

Spontaneous, Yet Studious: Esports Commentators' Live Performance and Self-Presentation Practices

LINGYUAN LI, Clemson University, USA

JIRASSAYA UTTARAPONG, New Jersey Institute of Technology, USA

GUO FREEMAN, Clemson University, USA

DONGHEE YVETTE WOHN, New Jersey Institute of Technology, USA

Esports commentating, the practice of reporting, explaining, and elaborating live competitive gameplay to spectators, is a centerpiece of esports as a rapidly growing spectator sport and an essential component of today's growing gaming/live streaming ecosystem. In particular, esports commentators face three unique challenges: the preparation for conducting real time commentating on highly dynamic esports games; the complexity of in-the-moment decisions during the game's broadcast; and the balance between personal self-presentation and professional content presentation. Yet this emerging and novel sociotechnical practice and how these challenges affect esports commentators' live performance and self-presentation practices has received relatively little research attention in HCI and CSCW. In this paper, we endeavor to address these limitations by empirically analyzing 19 esports commentators' sociotechnical practices. Our findings highlight the complex interaction dynamics involved in esports commentating as well as the importance of professionalism and social presence in esports commentators' self-presentation. In order to execute seamless and spontaneous commentary, commentators must be studious and engage in much prior research and have a clear sense of self. We contribute to the growing CSCW literature on esports commentating practices by revealing esports commentators' unique decision making process presenting information and their self-image.

CCS Concepts: • **Human-centered computing** → **Empirical studies in collaborative and social computing**.

Additional Key Words and Phrases: esports, esports commentator, live streaming, self-presentation

ACM Reference Format:

Lingyuