beyond fingers and thumbs, for example playing through games using only a dance pad or playing games in VR. Expanded embodied engagement in play extends the connection between the streamer's body and the streaming persona by deepening spectator awareness of the embodied rhythms of play that are otherwise always present.

The temporal experience of play during stream is as strongly affected when play isn't occurring as when it is, evident in the impact of game pausing on stream temporality. Stream rhythms are expressions of streaming persona as they create temporal experiences within streams that either adhere to or resists spectators' expectations based on their other experiences on the platform. A pause is, by definition, a temporary interruption. When a game is paused, typically the world of the game freezes while a menu displays. Upon exiting the pause menu, or unpausing, the game resumes from where it left off. A paused game during stream builds anticipation and can disrupt playing segments depending upon how it is implemented. Game content is visible and so still part of the stream consciousness while spectators wait for the game action to resume. GirlfriendReviews pre-empt complaints about pauses that last longer

when expected through the command *!pausescreen* that triggers a bot to send the following message when sent in chat:

> *Sometimes Matt and Shelby like to have a serious discussion about things going on in life. If you notice them on the pause screen, they will likely be talking for some time. Feel free to come back another time if you want to see gameplay!*

Though it can be sent at any time, its primary intended use is to respond to any expressions of impatience from spectators during the described discussion. This message communicates a connection between a pause in game action with shift in focus away from the game. The message also however acknowledges a disconnection between the temporal flow of the game and the stream that may cause frustration among viewers. Shelby and Matt have incorporated this message into their stream as a way of acknowledging that this recurring use of the pause screen is part of their streaming persona that subverts any assumptions around pausing necessarily being a short interruption. The temporal signification of pausing therefore shifts from its dictionary definition to an act of streaming persona that represents a shift between stream segments. It brings the game rhythm to a halt to be replaced by other aspects of stream rhythm like conversation or interaction with which it would otherwise have to compete. Paused games reduce the complexity of stream rhythm while building anticipation for the return of game play. The temporal experiences of pausing are thus simultaneously of focus and anticipation which then create a satisfying return to the next playing segment.

Game rhythms can similarly be purposefully slowed to create a particular experience for spectators as acts of streaming persona. The temporal relationship between streamer and game is in turn transformed into an expression of streaming persona. When I played through *Persona 5 Royal* (Atlus, 2020) on Twitch, I performed every line of dialogue that wasn't voice-

acted. This included reading in-game text messages in variations of my own voice that vaguely resembled the voices of the characters, and involved a *lot* of reading. This choice had two main consequences. Firstly, the game's narrative became an anchor point of the stream, and secondly, I had to very consciously switch between reading lines and interacting with viewers. If I switched too frequently, I would interrupt the flow of the game for the sake of engaging spectators and if I didn't switch frequently enough, I risked disengaging from spectators. As well as creating a narrative-focused playthrough, my decision to play the game in this way resulted in a longer, slower playthrough that was clearly communicated to my spectators through my performance. Wrafferino's (Wraff's) *lorethroughs* had a similar temporality but a different effect on streaming persona. The majority of Wraff's first playthroughs of games are *lorethroughs*, during which she slowly and methodically explores the game that she is playing. She reads through item descriptions, looks carefully at game environments and character design, and regularly pauses to discuss how these elements come together and theorise with her audience. Wraff's ensemble regularly celebrate this playstyle, appreciating both the relaxed approach to play and the opportunities to talk about the games that she plays in detail. This appreciation for the depth of world and narrative that games offer has becomes part of Wraff's streaming persona that is expressed in part through the temporal experience of her lorethroughs. In both examples, slow pace is used as a tool to communicate streaming persona. Slow pace is not the choice, it is an outcome of other choices made to produce a particular game/stream experience. Stream rhythm was affected via rhythms of play as a result of choices made to balance game and spectator engagement and perform an appreciation of game design details in mine and Wraff's streams respectively. Game rhythm then does not need to be focal point of a stream in order to communicate streaming persona.

Repetitive in-game practices make for less entertaining stream content, however the associated relaxed stream tone and greater opportunities for interaction affect streaming persona similarly to slower game rhythms with quite distinct temporal experiences. New synchronisations of a player's performance rest in repetitive acts like *grinding*, *farming*, and *spamming* – many of which are required for Achievements – "operate in a highly synchronic register, but which pursue an elusive diachronic event" (Jayemanne, 2017, p. 272). The repetitive content provides opportunities for interaction while anticipation of the diachronic event builds. Somewhat like pausing, there is a constant anticipation of the diachronic event for streamer and spectators alike, however this playstyle is distinct in that there is also constant progress towards the diachronic event. Ray's *shiny hunting Pokémon* streams demonstrate the temporal experience of repetitive streamed gameplay. Shiny Pokémon are extremely rare variants of the standard pocket monsters that have alternative colour palettes. During shiny hunting streams, Ray catches the same species of Pokémon repeatedly while keeping a counter on-screen until he captures a shiny variant, at which point he moves on to another species. Capturing a shiny Pokémon breaks the repetition, momentarily disrupting the temporality of the stream as the ensemble celebrates together. The diachronic event represents a pay-off for the time committed to the search. Ray frequently performs these goal-oriented streams that set aside game progress in favour of the diachronic events that Jayemanne describes, and the relaxed tone in combination with Ray's willingness to repeat the same short cycles for completion are characteristic of his streaming persona.

As well as increasing the pace of a stream, *speedrunning* also heightens awareness of the multiplicity of time in videogame play. A speedrun is a playthrough of a game that aims to complete the game using the least amount of time possible. The fast pace of gameplay during

speedruns on Twitch, in combination with on-screen splits comparing the current time with previous attempts, create a tense streaming environment. This tension is experienced temporally by spectators through the tight gameplay and the extension of short moments into longer ones as streamers approach challenging segments that they have previously failed or in-game tricks that are difficult to execute. Every success, every potential failure, and every past failure that culminates, and is overwritten by, in eventual success contributes towards the temporal multiplicity of games, as Keogh (2018) argues when he writes that "time in videogames is plural and multiple – defined as much by what did *not* happen or *could* have happened or happened but was then overwritten by what *actually* happened" (emphasis in original, p. 144). Nowhere is this more true than during streams, and even more so during speedruns. Referring again to Jayemanne's chronotypology, streamed speedruns are – like other stream occurrences – synchronising. The ensemble experiences the same playthrough together at the same time. However, the multiplicity and plurality to which Keogh refers are diachronising. Each differs from the last and those differences are exaggerated when a single delayed input – a single mistiming between streamer body and hardware – can mean the difference between a world record pace and another "failed" attempt. Each iterated run carries with it echoes of previous runs and traces of the unattainable perfect run. Embedded within this experience is the further diachronic tendencies brought by the collective audience members' experiences of the same game. Each viewer has a different relationship with each moment in a streamed game, whether they've played it before, seen it played before, or seen or attempted other speedruns in the past. Each member of the ensemble experiences each moment of a speedrun simultaneously through what is occurring in that moment and through every prior experience they have had with the streamer and with the game. The temporal multiplicity of

games is therefore another quality that is inherited by streams as what is, what was, and what could have been are brought into proximity.

Despite their name, speedruns are not all about fast rhythms. In 2019, I observed Distortion2 (Dist) develop and improve upon speedruns of the game *Sekiro: Shadows Die Twice* (2019). Dist played through the game over and over again, hoping for better arrangements of enemies and sequences of boss attacks, tweaking his approach to shave minutes from his best time. He also played *with* the game to discover better strategies. He developed a technique, known as HorseSkip, that enabled him to completely skip three bosses previously thought to be compulsory, thereby saving a huge amount of time. Developing this technique required experimentation with the area using a debug mode to more easily see the different boundaries of the world and how his player-character could interact with them. After discovering the technique, he then repeated it until he was confident that he could execute it during a run. Finally, he incorporated it into his runs. The rhythm of this stream fluctuated drastically through loops of different segments and the entire game, as well as through the slower paced experimentation and faster paced implementation of strategies. The payoff for the extended period that Dist spent experimenting with the game paid dividends when it significantly shortened the run. For spectators, the surface experience was the shift from the drawn-out experimentation to the fast pace (and now even shorter) runs. Underneath this however was an insight into the relationship between time and speedrunning. It was not just the ability to move quickly through the game that improved the run; it was the also the willingness to slow down, draw out, and examine each moment of the run for potential improvements. As a speedrunner, Dist's streaming persona is understood through both of these

temporal lenses, and the experience of each of his streams carries with it every past run and every moment of investigation.

Repetition is not only embedded into speedruns and grinding, but into all forms of streamed gameplay. The extent of the repetition, the length of the loop being repeated, and variations between loops shift depending upon the streamer, the game, and the chosen playstyle. Entire games can be repeated with different conditions, for example Lobos' playthrough of *Dark Souls* with the additional challenge of the electric guitar as a controller. In extreme contrast with entire games as loops, individual game moments like Ray's Pokémon captures can be repeated. The specific nature and content of repeated gameplay affects play rhythm and in turn stream rhythm, eliciting distinct temporalities and kinds of interactions between ensemble members that come to define streaming persona. There is one recurring cause of repetition that many streamers must navigate based upon their game choices and playstyles: in-game death. While many would consider death to be the ultimate marker of the end of repetition, in videogames it often presents an opportunity to try again. This opportunity to retry underpins Keogh's (2018) observation that "the most common resource lost in the death of the playable character is time ... Even when the character is resurrected, the time and labour the player invested in the character's previous incarnation may not be" (p. 138). I offer an alternative perspective that player time is never lost by deaths but only spent, as each character death represents an opportunity to learn and overcome future challenges. In-game death provides opportunities to practice, and practice is a time cost that Postigo (2016) associates with the production of recorded gameplay content. Practice is built into the experience of spectating live play however. In other words, practice is content during streams. As such, time is never lost through repeated game content during streams, only spent. And is it spent in

exchange for streamer skill and spectator anticipation, progress towards eventual divergence from the repetition, and opportunities to prioritise interactions without halting play, all of which are opportunities to play persona through stream temporality.

How streamers navigate failure, particularly character death and the associated repetition, becomes part of their streaming persona. When Laser dies in-game, she often takes the opportunity to foster playful antagonism among ensemble members by responding to messages that taunt and tease her for her failures. These deaths become opportunities for interaction that characterises her relationship with her spectators, which is in turn part of her streaming persona. In other cases, such as Ray's playthrough of *Dark Souls* or Juliet's playthrough of *Crash Bandicoot N. Sane Trilogy* (2017), streamers choose to include a death counter on the stream screen or in chat. These counters draw attention to the repetition of failure, with the number representing how many times spectators watched the streamer reattempt a game moment. At the same time the number communicates streamer skill or lack thereof and ability to learn from their mistakes as they progress despite their failures. As the tally goes up, there is also a sense of inevitable success – each death is one attempt closer to the eventual successful attempt. They also differentiate that playthrough from other playthroughs with a higher or lower number of deaths. They communicate, in an elementary sense, that streamer's relationship with the game that they are playing. Failure cannot be edited out of a live playthrough, and so instead streamers develop strategies for navigating failure to perform persona through repetitive game content.

Game temporality is interwoven with stream temporality. The experience of game rhythms as a product of the relationship between the player and game drives stream rhythm. Rhythms and paces of play become rhythms and paces of stream as games enact their temporal

sovereignty. These relationships, the choices that create them, and the choices that result from them, then become part of the streaming persona. Play is paused, slowed down, or sped up in an attempt to facilitate different kinds of interactions with and between spectators and the game being played. Streaming persona is thus a product of interactions between human and nonhuman ensemble members, each of whom enacts temporal sovereignty. Playing segments have their own roles in the internal temporality of streams but the organisation of the game beyond its mere presence is typically thoughtfully and deliberately executed. As streamers pause, pace their play, and navigate different kinds of repetitive play content, they are shaping streaming persona through the temporal experience of their streams. The performance of play on Twitch is the performance of persona, and the organisation and experience of time is key to that performance and the underlying temporality of the platform.

Time and Persona

The arrangements and experiences of time on Twitch are complex, and arranging and experiencing time are cultural and political acts. This chapter has demonstrated how temporality affects every aspect of Twitch and the interactions between users. Streaming persona is constructed and performed through the organisation of time and the temporal experiences that result from ensemble members enacting their temporal sovereignty, in turn reflecting and responding to the sociality of the platform. Internal and external temporalities, the temporal economy, and the role of games in persona play each demonstrate the role of temporal sovereignty involved in the construction and performance of streaming persona. The practices that I have examined in this chapter are part of the culture of Twitch whether they are built into the platform like Channel Points, or part of common practice across the platform like the stream segments that I examined. Temporality affects and is affected by the sociality,

culture, politics, and economics of Twitch, and is best contextualised by individual ensembles and ensemble member platforms.

In this chapter I have analysed streaming persona through temporality on Twitch. This analysis began with the internal temporality of a stream, or the experience of individual stream moments in relation to other moments within the same stream. The duration of a stream is segmented into pre-stream, playing, chatting, breaks, and a wind-down. Streaming persona is communicated by these segments through their design – common elements and elements that distinguish them from each other – as well as signals that communicate transitions from one segment to another and the way that playing-chatting-break loops emerge. Familiarity with streaming persona through internal temporality leads to time-sense, whereby one becomes attuned to more subtle temporal shifts. This time-sense is the first hint towards the next aspect my analysis: external temporality, that is the experience of individual stream moments between and across different streams. Through external temporality I examined fixed and changing stream elements over time. I used Jayemanne's chronotypology to emphasise that every stream moment is filled with unstable signifiers that shift between unifying (synchronising) and separating (diachronising) temporal experiences based upon an ensemble member's familiarity with stream history. A stream's external temporality captures the ensemble knowledges required to participate fully in the stream ensemble and how those knowledges are obtained, either through presence and linear time or absence and mediated time. It also acknowledges the relationship between different stream ensembles, which I examined through the use of raids.

My temporal analysis focused on the organisation and experience of individual stream moments in their own rights, through internal and external temporalities, as well as the temporal sovereignty of the platform and games as nonhuman ensemble members. Time is

commodified by the platform and the emergent temporal economy is incorporated into streaming persona. This temporal economy is significant to the economy of the platform through its impacts on the flow of capital. Channel Points are visible upon first arrival in a stream, the use and customisation of which is part of the performance of streaming persona through the nonhuman platform and in terms of platform temporality. Predictions are not only features that make use of Channel Points but also a social practice facilitated by the platform. The kinds of Predictions typical of a stream ensemble are therefore ensemble acts of streaming persona. Lastly, I demonstrated how game temporality affects streaming persona through the temporal sovereignty of games. I focused on game rhythm how it drives stream rhythm, in particular how game and playstyle choice affect stream. The implementation and management of alternative controllers, pauses in gameplay, altered paces, and various types of in-game repetition all alter the core game rhythm and in turn affect the temporal experience of ensemble members. Streaming persona is experienced through temporality on Twitch, and therefore the ways that time is arranged and experienced expressions of streaming persona.

The politics of time, particularly following Sharma's (2014) examination of temporality and labour, encourage us to examine whose time is valued and how, and how one organises themselves subject to the temporal power of others. Such questions are even more pertinent in the leisure-focused context of Twitch. Who has time to play videogames for eight hours per day? Who has time to *watch* someone play videogames for eight hours per day? In this chapter I have demonstrated how time and streaming persona play each other. The free movement of persona play is not apolitical however; participation structures, and is structured, by the time that one has to participate. I have not explored this aspect of Twitch participation in detail as it

is beyond the scope of the initial analysis provided in this chapter, however it would be a worthy application of this chapter's ideas.

The axis of temporality in the analysis of streaming persona emphasises that all elements of streaming persona change over time, and that this change is part of streaming persona. The temporal analysis presented in this chapter extends upon the work of this thesis in one pivotal way. In Chapters 4, 5, and 6, my analyses consider streaming persona as it is constructed and performed in individual moments. I demonstrated how streamers construct authentic persona, the formation of stream ensembles as collective performers of streaming persona, and how boundary work playfully demarcates between acts that are and are not consistent with streaming persona. Streaming persona is constructed and performed through these elements when they are presented and as part of the history of streaming persona, but they are not fixed. A complete examination of streaming persona must therefore consider temporal arrangements and experiences. In the next and final discussion chapter of this thesis, I extend upon the role of the game as ensemble member presented in this chapter. Chapter 8 represents the culmination of each of the aspects of streaming persona presented thus far in this thesis as it emphasises streaming persona as a human-nonhuman assemblage. Game and playstyle choices are decisions made by the streamer (sometimes in collaboration with other ensemble members) that affect streaming persona as the game acts upon the streamer, in the same way that game rhythm acts upon stream rhythm.

8. Gaming Persona:

Metagames in Streaming and Games as Players

"!gravity," one of Wrafferino's chatters messaged.

"Gravity claims another victim. So far physics have won over Wraff 94 times TearGlove," the chatbot Nightbot responded.[30]

When they are played live on Twitch, games act as stream ensemble members. In previous chapters I have discussed videogame play only to the extent that it supports other aspects of streaming persona. I have framed games as tools for streamer and spectator performance, as ensemble members who facilitate streaming performance, as giving rise to specific practices that elicit boundary work, and as affecting the rhythms and temporal practices of streaming persona. In this chapter I conclude my examination of streaming persona with a focus on games as nonhuman actors – a fully-fledged member of the stream ensemble that influences streamer performance and frames interactions between other members of the stream ensemble. Recall that streaming persona is the negotiated social identity that is performed by individual and collective (human and nonhuman) stream actors. This identity is constructed by and performed through games. As this chapter shows, games play and are played by streaming persona. The chapter does so by examining games as ensemble members – stream actors as influential in the construction and performance of streaming persona as any of the other ensemble members examined thus far. Since Twitch is a platform strongly associated with

[30] TearGlove is an emote depicting an animated face with tears running down their face.

games, their role necessarily affects the sociality and culture of individual streams and the platform more broadly.

There is a growing wealth of research on game streaming, moving from the platform as facilitating the conversion of private play into public entertainment (Taylor, 2018b) to the impact of playing games on embodied streamer performance (Egliston, 2020a) and on streamer-spectator interactions that occur alongside game content (Recktenwald, 2017). Researchers also continue to investigate game content with themes, design, and the application and emergence of different theoretical perspectives being the subjects of recent scholarship (e.g., Flanagan & Nissenbaum, 2014; Jayemanne, 2017; Payne & Huntemann, 2019). Conspicuous in its absence is the combination of these two research agendas – game streaming and game content analysis – by analysing game content through streamed gameplay. As this chapter shows, there is no better site than Twitch to serve such an agenda, where analysis can occur in the context of observed play and not only through our playful experiences as scholars. This chapter in turn builds on the framework of streaming persona I have established by examining ways that streaming game content affects the ways that ensemble members interact. While I agree that games are not the centre of Twitch streams (Consalvo, 2017), I also do not view them as paratexts as Consalvo does as such a reading positions games as rigid and reliant entirely on streamer agency. Instead I treat games as ensemble members – as stream actors – and as such reveal how their performed play is a cultural practice that determines and is determined by streaming persona and lends insight into ways that streaming and spectating game play on Twitch are so compelling.

I argue in this chapter that the interactions between games and streaming persona can best be understood as games playing persona and persona being played through games. Wraff's

!gravity command exemplifies both of these forms of play, one of which was presented at this chapter's opening. The command is used when her character falls to their death, in other words they die due to in-game gravity. In these moments the game acts upon Wraff's avatar through its physics. Just as falling in the physical world may be experienced as an act of gravity and not the falling body, representations of falling in-game – and consequently dying – are acts of the game. The game plays Wraff's streaming persona in these moments. In anticipation of such moments, Wraff prepared the *!gravity* chat command to be used by chatters to respond to and record the failure. Thus this particular kind of failure at the hands of the game is layered with opportunities for stream engagement and persona play, much like the death counters discussed in Chapter 7. Moments like these demonstrate how games are stream actors. As I argue in this chapter, they are ensemble members who play with the streamer as much as they are played by the streamer.

To make my case, I draw on theories of performative multiplicities within games (Jayemanne, 2017) and metagaming (Boluk & LeMieux, 2017) to explain what the phrase *games play persona* means and how it can be deployed to understand the role of the game in shaping streaming persona through its interactions with other ensemble members. Games display agency as ensemble members through their capacity to act upon the streamer-player in the world of the game and through these interactions, they impact streaming persona outside of the world of the game. The potentials and unknowables within game play – the looming threats of failure, the ever-present potentials for success, and the varying player-game interactions and conditions under which they occur – are accompanied by developing investments in particular outcomes for streamers and spectators. By framing games as stream actors – as agents – I tap into this unknowability, which is further unearthed by an investigation

of the kinds of performances by and with games that engage streamers and spectators alike through play.

Streaming persona is not only played by games but also through them, a distinction I make by looking to the role of game play in the construction and performance of streaming persona. Further extending upon the interactions between game and streamer in the construction and performance of streaming persona, I look to the impact of in-game failure on streaming persona. Failure is always a possibility when playing games and as such is incorporated into stream ensemble practices in ways that determine variations in the expression of streaming persona. I conclude by moving from failure as an inevitability to the worlds of possibilities introduced by particular playstyle choices. Through an examination of so-called *challenge runs*, I demonstrate that playstyle choices alter the game-persona relationship and offer opportunities for stream ensembles to position themselves in relation to broader cultures of game play. This chapter shows how games play, and are played by, streaming persona. It emphasises the significance of games on Twitch as more than playful objects but as stream actors. These stream actors contribute to the construction and performance of streaming persona as much as any other ensemble member.

Games as Ensemble Members

Like other ensemble members, games play persona through their interactions with other ensemble members. But what does the phrase *games play persona* mean? This question will drive this section as I interrogate player-game interactions and game-stream(er) interactions to provide a framework for the analysis of games as nonhuman ensemble actors. Videogame play typically consists of player inputs through a controller or other piece of hardware, the game responding to those inputs through its coded rules, which are then communicated through some

on-screen display. Games also act upon their player-characters through, for example, physics engines (software that determines how games emulate physical systems), non-player characters, and its general rules limiting player actions. Games thus become nonhuman actors in the performance of streaming persona, acting upon streamer-players and spectators to elicit affective and social performances that capture the attentions of ensemble members. It is in this way that games play persona. This doubled play – of game and persona – then drives ensemble investment. As games act upon players, they enact agency as ensemble members that culminates in the transformation of streaming persona and subsequently evoke particular responses from other ensemble members – particularly the streamer – that further construct and perform streaming persona.

Through digital game play the (human) player acts and is acted upon. This experience of game play is rooted in communication between different actants, for example the player and the game space (Janik, 2020). When this experience is performed for an audience – as it is on Twitch – games play streaming persona by eliciting particular acts of streamer performance or on-stream interactions between ensemble members. These acts of performance and on-stream interactions include: winning or losing states; player inputs having unintended effects by design, player fault, or because of glitches; unexpected in-game occurrences; interactions with other players; or players seeking to circumvent intended play actions. In each of these cases, the game acts upon the player and by extension the stream. Games then play persona through their interactions with the streamer as player within the world of the game. Games afford "a chance to enact our most basic relationship to the world" (Murray, 2017, p. 177) through their representations of diverse spaces, times, narratives, and people with which players can interact – can act upon and be acted upon by. When these relationships are enacted during a stream,

games become ensemble members. While streamers play games, those games play persona as the game acts freely within the more rigid structures of their programming and streaming persona. These games perform with and against streamers in order to communicate a basic relationship between streaming persona and the world to other ensemble members.

Social deduction game *Among Us* (2018) exemplifies how games can play persona by assigning players roles and motivations that affect how they interact with the game and each other, and how streamers perform their role with and for their audience. As the world locked down due to Covid-19 in 2020, *Among Us* saw a surge of popularity among social groups and stream ensembles alike. The game casts players in the roles of crewmates on a (space)ship. Players cooperate by completing allocated tasks in order to keep the ship running. A number of players are allocated the role of imposter and are tasked with killing all crewmates before all imposters are caught. Whenever a crewmate's corpse is discovered, players have a timed discussion during which crewmates must seek out imposters while the latter aim to derail the investigation of the former. At the end of the discussion, players may vote to remove someone from the game. If the majority of players vote for the same person, that player-character is ejected from the ship and the player spectates silently until the game is over. When played on Twitch, *Among Us* demonstrates the interdependence between game rules and persona rules as players perform particular in-game roles that transform how they interact with other ensemble members.

Rules are key to a game's structure as they determine how players interact with the game and with each other. They constitute the formal structure within which the player can freely operate (Salen & Zimmerman, 2004). Recall Juul's (2010) definition of a game as

> a *rule-based* formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, *the player exerts effort in order to influence the outcome*, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable (emphases added, p. 255).

A game's outcome is consequently *influenced* by the player but is *determined* by interactions between the player(s) and the system itself. It is within this gap between player effort and outcome that games play persona during streams. Within this gap, games act upon players despite or in response to player efforts to influence outcomes. In the case of *Among Us*, the rules are upheld by coding and algorithms (hard rules) and players (soft rules). Hard rules decide which player(s) take on the role of imposter and provide their characters with abilities to enable them to deceive and kill the other player-characters, however it is the soft rules that enable an outcome to be reached. For the game to proceed as intended, imposters – in fact all players – must play the role that they have been assigned. They must play persuasively and convince other players that they are not imposters through their in-game actions and the discussion segments between rounds.

Games' persona play is rendered visible by the performance of these interactions between game rules and the boundaries of streaming persona. For instance, when streaming *Among Us* streamers aren't just playing the role in-game, they must perform that role for their spectators. That is, they are playing their in-game role as their streaming persona. When describing his own approach to *Among Us* during a stream in September 2020, Cardboard Cowboy (CBC) said

> you know I try to go full detective Ash[31] but I end up going full Cardboard Cowboy and I end up getting voted off straight away. Just killing in front of everyone and getting voted off instantly.

CBC alluded here to playstyles representative of his streaming persona and that of another streamer. When Ash was given the role of imposter, they would waste limited discussion time by asking other players pointless questions that ultimately cast suspicion elsewhere. CBC then attempted to adjust his playstyle in response to his previous failures in order to increase his chances of reaching a more desirable in-game outcome, in line with the attachment to outcomes that Juul identifies when defining games. When CBC attempted to emulate Ash's successful strategies however, he would draw attention to himself and lead other players to suspect him. When he said that he ended up "going full Cardboard Cowboy", he was saying that Ash's playstyle was incompatible with his streaming persona. *Among Us* thus plays persona by affecting how streamers take on the role of imposter, particularly as its rules discourage playing in a way that is at odds with the streaming persona. As a social deception game, *Among Us* explicitly draws attention to the impact of game rules on player decisions, and the effectiveness of those decisions as acts of play and persona.

Playful acts performed by the game when playing persona are separate from those performed by the streamer when playing the game. This separation can be made by deconstructing game moments into their constituent units of play, which can then be examined using the notions of illudic and perludic acts (Jayemanne, 2017).[32] *Illudic* acts are defined as

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[31] Ash is another streamer.

[32] This categorisation emerged from the application of Austin's work on language to the performative multiplicities involved in videogame play.

"those *in* which something playful is done" and *perludic* acts as "those *by* which something playful is done" (p. 241–2, emphases in original). As a simple example, the aiming and discharging of a weapon in a first-person shooter game is illudic because "*in* pulling the trigger I fired the gun," while shooting an enemy is perludic since "*by* firing the weapon I destroyed the enemy" (p. 243, emphases in original). Jayemanne distinguishes in detail between illudic and perludic acts, however for the purposes of this thesis it suffices to understand that illudic acts are defined by a continuous and direct mapping between playful act and outcome, and perform a denotative function – pulling the trigger denotes and seamlessly results in the firing of the gun – while perludic acts perform a connotative function and have meanings in-game that are once removed from the in-game action – shooting an enemy is connoted by firing the weapon in a particular way, namely in the enemy's direction while in range without an obstacles in the way. In particular the in-game meaning of the action in the latter case – the death of the enemy – is once removed from the action itself – the pulling of the trigger and firing of the gun – and hinges upon the illudic act being performed in a particular way.

When applied to Twitch, Jayemanne's concepts allow individual moments of streamed gameplay to be broken down and examined at a micro level to unveil the nature of streamed game-player interactions, in particular how player and game each act upon the other during play and what about streamed game play draws engagement from streamers and spectators. When these interactions are streamed, the game performs (illudic and perludic) acts of persona play. Game agency is then expressed as the game playfully acts upon the streamer-player and their interaction constructs and performs streaming persona. This perspective on game as equal contributors to the game-player interaction concurs with Consalvo's argument that games should be decentred as texts but challenges that games as paratexts is the most effective

alternative (2017). This is because treating games as either text and paratext frames them as rigid and reacting entirely to streamer agency. As the streamer is the focal point of the stream and their play is coupled with their commentary, it is easy to forget that videogame play involves the player acting upon *and reacting to* the game because the player has first been acted upon. Examinations that centre streamer play render aids and obstacles provided by the game – as acts of game agency – visible primarily in relation to player actions and not games. Instead, my examinations of illudic and perludic acts on Twitch emphasise the game as actor and stream ensemble member. Streaming persona is then constructed and performed as it is played by games and expressed through them.

Horror games effectively demonstrate games as players of persona due to their clear affective aims. Namely horror games intend to evoke fear within players and when streamed they play persona through the affective performances of fear that they elicit from the streamer-player. These games play with the emotions of the player through elements like atmospheric music and environments, and embodiments of game agency in the form of enemy avatars that hunt or chase the player-character. Spectators witness the performance of affects that are vicariously experienced by the streamer while they remain a step removed from the game. When Laser played the horror game *Call of Cthulhu* (2018) in October 2020, she turned off all of her lights, leaving only the glow of her monitor to light her face and her living room visible in darkness behind her. Before she had even loaded the game, it was playing persona through the transformation of her stream aesthetic. Laser also included her heart rate as a number in beats per minute next to her face cam. This inclusion increased the perception of the authenticity of Laser's performances of fear as spectators witnessed the number fluctuate in response to the atmosphere and actions of the game. Her fear was thus communicated not only

through her performed reactions but also through her corporeal reactions as represented by the number on the screen. Throughout her playthrough, spectators often commented in chat on particularly high numbers. For instance when the number increased from its typical mid-70s up to 124, a number of spectators commented on this being a 'record' for the stream. Spectators were keeping track of this quantified performance of embodied affect that authenticated her screams and jumps in response to game actions. In other words, the heartbeat counter made visible for spectators how the game performed its agency through Laser. Laser's persona was played by the game via her performances of affect, as well as her performances of body and space in anticipation of, and during, game play.

Persona is played through interactions between game and streamer during game play. During one of Laser's *Call of Cthulhu* streams, she moved her character through a museum while a Lovecraftian eldritch horror searched for her. The creature was an embodiment of game agency, an obstacle between Laser's character and her goal. To add further nuance to the distinction between illudic acts and perludic acts as those *in* and *by* which something playful is done respectively, illudic acts tend to be "continuous processes" (Jayemanne, 2017, p. 241), while perludic acts are more often discrete. Both Laser's and the creature's movements through the museum were hence illudic acts. The creature perludically switched into a chasing mode when it detected Laser's character. Her easiest method of avoiding capture was to perludically hide by entering one of a number of closets conveniently positioned around the museum without the creature seeing her. She emerged from the closet after a short time only to immediately see the creature entering the room. She squealed as she re-performed the perludic act and returned to the closet. Since this action required only a single button push and not her continuous input, Laser was able to take her hands off her keyboard and mouse. She placed her

hands over her headphones as if covering her ears and ducked, as if hiding from the creature in real life might lessen her chances of being spotted in-game. Laser and the game each play the other in this example, exemplified by the playful acts that each performs in response to the other. She moves her character through the gamespace shared with the creature to avoid capture, and she does so through playful acts enabled by the game. The creature embodies the game as adversary but the game also provides Laser with the ability to flee and hide, forcing her to use these provisions as she is pursued. The game plays persona through Laser by coaxing her into interacting with it in particular ways, which then extends into her performance out of the game as she physically performs hiding out of the game. Game-streamer interactions are thus performances of playful acts through which both streamer and game play persona.

Games play persona not only through non-player avatars and how they direct play but also the atmosphere that they create. For instance, *Call of Cthulhu* also played Laser's streaming persona through the game's sound design. During the museum encounter described above, Laser illudically moved the in-game camera (i.e., her character's perspective) to watch the creature leave the room from inside the closet, the playful act aligning the attention of the stream with hers and her player-character's. After a time, she exited the closet only for intense music to start playing. She yelled at the game:

"Shut up music! Holy shit shut up I'm trying to listen!"

The music trigger is a discrete signal connected to the creature's pursuit of the player-character, making it a perludic act performed by the game. Though the sound is non-diegetic and therefore not strictly speaking an act of game play, it *is* an act of persona play. The game played persona using this music by creating atmosphere and subsequently building stream anticipation around Laser's character getting caught as well as inhibiting her ability to interpret her in-game

surroundings by drowning out diegetic sounds. Laser yells at the game through its music thereby performing persona in response to game agency. As this example of *Call of Cthulhu* shows, horror games play streaming persona through the timing and intensity of the reactions that they elicit from their streamer-players, and streamers facilitate this play through their performance and stream aesthetics.

Metagaming is another useful concept for explaining the relationship between a game's actions as ensemble member and streaming persona. Metagames stem from or operate alongside a game, often resulting from playing *with* a game rather than playing a game. This form of play is examined in detail by Boluk and LeMieux (2017) and, drawing upon their foundational work, Ruberg (2019) defines a metagame as "a secondary set of game-like practices that operates according to its own rules and treats video games as raw material for new modes of play" (p. 193). Streaming persona is a metagame due to its playful nature and ruleset, as well as its contextualisation through the cultural significance of games to Twitch and the role of games as stream ensemble members, thereby highlighting the critical role of nonhuman play in metagaming (Boluk & LeMieux, 2017, p. 17). While the examination of illudic and perludic acts attends to persona play by and through games on a micro level, approaching streaming persona as a metagame contextualises these smaller moments within a larger whole. This whole appears in two forms on Twitch. Firstly, videogame livestreaming is the presentation and performance of videogame play. Secondly, streaming persona is a broader metagame that encompasses videogame play and the playful performances of individual and collective identity that occur on Twitch. As a metagame in this broader sense, streaming persona is *played*, and the game is one of the players. There is a key distinction between games as defined by Juul and streaming persona as a game-like practice played by games: games do

not feel attached to the outcome of their efforts in persona play. I have argued elsewhere that a lack of affective intentionality separates human agency from nonhuman agency in play but that this does not prevent nonhuman actors from playing (Johnson & Jackson, 2022). When CBC streams *Among Us*, he explicitly acknowledges the challenges of simultaneously performing his streaming persona and the role of imposter when it is assigned to him by the game. And when Laser streams *Call of Cthulhu*, the game plays with her, evoking fear that becomes part of her streaming persona as game-streamer interactions are observed by spectators. Though the details are vastly different, in each case, playful acts are performed by, with, and against the game and these become part of the evolving streaming persona. As such, though these acts of play occur within the game, they also play persona as a metagame played alongside, within, through, and by the game.

Streaming persona adheres to and resists identity-based expectations that have emerged from the culture and politics of the platform. This relationship between streaming persona and identity-based expectations can be understood through streaming persona as metagame. There is a default subjectivity – cisgendered, able-bodied, straight, white, and male – through which all persona play on Twitch is implicitly framed; this subjectivity is what Boluk and LeMieux (2017) would refer to as the *standard metagame*. The standard streaming persona metagame begins with the performed identity of the streamer and how it adheres to or deviates from the default subjectivity, but expands to include spectator identity, the games that the streamer plays and how they choose to play them. Individual streaming personas either adhere to or resist the expectations and assumptions within streaming culture associated with the standard metagame through streamer and spectator performance of streaming persona, and how spectators acknowledge the streaming persona's (mis)alignment with the standard metagame. The role of

game content in relation to the standard metagame is subject to these assumptions as well. Cultural play practices are made visible through streamed gameplay, and particular games and playstyles are seen as better aligned with the standard metagame than others. Play practices that deviate from the conventions are framed by the streamer's identity and behaviours outside of game play, particularly when they do not adhere to the standard metagame. For example, female-presenting streamers playing difficult games or adopting particular playstyles tend to be met with more scrutiny from spectators than men playing the same game. Female-presenting streamers are expected to perform vulnerability and be more emotionally available to their viewers than other streamers (Guarriello, 2019), and Laser's performances of fear in response to *Call of Cthulhu* align with these gendered expectations. This aspect of her streaming persona is therefore played in alignment with the standard streaming persona metagame. Streaming persona is therefore political and culturally significant as a metagame – as a playful practice performed by all ensemble members, including games.

The game is an ensemble member and hence a player of streaming persona. Its impact is tempered by the simultaneously-occurring performances of human and nonhuman ensemble members including streamer, spectators, and the Twitch platform. Throughout my period of observation, however, it has become clear that the game's impact on streaming persona is significant and the remainder of this chapter is dedicated to demonstrating that significance. In this section I have examined games as ensemble members through their capacity to act upon the streamer and player. Games act upon streamer-players in ways that challenge their performances of streaming persona outside of the game, elicit particular affective performances, and shift performances of body and space. To examine games as stream actors, I developed a dual framework for the micro analysis of individual moments of game play

through illudic and perludic acts and the macro analysis of streaming persona as metagame. Together these lenses invite consideration of exactly what about game play is compelling and how these elements transfer to Twitch through persona play. My dual framework demonstrates how games play persona but also how persona play is enabled as a metagame because of games.

Performing Persona through Games

Having distinguished between persona play and game play, I now attend to ways that game play can be a form of persona play. In other words, playing and playing with games afford avenues for the construction and performance of streaming persona. The relationship between games and streaming persona presents numerous challenges for streamers both within and outside of game play. To begin with games must be suitable ensemble members. So streamers are tasked with choosing games and playstyles that will best play and play with their streaming persona. Game and playstyle choices engage spectators most strongly when they are cohesive with the tastes and preferences of the identity that the streamer performs. Persona is in this way played through games and there is no universally successful and maximally engaging approach to games on the platform. Spectators are held by game-streamer interactions, not games in isolation. Streamed game play is thus characterised by human and nonhuman labours that constitute acts of persona play, somewhat similarly to those forms of labour discussed in Chapters 4 and 5. This labour is performed by, within, and through the game, and is most clearly visible through game content. This visibility extends to the appearance of game content outside of the world of the game, namely how games also contribute to the streaming persona metagame beyond their play. The relationships between the game and other stream actors (streamer, spectators, platform) communicates a dynamic of

mutual play, whereby streaming persona and game are each understood in relation to the other within and outside of the world of the game.

Gameplay that reflects and enables performances of persona is a major consideration when streamers select games and playstyles. Games are not either good or bad for streaming. Streamers instead create engaging content by selecting a game and playstyle that suits their streaming persona. I term this *ensemble-worthy* gameplay, following Postigo's (2016) *YouTube-worthy gameplay*. YouTube-worthy gameplay is not just about a YouTuber's skill as a player but also their ability to engage with the social and technological structures of the YouTube platform in order to engage their audience through their play. Twitch can be viewed from a similar perspective, producing Twitch-worthy gameplay that accounts for "the lulls in gameplay and fill[s] whatever inevitable gaps in the actions that might occur" (Scully-Blaker et al., 2017, p. 2029–30) as a result of the social and technological structures associated with the platform. Twitch-worthy gameplay contrasts with YouTube-worthy gameplay in that it adapts to the liveness and the temporal complexities of the streaming mode examined in Chapter 7. Going a step further, I term *ensemble-worthy* gameplay that which is tailored not only to the socio-technical architecture of the platform but also to the social structures of the individual stream ensemble. Ensemble-worthy gameplay is defined through interactions between individual streamer, game, and platform as ensemble members in the production of content fitting to the streaming persona.

I note that Twitch-worthy gameplay is not necessarily ensemble-worthy gameplay. Game choice and playstyle may be well-suited to the platform but not resonate with the stream ensemble due to its perceived misalignment with the streaming persona. Hob is known for completing challenge runs in a range of games, in particular those by developers

FromSoftware. After a number of years of focusing primarily on this content, Hob attempted to introduce more variety into his streams by playing the First-Person Shooter battle royale game *Call of Duty: Warzone* (*Warzone*) (2020). In 2021, *Warzone* was in fact Hob's most-played game by a substantial margin. Of the 30 games that he played in that year however, *Warzone* ranked at number 21 when measured by average number of viewers.[33] When Hob would switch from another game to *Warzone*, his viewer count would decline and viewers would comment on the game switch being the reason for their departure, suggesting a causal connection between the game and view-count. There was a fundamental disconnect between Hob's established streaming persona and *Warzone* that was irreconcilable, even despite his best efforts. Hob's ability to recognise and fill pauses, his play and commentary styles, and his interactions with spectators were all unchanged, so his *Warzone* gameplay was Twitch-worthy but was not deemed to be ensemble-worthy as it did not maintain audience interest. A mismatch between gameplay and streaming persona was caused by the stark contrast between *Warzone* and the other games that he played. The game-persona disparity was so great that even consistent play throughout 2021 couldn't remedy it. I often observed streamers communicate concerns around ensemble-worthy content when discussing game and playstyle choice, such as Laser's comment in September 2020 that "whenever I play a different game, my view count will like shoot down." These streamers implicitly acknowledged their concerns that playing games not associated with their streaming persona would come at the cost of ensemble-worthy gameplay, even if it was Twitch-worthy.

[33] https://sullygnome.com/channel/the_happy_hob/2021

Yet despite the distinction between Twitch-worthy and ensemble-worthy gameplay, streamers may still successfully change their game content. If streaming persona is defined *with* game content rather than *by* game content then changing game content will have a less drastic impact on stream dynamics and consequently will be more readily accepted by the stream ensemble. Juliet primarily streamed *Monster Hunter: World* (*MHW*) (2018) when I first observed her streams. *MHW* is a monster-hunting simulator, where the player takes on quests to hunt and either capture or kill various fantastical beasts. Though the game's learning curve is steep, once the player understands the basic elements of the game, they can approach the more complex mechanics at their own pace. The gameplay loop involves resource and quest management from a hub, setting out on quests or expeditions, tracking targeted monsters and collecting resources, and finally fighting the target. The gameplay loop is simple enough that an uninitiated spectator can follow, while the complex mechanics and varying playstyle possibilities invite comparisons and commentary from veteran players. As such, *MHW* has broad potential for Twitch-worthy gameplay. *MHW* was a suitable choice for Juliet to produce ensemble-worthy content as its gameplay loop and mechanics facilitated consistent interaction with her spectators, which was core to her streaming persona. Only the monster fights themselves were fast-paced enough to prevent Juliet from consistently reading and responding to chat messages. However, these fights were regularly interrupted as monsters periodically fled to other areas. Juliet's understanding and mastery of *MHW's* complex mechanics imbued her streaming persona with gaming capital, albeit under the assumption that there is a correlation between a game's complexity and its value as a game (cf. Consalvo & Paul, 2019).[34]

[34] The authors examine such assumptions and their impacts on the delegitimisation of particular games and approaches to play.

Simultaneously, the complexity of *MHW* and Juliet's performed knowledge and skills of the game immediately undermined gendered assumptions that new spectators might bring to her streams (cf. Chess, 2017; Condis, 2018; Cote, 2020; Phillips, 2020).[35] Rather than constructing and performing a streaming persona defined by *MHW*, the game enabled Juliet to craft a streaming persona that prioritised streamer-spectator interactions and accrued gaming capital. The game facilitated Juliet's streaming persona rather than controlling it; Juliet's streams were not defined by *MHW* streams but rather with *MHW*. Persona play for Juliet was defined not solely as within the game but also alongside it. This distinction, along with carefully chosen alternative titles, enabled her to transition to other games without facing the same difficulties as Hob did with *Warzone*. Juliet chose to play games that allowed her to display similar degrees of streamer-spectator interaction, skill, and gaming literacy. She also interspersed regular *MHW* streams among streams of other games for some time. This gradual and measured approach extended the scope of ensemble-worthy game play in her streams.

The acts of deciding on games and playstyles to stream as well as the act of streaming game play – in other words the production of ensemble-worthy gameplay – are forms of labour. *Playbour* – a portmanteau of play and labour – is a term used to capture the evolving relationship between labour and playing, initially coined to describe the free labour involved in producing modifications for existing games (Kücklich, 2005). Streaming videogame play is certainly a form of playbour with economic stakes as the livelihoods of many streamers hinge upon it – it is a job for them and it is paid for in large part by viewers. The labour of play within streaming becomes a form of *assumed labour*, by which I refer to labour that is performed by

[35] These authors each discuss issues of gender and game cultures and have also been referenced in more detail in previous chapters of this thesis.

the streamer on behalf of spectators. When streamers play games, spectators don't have to. And upon extended observations of this play, spectators can sometimes see how physically, emotionally, and mentally taxing it can be and as such become cognizant of the streamer labouring for them. This assumed labour includes playing games and adopting playstyles that suit the streaming persona and hence spectators, thus creating ensemble-worthy gameplay. Many Twitch spectators don't have the time or disposition to play videogames, but still want to engage with them (Orme, 2022). Even spectators who do play don't necessarily have the time to develop the skills to play in the ways that streamers do. These spectators rely upon the streamers that they watch to perform play in ways that appeal to them, which in itself makes the play laborious. Streamers build skills and perform them through play, while spectators share in the experience.

The assumed labour of play can affect spectators' relationships with stream and ensembles and games in different ways. The most obvious example of this is in the use of the first person plural 'we' that streamers tend to use as they play games. Though they are in direct control of game play, they frame its experience as collective. This language emphasises the fact that despite assuming the labour of play on behalf of their spectators, the play is experienced by – and to a degree, owned by – the entire ensemble. As a result, spectating gameplay can provide a sufficient experience of the game for the spectator, making it unnecessary for them to play themselves. This outcome is most foreseeable for games with narrative-heavy or heavily linear titles and has been identified as an issue for indie game developers as it adversely affects sales in a precarious segment of the games sector (Parker & Perks, 2021). On the other hand, spectating can transform a potential player into a player. It can raise awareness of titles or demonstrate elements of play that spectators might not

otherwise have known about or considered playing. Conversely, if a spectator knows that they want to play a game themselves, they may opt not to delegate the labour of play to a streamer. In these cases, they may even opt to temporarily remove themselves from a stream ensemble in order to ensure that the game isn't spoiled for them. Spectators are constantly balancing their relationships with games and ensembles in order to manage their connection to game culture. They do this by consciously deciding on the labour of play that they want to delegate to streamers.

Games play persona when they are incorporated into stream elements outside of the game. The most common ways that this occurs are through stream design elements like emotes that represent a visual and performative connection between the streaming persona and games. For example, Emray is a streamer known for her skilled *Hollow Knight* (2017) play and whose collection of subscriber emotes largely depicts characters from the game. The game plays her persona when these emotes are used as virtual speech acts (as discussed in Chapter 4) and make *Hollow Knight* a more prominent figure in her streams. This kind of persona play can be made more visible in a range of ways, such as the role that the central recurring character Tom Nook the tanuki from the *Animal Crossing* played in CBC's stream narrative for a time. In the most recent instalment of the game series, *Animal Crossing: New Horizons* (2019), Tom Nook sells the player-character a getaway package to his deserted island. The player is encouraged by Tom Nook to freely collect materials and customise the island to their liking. The tanuki ultimately seeks to transform the island into a desirable destination for visitors off the back of the player-character's labour. After paying off the player-character's getaway package, Nook insists on transforming their tent into a house and then expanding the house room-by-room. Each expansion indebts the player to Tom Nook an increasing number of bells – a currency

obtainable by performing various tasks on the island, including fishing, chopping down trees, digging holes in the ground, catching bugs, and selling the obtained resources to Nook's nephews Timmy and Tommy. Under the guise of Tom Nook's friendly encouragement, the game's bright and colourful design, and the pleasure that players can derive from making the island their own, it is easy to lose sight of the wealth that Nook accrues from the player's in-game labour.

CBC incorporated Nook into his streams, thereby allowing the game to interact with him as a stream actor beyond the boundaries of *Animal Crossing*. The tanuki was depicted as part of CBC's cardboard world (Figure 31), performed with an artificially deepened voice and a crueller personality that was more directly befitting his in-game neoliberal capitalist agenda. Nook played CBC's streaming persona by occupying a dominant role over CBC, coercing him into playing *Animal Crossing: New Horizons* and labouring for Nook. He performed cruel acts like breaking CBC's guitar. Nook's role as antagonist in CBC's narrative was captured by the song *Nook's Bells* by American rap artist T-Pain. The official video clip includes CBC and is part of his streaming persona that is regularly played CBC's streams. The song recounts the period of time when CBC was forced to labour for the fictional tanuki. It opens with Nook singing to the camera, his outfit changing from a sweater to a black coat and gold chain. *Animal Crossing* characters and CBC are in the background, the latter struggling to shake bags of bells from a tree.[36] Nook sings to CBC that "work is never done here" on the island and "that's why [he] brought [CBC] here ... 'cause them bells ain't gonna earn themselves." The song adds to the dual layers of metagame initiated by CBC's parody of Nook's character. CBC's streaming

[36] An action the player-character can perform in-game.

persona is the first layer of metagame that is played by *Animal Crossing* via the streamer's subordination to Nook. The second layer is the metagame played through *Animal Crossing* as the in-game labouring is taken out of the context of the game and parodied through stream-Nook's cruelty. These metagames are enabled by the boundary between CBC's cardboard world and the *Animal Crossing: New Horizons* game world being broken down with CBC and Nook both depicted in both worlds (Figure 32). As CBC incorporated game content into non-game aspects of his streaming persona, he enabled the performance of streaming persona through game-streamer interactions outside of the world of the game.

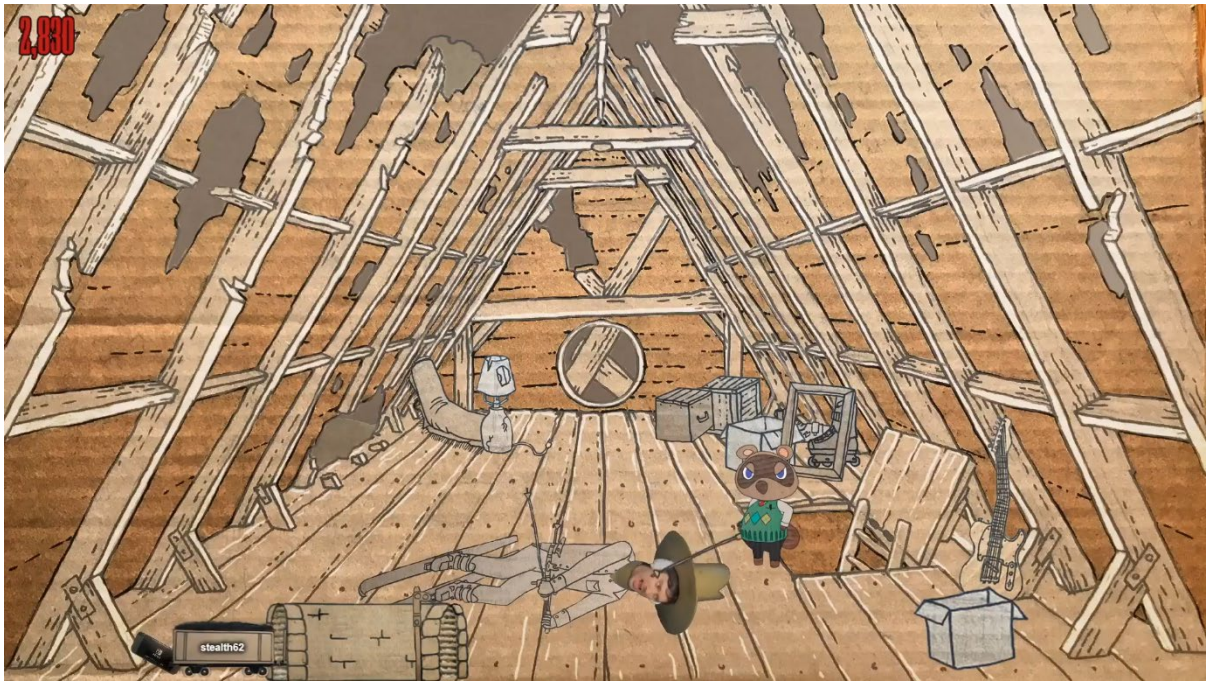

Figure 31. CBC interacting with Tom Nook in his cardboard world (2020).

Figure 32. CBC and Tom Nook in a depiction of the island of Animal Crossing: New Horizons (2020).

As much as games are ensemble members that play persona, they are also sites that offer alternate characters, spaces, and frames for the performance of streaming persona. I opened this section by introducing the notion of ensemble-worthy gameplay as a way of assessing the gameplay of a streamer that accounts for their playstyle, its suitability for streaming on Twitch, and its resonance with the stream ensemble. Producing ensemble-worthy gameplay – deciding upon games and playstyles suitable for the streaming persona – is a form of labour that is accompanied by the labour of playing the game, which I framed as assumed labour. The laborious nature of play is developed further in subsequent sections as in-game failure and demonstrations of skilled play are examined in detail. These examinations extend this section's argument that game play is performed on behalf of spectators, despite efforts to position play as an ensemble activity. Finally, I looked to the role of game content integrated into non-game aspects of the streaming persona. Through these acts of play, I highlighted

streaming persona as metagame and the capacity for games to play and be played in the construction and performance of streaming persona, which I extend in the next section by examining approaches to in-game failure.

Failure as Play

In-game failure occurs during streams when games act upon the streamer-player in particular ways, thereby playing persona through an implicit commentary on the streamer's skill and in-game choices. Game-streamer tension engages spectators through other tensions between success and failure, and between game play and persona play. These tensions are most visible through the variable outcomes that define games and the ways that different ensemble members are invested in different possible outcomes. The challenges that games present and the journeys that streamers take to overcome them build investment in the streaming persona among ensemble members. Streamers foster that investment by integrating mechanisms for navigating successes and inevitable failures into their streaming persona. These mechanisms must enable them to overcome challenges while maximising spectatorial engagement. Despite being the antithesis of progress and success, failure does not necessarily have a negative effect on streams or streaming personas. The potential for failure is one aspect of what makes stream spectatorship compelling as success only has meaning when it is possible to fail. As streamers acknowledge the inevitability of in-game failures, they develop strategies to lean into failure's value to invested spectators and frame failure as desirable through persona play. Stream ensembles also develop vernacular to frame failures and failure-adjacent interactions between streamer and game, making it more than just not-success. This section explores the impacts of

failure on streaming persona and the circumstances under which failure might be desirable, particularly when it is not in the name of eventual success.

In-game failure is one way for games to play persona by acting upon the streamer as they interact with the game. As described at the beginning of this chapter, when a member of Wrafferino's (Wraff's) chat types '!gravity' into chat, a bot responds with "Gravity claims another victim. So far physics have won over Wraff X times TearGlove." In this message, X is the number of times that Wraff has died in-game by falling into unplayable territory. In *Dark Souls*, gravity 'wins' when Wraff performs the illudic action of walking or jumping to a place where there is nowhere for the player-character to stand or land. The game's physics engine, emulating gravity, illudically carries the player-character downwards. Once Wraff's character falls far enough, they pass a *death plane* that triggers the death of the player-character. The game performs multiple perludic acts in quick succession once the player-character passes the death plane that signal the character's transition from alive to dead, including: switching her perspective from third-person to top-down; depleting her health bar; triggering a non-diegetic 'sparkling' sound effect; and displaying the words 'YOU DIED' in red text against a darkened horizontal strip. After this sequence, the game transitions to a load screen and revives Wraff at her most recent bonfire (checkpoint). The game acted upon Wraff via its physics engine and in-world boundaries for play even though Wraff was in control of the player-character immediately preceding her death. While the game offers a somewhat accusatory 'YOU DIED' to Wraff, the chat message positions the death as occurring at the hands of the game. The chat message says that physics have won over Wraff, communicating her failure as a result of the game's physics acting upon her character. This record of Wraff's deaths due to gravity is an element of her streaming persona that carries a history of these interactions. The performance

of persona here isn't just in her play but also in the triggering of this message. Each death to gravity thus becomes a re-performance of those that preceded it from the perspective of streaming persona, even though it may occur in a different location or a different game altogether. Failure in the game here is not a product of streamer/player agency but rather game agency, which is internal to the gameworld in relation to the playful acts but also affects the external world through the Twitch platform.

Failure is prominent within streams, which may be due to how a streamer's focus is split between the game and other stream elements which in turn increases the likelihood of in-game failure. Players continue to play games despite their inevitable experience of failure – something typically thought to be undesirable. This contradiction is referred to as the 'paradox of failure' by Juul (2013). In fact failure is not just inevitable; it is part of the core experience of playing games. Juul muses over numerous explanations for this paradox, exploring the pains of failure and what keeps players returning to experience that pain again. On Twitch, many streamers embrace in-game failure despite this pain because they acknowledge its inevitable nature and develop entertaining ways to package it for spectators, such as Wraff's !gravity command. The conditions for failure shift when game play is streamed. Failure occurs consistently when challenge that the game presents outweighs the player's skill. The player's success is contingent upon sustained concentration and consistent game behaviour, among other things, when challenge and skill are balanced. This balance is what Mihály Csikszentmihályi (1990) calls a *flow* state. Flow describes a person's complete and pleasurable absorption in a challenging activity. Streaming game play requires additional mental overhead for stream management and interaction with spectators than playing off-stream. As such, flow states are hard to sustain, easier to breach, and often reserved for particularly difficult moments

of game play. As player and game are constantly interacting and the streamer's game focus shifts, the relationship between challenge and (accessible) skill fluctuates. The likelihood of failing while streaming game play can for these reasons be seen to be higher than when not streaming.

Failure's prominence within streams leads to its multiple social functions that facilitate expressions of streaming persona. The changing relationship between challenge and skill is articulated through stream interactions and specific language that ensemble members use to categorise types of failure (see Table 2). For instance, *Whiffs* – missing a target by a small margin – can be misjudgements that cause a player to exit a flow state, and *clutch* – succeeding when failure is expected – is often used when the player enters a flow state in the final moments before failure is guaranteed. The majority of this vernacular is understood in terms of potential, or eventual, success. Whether ensemble members are rooting for the streamer's success or their failure, or whether they're performing an investment in one outcome while hoping for the other, they will be most engaged if both outcomes are in sight. Games are defined in part by variable outcomes and player investment in outcomes (Juul, 2010) and the possibilities of streamer success and failure constitute the variable outcomes of the metagame of streaming persona in which spectators are invested. Success and failure are only simultaneously visible in this way in sufficiently close proximity to a flow state. Spectators need to believe that success is possible but not guaranteed in order to be maximally engaged. When this occurs, spectators become invested in (meta)game outcomes and failure has value as entertainment and an expression of streaming persona.

Another social function of failure within streams is its use for playful antagonism. Stream ensembles are most prominently split between those who outwardly support the

streamer's success and those who playfully advocate the streamer's failure – the latter being playful antagonists. I observed the failure-related vernacular in Table 2 to be particularly common expressions of spectator positions in relation to streamer success and failure. These terms express persona through their connotations. For example, *greed* and *throwing* – failing because of in-game greed and passing off a mistake as deliberate – are both accusatory, implying that the streamer would have succeeded if not for their poor judgement in the moment. *Clutch* praises high skill or celebrates good luck, also implying that the streamer succeeded despite the odds. These terms communicate the streaming persona by expressing the streamer's relationship with the game through spectators' eyes. This qualitative commentary communicates spectatorial judgement regarding the streamer's proximity to a flow state during a pivotal moment determining success or failure. For instance, many of these terms articulate different ways of leaving a flow state at key moments (*whiff, greed, throwing*). These terms function socially through playful antagonism as they are used to position spectators in terms of streamers' successes and failures.

A final social function that failure performs in streams is in its unifying capacity. Usually a single *F* in chat responding to an in-game failure triggers more *F*s from other viewers. The stream ensemble shares in the pain of failure and offers their commiserations collectively, whether genuinely or sarcastically. There are numerous factors that determine collective responses to success and failure: the number of attempts that the streamer has made; the amount of time committed to a particular attempt; the streamer's mood; and the relationship between streamer and spectators. The greater the tension that these factors collectively create, the more unified I observed the responses to success and failure to be. More failures and more costly failure (in terms of stream time and the streamer's mood) tended

Table 2: Failure-related vernacular.

Term	Meaning	Relationship to Failure
Whiff	When the player misses their target, usually by a small margin	A failure that was close to success
Clutch	Succeeding when pressure is highest and failure seems likely	A success that seemed to be a failure
Greed	Taking advantage of an opening to the point that it backfires and harms progress, usually in high-pressure situations	Failure caused by a focus on success
F	A way to offer condolences. A reference to the direction to "Press F to pay respects" during a funeral scene in *Call of Duty: Advanced Warfare*	An acknowledgement of failure
Throwing	Passing off a mistake as being made on purpose (usually sarcastically)	An acknowledgement of a failure that was easily avoidable
Rust	Poor gameplay as a result of being out of practice. De-rusting is used to describe the process of regaining skills in a game after a long time not playing	An acknowledgement of likely failure building towards eventual success
Copium	A portmanteau of cope and opium. A metaphorical drug that takes the form of various coping mechanisms to manage failure	Labels strategies for managing failure

to unify the stream ensemble more strongly. This shifting dynamic serves to demonstrate that despite performances of playful antagonism, spectators are primarily invested in the streamer, and hence their success, because of (and not despite) the potential for failure. Spectators are engaged by unknowable outcomes but they share the streamer's desire to overcome the game and its challenges – a desire fostered by all forms of capitalist and neoliberal play. Both expressions of this investment and the conditions under which they occur communicate the streaming persona through the occurrence or potential of failure during streams.

While the social functions of failure are predominantly expressible through interactions between human ensemble members, streamers and games also engage in persona play through the management of failure. The ways that a streamer prepares for and responds to failure are expressions of the streaming persona. These expressions are responses to failure-inducing acts performed by the game. A streamer's reaction to an individual failure is a performed response that carries information about the nature of the failure. Common responses and typical readings include:

Stopping speaking mid-sentence, suggesting that the failure was sudden or a surprise;

A long pause is more ambiguous and context-dependent, possibly communicating shock, frustration, or restraint;

Laughter signifies an unusual or funny failure, or the streamer implicitly taking responsibility for the failure;

Swearing or shouting genuine or performed frustration or anger;

Complaining about the failure is typically deferring blame to the game;

Explaining or rationalising also typically attempts to defer blame or justify the failure, or is an expression of copium – a fictional drug that one takes to ease the pain of failing (Table 2); and

Pausing to interact with chat is an opportunity for the streamer to re-engage spectators after attending to the game for a while, take a break before re-attempting, or both.

A single failure could elicit multiple responses. For example, Juliet often paused briefly and then laughed when she failed while playing. These responses are expressions of streaming persona and when taken together they communicate a streamer's relationship with failure and affect the tone of the stream. Laser's responses to failure are neither consistently positive nor negative, meaning that her responses to particular failures act as cues for spectators. A positive response from Laser encourages playful antagonism, while a more negative response might prevent spectators from making light of the failure. In the latter case ensemble members may keep a light tone but direct attention away from the specific playful act that triggered the failure. Streamer performance following failures is a part of their performance of persona that responds to the game and stimulates spectator response.

Streamers' approaches to failure management situate failure in relation to the streaming persona and as key to the popularity of streamed game play on Twitch. There is pleasure to be found in failure according to Ruberg (2017) in their examination of failure as an inherently queer mode of play. Ruberg distinguishes between "failing in the way that a game wants us to ... versus failing the way that a game does not want" (p. 204), which they label as *failing toward* and *failing against* a game system respectively. Streamers seek to fail towards the metagame

that is streaming persona regardless of the specific nature of in-game failure. Failing towards the streaming persona is an embrace of failure in persona play – as distinct from game play – that is consistent with other aspects of the streaming persona and maintains engagement from ensemble members. Failing against the streaming persona on the other hand would be failing in-game in ways that disengage spectators. Failing towards the streaming persona mobilises failure in a way that develops their streaming persona. Streamers sometimes lean into their ensemble's schadenfreude by either exaggerating their failures or making failure more common than it needs to be as a way of failing towards their personas, making failure itself an act of persona play that occurs through game-streamer interactions. For instance, EdyBot (Edy) has a "Drink every time I die" series that consists of playthroughs of difficult games. As suggested by the name of the series, Edy takes a drink of an alcoholic beverage every time she dies in-game. Her series therefore creates a new metagame through the addition of a new rule by which an in-game occurrence triggers an action outside of the game. The act of drinking becomes an illudic act of both persona and the drinking metagames. The "Drink every time I die" series subverts expectations of failure, where success is typically predicated upon learning from failures. Instead, failure begets further failure as every time Edy dies, she reduces her capacity to play well by consuming alcohol. These streams are thus not about succeeding because of repeated attempts but rather succeeding in spite of them. The additional drinking rule builds investment in her failure as well as her success. Spectators want to see Edy fail so that she can get more drunk, thereby making play more difficult and altering her performance. They then want to see her succeed despite her inebriation as a greater display of skill than if she were to succeed sober. The introduction of this metagame demonstrates how failure can be integrated

into streams as a way of framing what it means to fail towards streaming persona, and how this frame affects stream dynamics and ensemble members' experiences of persona play.

A game's persona play can be more prominently featured when the streamer extends their responses to failure beyond a brief reaction. When Hob fails, for example when he gets hit by an enemy during a no-hit run, he will often switch his stream to an analyst frame (Figure 34). In this frame, he watches a clip leading up to the failure, talking spectators through what he was thinking and what went wrong, and discusses a plan to deal with the situation when he next encounters it. The analyst frame functionally alters the stream and by extension the metagame of streaming persona. Hob's analysis is thus a perludic act of persona that occurs in response to the prior player-game interaction. The analyst frame is an expression of persona that is brought about by, and focused upon, the game's playful act that caused Hob's failure. This approach attends to the failure in a way that increases the odds of future success, a suggested impact of failure more generally on videogame players McGonigal (2011). Within the analyst frame rests the potential for a different outcome that in turn maintains spectator engagement in future iterations, again highlighting the critical role of the tensions associated with games' variable outcomes. These tensions can also be used to fail towards streaming persona, as the following extended recount demonstrates:

> Hob streamed a no-hit run of *Demon's Souls* in September 2021. He fought a boss called Storm King, a giant flying creature that resembles a manta ray. Storm King was accompanied by smaller flying manta rays that launched long green-blue projectiles at the player. As Hob's character ran to a location in the boss arena that Hob knew to be safe from the projectiles, one hit him at the end of a roll. As the projectile hit his character, Hob screamed and bounced off his chair.

Figure 33. Hob's analyst frame while he views a clip of a recent failure (2021).

"NO! WHA-" he smacked his desk with a large motion from both hands, "YOU ARE KIDDING ME DUDE!"

Hob leaned back, wiping both hands across his forehead and over his head, his elbows raised. The series' infamous 'YOU DIED' read across the game screen.

"THERE HAS TO BE A FUCKIN' STRAT[37] FOR THIS FUCKIN' BOSS DUDE. THIS IS FUCKIN' RIDICULOUS."

He smacked the desk on the final swear. This realigned his camera and made a sliver of a living room visible behind his green screen.

[37] Short for strategy.

> "THIS IS NOT CONSISTENT, DUDE! I can't run in a straight line and weave, 'cause it's-justit's-dude, I can't do this shit man. Oh my God, how many fuckin' time am I going to die ON THIS FUCKING BOSS."
>
> Over the course of the next minute, he ran the gamut of reactions to failure. Silence. Head shaking. Explanations. Looking for strategies. Swearing. Yelling.
>
> He attempted again. He entered the boss arena and before anything happened he smashed his hand or controller (the movement was too fast to tell) against the desk seven times. Hard. The camera bounced with each hit and was now facing a completely different direction, with only the bottom of one of Hob's computer monitors visible. An eighth hit.
>
> He moved his character forward and the small creatures start to fire at him. He hit his desk six more times.
>
> "Motherfuck," he muttered.
>
> When Hob readjusted his camera, he showed his desk. He had completely smashed through its surface. Addressing accusations that he planned his victories, he sarcastically said "Yeah, that's great, wow, look at the scripted content guys."

This was an extreme reaction to failure for Hob, but not an isolated incident. Moments like these were in fact glorified by Hob's stream ensemble. They were often compiled into clips that Hob played to keep his viewers entertained while he takes breaks. His ensemble derived pleasure from his extreme emotional reactions. And so when he enacted these behaviours he was knowingly transforming in-game failure into failure towards the streaming persona. This

hypermasculine rage contextualised by the in-game failure made Hob and his streaming persona and embodiment of geek hypermasculine ideals associated with certain segments of game culture (Salter & Blodgett, 2017). Spectators were engaged by his skill with and knowledge of the games that he played. His successes reaffirmed these traits, while his failures were broached with either a cool rational eye through his analyst frame or violence and rage, grounding his streaming persona in behaviours conventionally associated with heterosexual masculinity. Hob plays persona through his transformation of failure into content as he fails towards his streaming persona. This transformation creates a tension between game play and persona play that defines failing towards his streaming persona through his simultaneous rejection of failure (in game) and embrace of failure (in persona). His game play failures then become persona play successes. The repeated exaggerated and extended rejections of in-game failure are themselves an embrace of failure as part of Hob's streaming persona. The play of persona is a collaboration between the two actors: the game, which performs the acts, and Hob, who performs his reaction. Hob's no-hit runs are about minimising – in fact eliminating – failures, ironically making his streaming persona as much about his failures as about his successes. In contrast with a stream where all deaths can meld together in novelty through drinking games and on-screen counters, each failure of Hob's requires attention and carries weight. Hob allows the game to play persona by giving failure that attention and thus a role in developing his persona.

In-game failure is the result of playful acts of game and persona performed by games. During streams however, the inevitability of in-game failure gives it social, cultural, and political significance as it draws spectators into the tensions of unknowable outcomes and the confrontations between streamer and game as each attempts to overcome the other. This

significance was introduced in this section with in-game failure as the game acting upon the player as an act of persona play which is extended by streamer management strategies. I then examined the social functions of failure within streams, including the development and use of failure-related vernacular, playful antagonism, and its capacity to unifying ensemble members. Subsequently I looked to failure management strategies as acts of streaming persona performed by the streamer. Failure becomes a tool used to frame streamer performance and to encourage spectators to engage with the stream in particular ways. To demonstrate this, I extended upon Ruberg's (2017) phrases of *failing towards* and *failing away* from game systems in order to theorise failing towards and away from the streaming persona metagame. I emphasised the distinction between game play and persona play through games, and used framework to examine the use of in-game failures to define failing towards streaming persona as and through acts of streaming persona. Issues of identity politics emerged from this framework through Hob's use of hypermasculine rage as a coping mechanism for failure and a performance of streaming persona.

Challenge Runs and Playstyle as Streaming Persona

Unlike failure, which is a universal concern for stream ensembles that include games, playstyles are chosen by streamers and define the streaming persona through tailored streamer-game interactions. For example, challenge runs are playthroughs of videogames with additional constraints, which carry unusually strong potential for failure yet also greater prestige upon success. These constraints might include completing the game in the least possible time (also known as a speedrun), without dying or getting hit (as in Hob's previously-discussed no-hit runs), without using a specific in-game resource, or with an alternative controller, to name a

few. Challenge runs demonstrate the relationships between streaming persona and playstyle. They are examples of what Newman (2008) refers to as *superplay*, namely

> a range of gaming practices that differ significantly in their execution and implementation but that are bound together by a common desire to demonstrate mastery of the game through performance (p. 123).

But when performed before an audience, streamed challenge runs also resemble high performance play. *High performance play* is a concept that Lowood (2008) discusses in relation to machinima and speedrunning, and Witkowski (2018) defines as a form of elite play for players "involved in expert communities of practice" (p. 200). As the conditions and constraints of both superplay and high performance play are altered from those determined purely by the hardware and software of the game, both – and by extension challenge runs – are metagames. When streamers play challenge run metagames, they perform their mastery live through a combination of technical skills, knowledge, and practice. This mastery becomes part of the streaming persona that emerges through (and despite) particular streamer-game interactions.

Challenge runs are metagames that transform the game being played as part of the performance of streaming persona through and by games. While play involves operating within a structure, one can also play *with* that structure (Zimmerman, 2008). Challenge runs involve playing with the structure of their chosen games by unnecessarily narrowing the set of in-game possibilities through the introduction of additional rules. These additional limiting rules ironically expand possible play experiences, creating new (meta)games. Speedrunning may be considered a form of challenge run with the base additional rule being to finish the game in the least possible amount of time and "by adding an additional rule ... , the speedrunning community not only changes the way games are played but also questions the very ontology of

videogames" (Boluk & LeMieux, 2017, p. 43). In other words, additional rules not only change the 'how' of game play but also what the game is. Speedruns, as well as other types of challenge runs, create a new game – a metagame – based upon the same hardware and software but executed entirely differently as players skip game segments and exploit glitches to shave seconds off their runs. When these metagames are streamed, they interact with the streaming persona metagame to produce new ways for ensemble members to play together. With a new game arrives a new streamer-game relationship and consequently stream dynamics shift. Questions of success – likely, possible, eventual – give rise to new tensions between game challenge and skill that affect stream interactions. Given that streaming persona is a metagame that is played through and by the game, ontological shifts in games necessarily translate to ontological shifts in streaming persona. Challenge runs thus alter the metagame of streaming persona through additional rules that limit the interactions between streamer-player and game as ensemble members, and consequently create new possibilities as the streamer-player adheres to these additional rules.

The additional rules that separate a challenge run metagame from the game within which the run is played are social rules enforced by human ensemble members. The enforcement of these additional rules become expressions of streaming persona as spectators and streamer negotiate how moments of game play adhere to or breach these rules. Challenge runners, like speedrunners,

> self-consciously debate and *collaboratively* decide on answers to…[ontological] questions which, when set in motion, function, like all metagames, as a form of game design. The voluntary rules invented by speedrunners ... are metagames adopted by players that evolve in, on, around, and through the media ecology of

> hardware, software, and *community* comprising a game (Boluk & LeMieux, 2017, p. 43, emphases mine).

In other words, these metagames are made distinct from the games from which they emerge by the emergence and enforcement of social rules. This sociality actively engages spectators in the metagames but can be a source of tension between stream ensembles and among their members. For instance, in March 2019 Hob played a no-hit run of *Dark Souls III* (2016, FromSoftware) as the fifth (of five) consecutive FromSoftware games constituting a single run known as *The God Run*. This game contains creatures called 'crystal lizards' that provide valuable materials for weapon upgrades upon death. They are non-aggressive and will only run away from the player-character, eventually disappearing if they are not attacked quickly enough. After failing to kill a particular crystal lizard, Hob allowed it to despawn, quit the game, and reloaded. The creature respawned, giving Hob another attempt. He explained that this particular lizard can "glitch up and drop down on your head," which would count as a hit and end the run. As soon as Hob quit, a member of chat wrote "*Isn't quitting out against the rules?*" Another responded, "*only if it's to avoid a hit or death*." A conversation among ensemble members ensued, many certain that quitting was acceptable and many (both seriously and facetiously) suggesting that the run was now invalid. Hob's actions here were not being challenged by the software – *Dark Souls III* allows the player to quit out and reload in this situation. Instead, he was being held to account by viewers. What counts as a hit and under what circumstances (if any) a runner is allowed to exit the game are social rules of the *Dark Souls III* no-hit run metagame that are layered on top of the rules coded into the software. Hob's adherence to these social rules was being called into question and debated by spectators. Some viewers suggested that the run was *invalid*, and that the run would not be considered successful

even if Hob saw it to completion without getting hit. They were calling out what they saw as a breach of metagame rules. Streaming these metagames holds the streamer accountable to the stream ensemble who enforce the rules when the game itself cannot. This kind of play is thus highly collaborative, and the additional social rules encourage expressions of streaming persona in response to streamer-game interactions.

These social rules extend beyond individual stream ensembles. They can extend to communities of other players of the metagame and bring streaming personas directly or indirectly into conversation with each other, consequently situating their play within the broader culture surrounding their chosen game on the platform. Over a year and half after the crystal lizard incident, Laser was playing through the same part of *Dark Souls III*. "Hob quit out on his God Run in that section because the lizard despawned and I thought you just couldn't quit out," she said. A few days later, the conversation came up again. This time she said "I don't care if he quits out. He did the run. The only reason he quit out was to reload that lizard in." The uncertainty around this rule extended beyond the incident in Hob's chat and brought the two streams into conversation. These human-enforced rules standardise the metagame, and interactions with these standards become expressions of streaming persona as they create discourse surrounding the rules in relation to streamer play. Conversations about these rules are part of the culture associated with particular metagames and connect the streaming persona to that culture. The addition of social rules expands play from occurring within the software that the streamer is running, to within the stream itself. In this way, challenge runs affect the streaming persona through interactions within and between stream ensembles.

Glitches, such as the crystal lizard potentially dropping on Hob's character's head, are both displays of game agency and playful acts through which the game plays persona. These

acts enable and compromise different metagames. In the broadest sense, glitches are "result[s] of ... programming error[s] ... [that] vary significantly in their scale and severity" (Newman, 2008, p. 114). This definition is deliberately vague and not entirely accurate. In a videogame, a glitch is less an error and more an observable disparity between developer intention and execution. The game is not erring, it is following its programming. That is,

> by defying its designed purpose, the video game object is exposing its agency ... [A glitch] is something unexpected that does not fit the player's perception of what the game object *should* do (Janik, 2017, p. 73, emphasis in original).

Taken as displays of game agency, glitches are playful acts that alter the relationship between the game and the player. Though glitches adhere strictly to the programmed rules of the game, they appear to players as breaches of the game rules. These variations to players' expectations separate what Scully-Blaker (2014) calls a game's *implicit rules*, or the rules perceived as consistent with developer intention and the game world, from its *explicit rules*, or the rules as they are coded into the game's software. The discrepancies between these rules are exacerbated during streamed metagames like challenge runs. The rulesets of these metagames are further complicated by the additional social rules discussed above and the deliberate and accepted breach of implicit rules as part of the metagame. Such complications are visible in the previous example when Hob's conscious decision to avoid a known glitch – when the game itself may not adhere to its implicit rules – sparked disagreement. But not all glitches can be recognised in advance and avoided. In September 2021, Hob was playing a no-hit run of *Demon's Souls* when a glitch caused his avatar to become trapped floating in the air, seemingly by a tree branch (Figure 35). Hob could not move his character and so nearby enemies were able to hit him and ended the run. Another conversation ensued about whether the hit counted and whether Hob

could have quitted out to save the run, as he did in 2019, without breaking the rules. A particular chatter said that *"it sucks, and it's bullshit, but it still counts."* Even when the software is seemingly not playing by its own rules, Hob is expected to. The capture of Hob's character was a perludic act of play as it required a precise input from a precise in-game location – one that Hob likely could not easily repeat if he tried – that demonstrates glitches as "the game's assertion of itself as an agent over and against the player" (Janik, 2017, p. 67). When Hob and his spectator accepted the hit, they were acknowledging glitches like this as demonstrations of the adversarial relationship between software and player, particularly in the context of metagames. Glitches are acts of persona play performed by games as ensemble actors as they represent challenge to both the streamer-player and the implicit rules of the game.

Figure 34. Hob's avatar trapped in game textures in Demon's Souls (2021).

The game-as-adversary demonstrated by glitches can be balanced in favour of the player through *cheese*. *Cheese* is a term used in gaming to refer to strategies that trivialise a game's challenges. Though cheese strategies do not always take advantage of glitches, they do often represent the same disparity between implicit and explicit rules. This distinction lies at the heart of high performance metagames, as "unintended exploits ... permit speedrunners to play the game *within* the game and invent metagames limited not merely by mechanical constraint but by the voluntary choices of the players" (Boluk & LeMieux, 2017, p. 45). In other words, exploits like glitches and cheese strategies can be used to deliberately overcome a game's explicit rules at the cost of compromising its implicit rules. Whether or not these exploits are accepted as part of a particular streamed metagame is itself a social rule. LobosJr (Lobos), like Hob, is known for completing challenge runs in FromSoftware games, however the additional rules of the metagames that Lobos plays tend to be more creative and varied than Hob's. One such run is his *Cheese All Bosses* runs, during which Lobos aims to defeat all of a game's bosses exclusively using cheese strategies. It is often highly time-consuming to find and execute these strategies and, in many cases, more difficult than completing the game as intended. Runs like this then enable Lobos to consolidate and expand collective knowledge of the explicit rules of the game and put his own on display. The combination of creativity and skill that characterises his runs also characterises his streaming persona through his game play. Cheese All Bosses and similar runs can be seen as retaliations against games for moments when games play by explicit rules instead of implicit ones. When he exploits the disparities between implicit and explicit rule, Lobos demonstrates a power over the game that again feeds into the game mastery associated with his streaming persona. The relationship between game and streamer as ensemble members is thus performed as adversarial in the construction and

performance of streaming persona in relation to games, with each try to overcome the other by playing with the game rules in the production of new metagames.

Repetitions of and within challenge runs further affect the performance of game as ensemble member and ensemble performances of streaming persona in response to game play. Challenge runs are either what I call *iterable* or *non-iterable* based on the nature of their repetitions and the value of repetition to persona. An *iterable* run is a metagame that can be repeated in its entirety with the goal of quantifiable improvement. A *non-iterable* run is a metagame that can be repeated but there is limited value in doing so – the primary value of the run in its completion. For example, speedruns are iterable as each iteration aims to improve upon the streamer's best time and no-hit runs are iterable as the streamer aims to complete more of the game without getting hit. On the other hand, a playthrough using only one hand would be non-iterable as the novelty of the run is in its completion.[38] As they observe multiple iterations of iterable runs, spectators become invested in the streamer's improvements and can become attuned to nuances of play. They become familiar with streamer strategies, strengths, and weaknesses, more attuned to variations between runs, and able to recognise when a run is going well. This attunement is a connection to the streaming persona, and is visible when newcomers ask questions about why streamers are approaching the game in a particular way. Veteran ensemble members are able to respond to these queries, often repeating explanations that the streamer has given in the past.

[38] Non-iterable runs can become iterable with the addition of different rules, for example a one-handed speedrun would be iterable, however the change of rules also constitutes a distinct metagame thereby offering a clear distinction between the two.

The majority of Hob's playthroughs are iterable runs in the form of no-hit runs. He chooses to restart his runs after getting hit once. This is unusual, with many no-hit runners instead choosing to complete entire games getting hit as few times as possible and iterating to minimise that number. Hob's choice changes the metagame and adds additional tension to runs, as a hit signifies the termination of the iteration. His only complete iteration is his success. A consequence of this tension is increased interest as he progresses. The further into a playthrough that he gets, the less often his ensemble members have seen the game content that he is playing. Part of Hob's streaming persona thus entails a unique correlation between progress and perceptions of potential success. As a trade-off, however, earlier game segments are repeated more often. This repetition can breed impatience, leading to negative associations between particular game segments and Hob's streaming persona if they represent sites of repeated failure, such as Storm King discussed in the previous section. As a point of multiple prior failures, tension rises in proportion with the likelihood of the iteration ending, even if the end of the iteration is accompanied by an extreme performance. In contrast, streamers who complete iterations while minimising the number of hits taken, with the eventual goal of not getting hit at all, are able to vary their stream content more. Although consistently getting hit at the same point still has a negative effect on the streamer and the run, it does not force the end of the iteration. Repetition and difference within iterable runs poses challenges for streamers not just in game content but also in stream content. The choices that they make in tackling these challenges links approaches to particular metagames to streaming persona, thereby shaping streamer-game interactions and spectator experiences.

Non-iterable runs give streamers opportunities to associate skilled and creative game play with their streaming persona, though they also pose challenges through repetitive content.

While non-iterable runs *can* be completed multiple times, there would be limited value in doing so. This applies to metagames like completing a game without using a particular mechanic such as jumping or attacking, or Lobos' Cheese All Bosses runs. While these runs could be improved through iteration, their novelty places their value on completion rather than optimisation. The nature of their ruleset drastically increases the difficulty of play and often leads to the repetition of individual segments many times before successful completion. In July 2021, Laser attempted a one-handed Soul Level 1 run in *Dark Souls III*. In this metagame, she could only use one hand to control the game and could not increase the level of her character. Laser included a new camera feed on the stream screen that showed her hand on the controller. Spectators could then verify that the single-hand rule was adhered to. The feed also added novelty through a new stream element and rendered visible the embodied skill involved in the run. The latter condition placed restrictions on the weapons that she could use, the damage she could deal, her maximum health, and the quality of the armour that she could use. This metagame was a non-iterable run designed to challenge Laser via two significant additional rules. These constraints meant that she was forced to attempt boss fights many times before winning and moving on. The repetition and relative tightness of the loops – the shorter period of time between attempts – in contrast with most iterable runs meant that improvement was more easily identifiable. As Laser attempted the fights more times, she developed strategies for managing the metagame's additional constraints and adjusted to the limited dexterity of using only one hand to play. Laser's visible improvement, combined with the novelty and requisite skills of the run, as well as the knowledge that the run will progress once the segment is beaten, offset the potential for these tighter loops to lead to stale content. While the nature of iterable runs leads to comparisons between iterations, non-iterable runs tend to focus more on individual moments

within the run. The primary challenge in a non-iterable run is simply overcoming an obstacle rather than overcoming it as well as, or better than, previous attempts. Individual runs, like Laser's one-handed Soul Level 1 run, demonstrate skill and game knowledge. When a streamer consistently plays a range of non-iterable runs, these characteristics extend beyond their relationship to a specific game at a specific time and characterise their streaming persona.

The streamed repetition in both iterable and non-iterable runs constitutes a form of spectated rehearsal, whereby each moment is both practice and potential progress. The simultaneous function of each moment as practice and potential progress builds dramatic tension, which increases spectator investment. Whether spectating one of Hob's no-hit run attempts or one of Laser's one-hand Soul Level 1 boss fights, spectators are engaged by the unknowable answer to the question 'Is this *the* run?'. Spectators are yet again drawn in by variable outcomes and the investment in outcomes included in Juul's (2010) definition of game, here heightened by particular metagames. Familiarity with streaming personas gives ensemble members faith that victory is inevitable. This faith stems from knowledge of the streamer's abilities and their standards for completion before they move on to another run. Speedrunning is a "practiced practice" according to Scully-Blaker (2014) with reference to de Certeau's notion of spatial practice, which frames all narratives as rooted in space. Practiced practice is clarified both "both in the sense that the run took many hours of training but also in the sense that [the player's] approach to the spatial practice of playing through the game is so efficiently streamlined that it becomes a new practice unto itself" (n.p.). In this sense, all challenge runs are a practiced practice. They each require rehearsal and training, and additionally they each carve a specific path through the world and mechanics of the game that maximises chances of success. When streamers perform these runs live, they are rendering this rehearsal process

visible in ways that no other mode allows. Spectators don't just bear witness to a single success, but all failures on the path to that success. Spectators do not share the streamer's focus on game play and are not required to be present for every attempt, but this does not prevent them from becoming invested. Their investment is clear from consistent playful celebrations and genuine commiserations responding to failures and collective celebrations of eventual success in streamers' chats. Failure is a valuable performance of persona play that serves the essential function of practice during high performance metagames.

Challenge run metagames can elicit intense affective reactions from streamers that feed into their performances of streaming persona and their approach to streamed game content that are exacerbated by the building pressures of repetitions involved in both iterable and non-iterable runs. As part of the performance of an intense assumed labour for spectators, challenge run streamers must maintain focus and constant control of their emotions as they play. A single mistimed button press can end an hours-long run or add yet another attempt at a game segment. The pressures to succeed and to create ensemble-worthy content intensify the more times the streamer plays through the same loop. A number of the strategies described by the terms in Table 2 are used to help with failure management. The use of these terms empowers streamers to frame failure as part of the process of success (*rust*) or facetiously as a deliberate part of their performance (*throwing*). Hob categorises his failures in no-hit runs using vernacular consistent with the metagame rules. He refers to hits received as either *mental hits* – "when it's your fault, you weren't concentratin' or you weren't in the right mental state" – *skill hits* – "when you need to learn something about the situation or you need to practice more or you forgot something that you once learned" – or *RNG hits* – "which is just randomness, and it's unavoidable." While these terms are Hob's own and contribute to his streaming persona by

giving his spectators an insight into his perception of his game play, the sentiments are transferable. The very notion of a mental hit emphasises that these metagames are not just about what happens on screen but that these games play persona through challenge run metagames. Hob regularly communicates his emotional state to his stream ensemble, and not just through hypermasculine rage as previously discussed. Throughout 2021, he regularly discussed on-stream his sessions with a sports psychologist helping him to cope with the pressures of performing such intense and demanding game play. Laser was similarly open about her move away from particular iterable runs towards non-iterable runs, a decision that she made in response to severe anxiety that she experienced towards the end of iterable runs. Iterable runs seemed to have the most profound affective impacts on streamers as pressure builds gradually through the run due to a lack of finality (there can always be a better run) and the higher time cost of failure than non-iterable runs. Games play persona through their affect impacts on streamers, which are extended by the intense nature of challenge runs as metagames. How streamers cope with this intensity is part of their performance of streaming persona expressed through challenge runs.

The identity politics of mainstream game cultures also figure into the ways that challenge run metagames play persona, further tightening the relationship between playstyle choice and streaming persona. Close to half of the streamers that I observed over the course of this project engaged in some form of challenge run. From those observations, as well as connections between the streamers that I observed and other streamers who produced similar content, male-presenting streamers tended to engage in challenge runs more often and more consistently than female-presenting streamers. Challenge runs produced gendered assumptions around male-presenting versus female-presenting streaming personas. Although a wider scale

study would be required to confirm this, my observations suggest that assumptions around gender, games, and ways of playing within game cultures extend to streaming high performance metagames on Twitch. For instance, challenge runs lean into discourse around 'real' games – games that are culturally legitimised and labelled as worth playing and discussing. These metagames perpetuate the attitude that "real games must be both difficult and the right kind of difficult" (Consalvo & Paul, 2019, p. 83). Streaming high performance metagames invites live conversations about right and wrong ways to play, opinions on who should and shouldn't play, and whose voices are heard around these issues. Challenge runs, particularly those of games by FromSoftware, are seen as the right kind of difficult. They fall on the hardcore side of the casual-hardcore split, and players of these games tend to have strong opinions about how they should be played. Casual games are seen as 'games for girls' and they "are thought to be inferior, watered-down substitutes from players who can't handle hardcore titles" (Condis, 2018). These gendered associations also carry over to Twitch and affect how willing spectators and streamers are to accept a particular (meta)game as compatible with a streaming persona. Gendered assumptions were often played out subtly during challenge runs, for instance backseating tended to be performed as a helpful reminder for male-presenting streamers, whereas backseaters tended to assume that female-presenting streamers had less knowledge and skills in the game than they did. Additionally, as is the case more generally across the platform, male-presenting challenge run streamers tended to have larger audiences. Female-presenting streamers who play challenge runs need to grapple with the geek masculine values bound to this 'hardcore' play and they do this in many different ways, as Cote (2020) explores in relation to non-streamed game play. They can respond entirely through displays of skill, through displays of hypermasculine rage similar to Hob's, or through very deliberately

meeting gendered expectations in other ways such as performances of emotional availability through gratitude and care. In each case, though their streaming personas subvert gendered expectations around skilled play, they adhere to other expectations that enable them to be accepted by a broader audience.

The label of particular runs as *challenge* run also speaks to assumptions of able-bodiedness that contextualises playstyle choice on Twitch within broader cultures of play. Challenge runs that affect how streamers physically engage with a game either carry able-bodied requirements or mimic the impact of a physical disability on play. Runs like Lobos' playthrough of *Dark Souls* with a guitar or Laser's playthrough of *Dance Souls III* with a dancepad as a controller have physical requirements of the player beyond being able to hold a controller. Only players with the ability to hold and play a guitar or to stand and use a dancepad would be able to perform the required actions to complete these runs. Performing these runs thus imbues the streaming persona with able-bodied assumptions, at least to the degree that they are able to complete the run. In contrast, other challenge runs emphasise the difficulties associated with playing in ways that are the only options for many plays. For example, players who don't have sufficient use of two hands would only be able to play *Dark Souls III* with one hand, as Laser does, or no hands at all. By considering these runs *challenge runs*, ensemble members implicitly acknowledge assumptions of able-bodiedness present in videogame control schemes. In addition, this treatment presents difficulties that those who are not able-bodied face without an explicit acknowledgement of those challenges. When these runs are complete, they show that it is possible to play difficult games without being able-bodied, but that these are not the intended ways to play. In fact, these runs highlight unspoken biases within game design. The ways that streamers are able to use their bodies, and the ways that they choose

to use them to play, connect streaming personas to broader discourses around disability in gaming. However, challenge runs, as a form of player 'handicap' do not often implement the handicap as a way of broadening discussion and accessible play to more diverse abilities but rather to reinforce the normative body that performs a handicap.

Streamed challenge runs are examples of high-performance play through both the requisite demonstration of skill and their performance for an audience. They demonstrate how playstyle choices transform the streaming persona by through particular interactions between games and other ensemble members. Challenge runs are metagames that are played alongside and as part of the streaming persona metagame, which I demonstrated have social and cultural significance within individual streams and the platform more broadly. I discussed this significance in terms of the additional (social) rules that define these metagames. In returning to this chapter's prior framing of games as actors, I examined glitches as acts of game agency that threaten to undermine the streamer but can also be played to overcome the game's challenges. Through my notions of iterable and non-iterable runs, I examined the ways that different kinds of repetitions characterise interactions between ensemble members through building and resolving tension in different ways. Both forms of repetition affect how streamers and spectators engage with the runs, and act as forms of spectated rehearsal, blurring the boundary between practice and the 'real' thing. Finally, I looked to how streamers performed the affective impact of challenge runs and assumptions of able-bodiedness implicit within these metagames. Both contextualise identity-based assumptions surrounding playstyles within the broader cultures of Twitch and games that are expressed through streaming persona in the play of challenge runs.

Playing Games, Playing Persona

As the final aspect of streaming persona that I examine in this thesis, I have centred in this chapter the analysis of games as actors that has previously been present only in the periphery of my analyses. Games are stream ensemble members; games are stream actors that enact their agency through interactions with streamers that ultimately feed into the streaming persona within and beyond the world of the game. I have deployed theories of gaming involving rules, playful acts, and metagaming to argue that persona play by and through games points towards the sociocultural significance of Twitch as a site where game play is streamed and spectated. The labour involved in streamed game play is not just the act of playing games, but the assumed labour performed both by the streamer and by the game on spectators' behalf. These actors collaborate to produce ensemble-worthy gameplay, which is a sociotechnical phenomenon that characterises compelling streamed game play by accounting for the streaming mode, the Twitch platform, and the particular stream ensemble for which play is performed. This is a novel extension of previous works that taps into a critical streamer consideration of how well their viewers will respond to their content, emphasising that content is not either categorically appropriate for streaming or not.

In my examination of different playful practices on Twitch I demonstrated how play intent and form combine to define elements of streaming persona. The potential for and realities of failure are present in all game play and engage spectators through unknowable outcomes. I framed failure as a particular instance of the game acting upon the player, but also emphasised that it performs social functions that feed into streaming persona. Streamers also perform streaming persona through their management of failure, which can appear in the form of new metagames or performance of extreme emotional. Another universal consideration when

approaching games is in playstyle, for example in the choice to play challenge run metagames. Player-dependent rules introduced through challenge run metagames have strong social significance within and between stream ensembles. Through breaches in game rules, such as glitches or cheesing, I asserted that streaming persona is performed through an adversarial relationship between player and game with a constantly-shifting balance. My terminology of iterable and non-iterable runs captures the different kinds of repetition present in challenge runs, and the different impacts that they have on ensemble engagement through game play. The challenges of these metagames are not solely focused within the game. Instead, they extend to the increased emotional labour and the constant legitimisation through play required of streamers. My observations suggest in particular that streamers' performances of gender affect spectators' expectations of their gameplay knowledge and skills, in turn potentially leading to social challenges when streaming challenge runs – further differentiating the metagame of streaming persona from that of the challenge run. I also drew attention to the politics of challenge runs and disability, with able-bodied streamers mimicking disabilities for challenge runs. Though there is no malicious intent, and there is an acknowledgement of the *challenge* that disabled players face, there is no visibility afforded to those who have no other options.

9. Conclusion:

Streaming Persona as Performance and Play

Through this thesis, I have developed an expanded account of streaming persona. Twitch is an enormously popular platform for socialising around and through videogame content, making it a hub that emerges from and feeds into game cultures. By looking at authentic streamer performance, ensemble formation and interactions, boundary-work, arrangements and experiences of time, and games as nonhuman stream actors on Twitch, I have shown that streaming persona is not only a practice engineered and performed by the streamer. I have shown that streaming persona is a practice that is socialised, economised, temporalised, and gamified by multiple co-evolving systems and agents that are both human and nonhuman. This expanded understanding of streaming persona provides a holistic framework for the formation of identity with and through digital platforms and as such reshapes the platform-user relationship. As a subsidiary of Amazon that capitalises upon the labour of streamers, Twitch's popularity also merits attention in terms of the platform's broader economic significance. In particular, my account of streaming persona unveils the tensions between users performing for and with each other and the platform within a neoliberal framework driven by pursuits of attention and money through social interactions. With a strong interdisciplinary grounding and ethnographic methodology that is sensitive to the particulars of Twitch as a research site, namely the live, long-form, and synchronous nature of streaming, I extend upon existing scholarship both theoretically and methodologically, offering potential applications that expand well beyond Twitch and streaming to other digital platforms and modes.

This novel approach to streaming persona fulfilled the promises introduced in Chapter 2, namely to progress areas of research interested in digital media, platforms, games, and performance through its expanded understandings of the social, cultural, political, and economic spheres of the Twitch platform. Rather than treating games as texts or paratexts (Consalvo, 2017), I have contributed to games scholarship through this thesis by consistently treating games as actors whose agency is one among many stream actors. This perspective is consistent throughout the thesis but occupies a central role in Chapter 8. Persona studies is highly relevant to the titular concept of this thesis in more than name. Both this thesis and persona studies are broadly interested in the production and performance of identity for particular (digital) audiences. Yet while persona is traditionally associated with a single performer and a single role (Marshall et al., 2020), streaming persona is constructed and performed by multiple performers that contribute towards a single identity. Building on established precedents within the discipline of Performance Studies, this thesis has also covered new ground by drawing upon theories of performance such as Dixon's (2015) work on digital performance, Garde and Mumford's (2016) concept of 'Authenticity-Effects,' and Bay-Cheng's (2015) taxonomies of mediated performance. My analysis of streaming persona applied these theories to entirely new settings and explicitly maintained the claim that every aspect of streaming is performance. I have therefore contributed to multiple scholarly disciplines individually and by bringing them into conversation with each other in new ways, while also being responsive to and reflecting social, cultural, political, and economic concerns relevant to the platform.

This responsiveness to real-world concerns is then the motivation for the research question introduced in Chapter 1: how is streaming persona constructed and performed, and

how does it contribute towards the sociality, culture, politics, and economics of the Twitch platform? In order to answer this question and offer disciplinary contributions such as those outlined above, I defined *streaming persona* as the negotiated social identity that is performed by individual and collective (human and nonhuman) actors within a stream. This definition considers both human actors – streamers and spectators – and nonhuman actors – games and the Twitch platform. My analysis then attended to the different roles of each actor and interactions between them, which is a critical distinction between streaming persona and conventional understandings of persona. As this project focused primarily on streams that included game content, play was ever-present in my analysis. And so, taking the definition of play as "free movement within a more rigid structure" (Salen & Zimmerman, 2004, p. 304), I coined the term *persona play* to streaming persona within cultures of play and emphasise how it is reshaped as stream actors move freely within the technical confines of the platform and streaming mode, and the social and cultural boundaries that determine acceptable and unacceptable behaviours in individual streams and on the platform more broadly. Platform politics emerge from different enactments and negotiations of power between stream actors. And this is all performed over the platform economy as streamers labour for spectators and the platform, while each profits from the performances of the other. Streaming persona and persona play together formed the basis of my analysis and consequently this project's significance.

Not only have I offered new ways of understanding persona through this thesis, and thereby understanding the sociality and culture of Twitch, I have also built new and innovative methods. I initially detailed these methods in Chapter 3 and subsequently developed them through the remainder of the thesis. I conducted over one thousand hours of participant and non-participant observation across twenty-one channels, combined with an auto-ethnographic

six months of part-time streaming and three interviews with streamer participants. My successful adaptation of established ethnographic methods to Twitch contributes new ways to conduct ethnographic research that are sensitive to and reflective of everyday use of platforms. In particular, my research methodology drew and extended upon Boellstorff et al.'s (2012) handbook on ethnography and virtual worlds. Twitch deviates from the authors definition of virtual worlds due to its lack of 'worldness' and in this deviation I developed research practices specific to Twitch. For example, while the authors go to great lengths to detail participant observation as the primary method for ethnographers to study a culture on its own terms, the majority of my observation as a spectator was non-participant observation. In fact to only conduct participant observation would not be to engage authentically with Twitch as spectators often switch between active and passive spectatorship (cf. Spilker et al., 2018). My method of selectively switching between participant and non-participant observation was both novel and responsive to the specifics of the Twitch platform. My methodology also represents a significant contribution to Twitch research, the vast majority of which has not had researchers using the platform. Of those few that do, none that I have seen report the same level of authentic platform engagement as I do in this thesis.

Streamer Performance and Problems of Authenticity

In their performances on Twitch, streamers perform tensions between what I called *curated* and *labouring selves*. I examined these tensions in Chapter 4 and consequently contributed new ways of understanding perceptions of authenticity that were constructed and denied as a result of streamer decisions. My investigation of authentic streaming persona unveiled a number of significant social, cultural, and political issues relevant to the platform. Firstly and foremostly, streamer performances of gender affected perceptions of authenticity.

One of the central gendered tensions on Twitch that I observed was sociocultural assumptions produced by particular expectations around appearance, temperament, and gaming skills and knowledge for female-presenting streamers. Yet when these streamers met these expectations, they were accused of being inauthentic. Authenticity is in this way not a neutral problem for streamers in the construction and performance of streaming persona. Authenticity is mediated by every aspect of streamer performance including cultural markers of identity. By explicitly examining interactions between the corporeal streamer and nonhuman stream actors in the production of authentic streaming persona, I made a significant step towards another of this thesis' major contributions to scholarship with the first major example of streaming persona's inherently collective nature in this chapter.

This chapter's contributions were grounded in the curated and labouring selves and what I termed the *authenticity gap* between them. I argued that perceptions of authenticity were distinctly formulated by the strategically constructed presentation of the streamer self (curated self) and the perceived 'real' streamer self (labouring self), and that these two selves extend, repeat, undermine, and contradict each other as they interact differently in different streams and at different times. I analysed authentic streaming persona by disentangling the curated and labouring selves and examining these changing relationships. Such an approach intervenes in ongoing scholarly pursuits of understandings of authenticity, for example Heřmanová et al.'s recent edited collection (2022) by focusing on how authenticity is produced and perceived rather than querying the truth of particular performances. I make such an intervention in part by recontextualising theories of live theatre, in particular Garde and Mumford's (2016) concept of 'Authenticity-Effects,' into the digital performance space of Twitch streams. I concluded my examination of authentic streaming persona by pivoting from streamer performance to

nonhuman performances of the streamer. Through what I call *mediating objects* – lighting, cameras, microphones, etc. – and by arguing that emotes are what I term *virtual speech acts*, I demonstrated how nonhuman actors construct and perform authentic streaming persona through and alongside the human streamer. These human-nonhuman interactions add further tensions to authenticity as they introduce necessary separations between the curated and labouring self – a *minimum authenticity gap* that produces for spectators perceptions of an inaccessible 'real' streamer – while also enabling the stream and new forms of interactions between stream actors.

Playing Persona Together

Streaming persona is not only conceived through individual acts of staging and curation but is in fact performed by streamer, spectators, games, and platform together as stream actors. I called this collective the *stream ensemble* to indicate that ensemble members perform consciously when playing persona and to acknowledge shifts in focus between different (groups of) members. Through my examination of stream ensembles, I contribute to Twitch scholarship the explicit consideration of conflicting and negotiated agencies in the construction and performance of streaming persona. I further emphasise how the Twitch platform is an ensemble member that is complicit in bringing the financial and social together. The term *ensemble* also emphasises how the platform and its users together develop and maintain the neoliberal framework within which Twitch operates. The concepts that I introduced in this chapter identify tensions between users and the platform whereby each knowingly benefits the other, collectively producing the ecology of the platform.

Chapter 5 deployed the concept of stream ensemble to examine interactions between stream actors and the processes by which they play persona together. Through my

consideration of ensemble membership, I examined the sociality of Twitch in this chapter. I attended to spectator labour transforming into streaming persona and building a sense of community through normative behaviours and vernacular. Twitch's economy operates through interactions between ensemble members as spectators exchange financial capital for social capital through the platform. I also demonstrated in this chapter how ensemble membership is established through interactions between human stream actors, including the specific sociocultural practice that I termed *playful antagonism*, and that spectator agency and ambivalences within stream ensembles were key aspects of streaming persona. This chapter culminates in the first close scholarly examination of text-to-speech (TTS) on Twitch to examine ensemble agency and argue that TTS is both a tool and a nonhuman actor that represents the collective stream audience. In this chapter, I established streaming persona as collectively performed by stream ensemble members individually and through their interactions by closely attending to particular social behaviours and practices observed during this project.

The Boundaries of Streaming Persona

Ambivalences within stream ensembles structure streaming persona by defining and demarcating between acceptable and unacceptable behaviours. Through a focus on boundary-work as persona play, I newly revealed the structure of streaming persona in Chapter 6 – how its boundaries are shaped and refined through interactions between ensemble members – and provided insights into the position of streaming personas in relation to broader contentious social and cultural practices. Boundaries of streaming personas change between stream ensembles and are related to the broader boundaries of the platform, as I demonstrated through novel analyses of a range of gaming and sociocultural practices that frequently elicited and

disrupted boundary-work. My consideration of boundary-work as persona play on Twitch accepts that both those who play with and those who play against the streamer's performance of streaming persona are ensemble members whose behaviours feed into the sociality, culture, and politics of the platform.

My examination contributes to scholarship on moderation in livestreaming (e.g., Cai & Wohn, 2019a, 2019b; Seering et al., 2017, 2019) through the role of human and nonhuman moderators as ensemble members. These ensemble members contribute to the streaming persona by performing acceptable behaviours, identifying breaches, deciding upon suitable punishments and enacting them. Boundary-work thus clearly delineates between behaviours that are and that are not consistent with particular streaming personas, particularly when those distinctions are challenged. I argued in this chapter that spoiling and backseating were game-related sociocultural practice that bred extreme contention within and between stream ensembles by relating them to Consalvo's (2009) framework of cheating. This analysis is significant as thus far no focused research has been performed in relation to either practice and it is clear from this project that both are socially and culturally significant practices relevant to Twitch and game cultures more broadly. I found these practices were further complicated by the associated necessity for spectators to balance their own experiences of games alongside their ensemble memberships, often risking one for the sake of the other. I also conducted a novel analysis of toxic behaviours in streaming. This analysis contributed to ongoing scholarly discourse surrounding toxicity and digital interactions (e.g., Bacon, 2022) by highlighting ways in which toxic behaviours became part of streaming persona. Toxicity was often deployed ironically or through acts of boundary-work in response to other toxic behaviours, destabilising toxicity's inherent negativity in persona play.

Time Control and Persona Play

The arrangements and experiences of time on Twitch shed new light on temporal power as they facilitated, directed, and characterised the streaming persona. I present with Chapter 7 among the first scholarly considerations of temporality on Twitch – an essential aspect of the platform given the emphasis on synchronous interactions – and certainly the first to consider how the platform's temporality is a constant negotiation of temporal power between ensemble members. I demonstrated ways that persona plays time as ensemble members arrange time and time plays persona as ensemble members experience and are affected by time. In this chapter, I made explicit the temporal politics underpinning streaming persona by adapting Kitchin's (2023) concept of temporal sovereignty to examine how ensemble members enacted control over each other's experiences of time. I argued that temporal sovereignty is held by the platform and streamer as spectators are encouraged to spend more time with the stream ensemble, but also by collective audiences for whom the streamer is compelled to stream.

To unearth Twitch's temporal politics, I established the concepts of *internal* and *external temporalities* and argued that streamers and spectators together produce a relational temporality of streaming persona. Spectators' temporal experiences are affected by the times that streamers choose to stream and how they structure the streamer, and streamers make these decisions in order to maximise their viewership. Through my temporal analysis, I trace ways that streaming persona evolves over time and capture motivations for these changes. I identified the temporal sovereignty of the platform through platform features like Channel Points from which Twitch's temporal economy emerged over the duration of this project. This temporal economy quantifies streamer value and spectator contributions to the streamer, thereby distributing temporal power to human ensemble members. Ultimately however, temporal

sovereignty is primarily held by the platform that controls this economy and maintains distribution rights over temporal wealth. Similarly, games hold temporal power as ensemble members, though the impact is quite distinct from that of the platform. I argued in this chapter in particular that stream rhythms were driven by game rhythms and that streaming persona incorporated and responded to these rhythms through interactions between ensemble members.

Games as Players

In Chapter 8, I brought together the perspectives in each of the previous chapters to argue that games play person by examining the role of games as nonhuman ensemble members – as actors capable of enacting agency upon the player. This particular framework for game analysis contributes to game studies scholarship by treating the game as neither text nor paratext (Consalvo, 2017), but as an actor that operates alongside the player-streamer in the construction and performance of streaming persona. I separated how streamers perform game play from how streaming persona is played by games. Streamed and spectated game content is not universally compelling, and by its very nature is compelling only in relation to streaming persona. In other words, streamed and spectated game play content is popular in part because it is mediated by game-streamer interactions.

To examine games as stream actors, I blended a micro analysis of acts of performance in games aided by Jayemanne (2017) with a macro analysis of streaming persona as a metagame driven by Boluk and LeMieux's (2017) work. I fused these theories to investigate why and how streaming and spectating game play is compelling, in other words why game streaming is such a significant sociocultural practice, and to argue that the answers to these questions rested in investment in unknowable outcomes in both game play and streaming persona metagame play. My consideration of game play content and playstyle choices in this

chapter also contributes to streaming research as despite the growing body of game streaming research, very little attends closely to games in this way. I demonstrated the social and cultural significance of the game as stream actor through my concept of *ensemble-worthy* game play, which acknowledges the specific socio-technical environment of Twitch and individual ensembles. I further emphasised game-streamer interactions as the source of compelling game play on Twitch through analyses of in-game failure and challenge runs. Unknowable outcomes, such as uncertainties of success or failure, or what will happen next in either stream or game, drove spectator engagement in game play. I established these motivations by comparing and contrasting the social interactions and streamer-specific practices, specifically those related to in-game failure, which is inevitable, and challenge run metagames, which were optional playstyle choices.

Streaming as Live Performance

Each chapter in this thesis analysed one aspect of streaming persona – streamer performance and authenticity, stream ensembles, boundary-work, temporality, and games as ensemble members – and presented behaviours and practices that best demonstrated that aspect. However each moment on Twitch is experienced simultaneously through all of these aspects. And together they newly frame social and cultural, as well as shed light on political and economic, issues that affect the platform and its users. Streaming persona is sensitive to interactions between human ensemble members and those facilitated by nonhuman ensemble members. These interactions construct and communicate values shared by members of stream ensembles and those that align and distinguish between different stream ensembles. These values reflect the politics of the platform, which have evolved from those of mainstream game culture, visible through the identity-based assumptions that affect streaming persona as

investigated in relation to gendered perceptions of authenticity and boundary-work associated with toxic behaviours. I explored how these assumptions extend to every aspect of Twitch participation, affecting the relationships between ensemble members, the boundaries of streaming persona, how streamer time is valued and who holds temporal power, expectations around streamer-game interactions, the performance of play as a form of labour that unveils Twitch's political economy, and how power is distributed across and enacted by ensemble members in different ways.

I have also, throughout this thesis, established the economy of the Twitch platform as present in every aspect of its use. Streamers, particularly those who do it for a living, alter their performances to invite financial contributions without coercing. Spectators exchange financial capital for social capital and status that affects how they perceive themselves in relation to the boundaries of streaming persona. The temporal and financial economy feed into each other through the platform's temporal power. And games perform with streamers to draw investment from spectators than can be expressed through financial support. Streaming persona is therefore present in every aspect of Twitch participation and feeds significantly into the platform's sociality, culture, politics, and economics. In this light, this thesis' significance extends beyond scholarship as its focus upon actual platform use reflects upon the significance of Twitch as an increasingly prominent site of digital sociality and culture that is wrapped up in capitalist neoliberalism.

The methods and primary outcome of this research – the concept of streaming persona – are specific to Twitch but are easily applicable to a range of platforms. Streaming persona is also significant in its holistic approach to platform engagement. Rather than providing a singular close analysis of one aspect of Twitch as a sociocultural site, streaming persona

contextualises each aspect of analysis in terms of others. While my analysis in each discussion chapter analysis has value in understanding streaming, it is only through all chapters combined that a complete understand can be formed. In this thesis, I have examined Twitch as a platform – as a nonhuman actor that performs alongside its users. However Twitch is also a corporation that relates to its users in other, drastically different ways. Further studies may investigate Twitch from a high-level perspective to unveil the corporation's relationship to its users as they differ from the ground-level platform-user relationships that I presented; a top-down approach to complement my bottom-up one.

There are however many potential additional applications for the concept of streaming persona. As a starting point, some streamers opt to play videogames rarely if ever. Streaming persona can be deployed to investigate how success and failure are performed and understood for a Twitch streamer fishing on a lake, or how reacting to YouTube videos live on Twitch repurposes content playfully. It may also shed light on what ensemble-worthy content looks like for a streamer who only chats with their spectators. Each of these different approaches to streaming on Twitch reframes the meaning of 'game' within Twitch streaming. Each approach would reveal new practices and new ways of understanding how persona is played. Broadening the scope further: what would streaming persona look like on a different platform, like YouTube Live, Chinese platform Douyin, or Korean platform AfreecaTV?

Even an analysis that accounts for all of the elements that I have presented may not be comprehensive. As I noted in Chapter 7, platforms change. While the underlying principles that I present will likely persevere, the details will change with the platform's userbase and features. The specifics of streaming persona may therefore be updated to reflect the present moment. Such an update may take the form of altered details with the aspects addressed in this

thesis or the additional of entirely new aspects to suit new contexts. And so, in concluding this thesis, I offer streaming persona as a method for analysing Twitch streams as live performance, and as an invitation for other researchers.

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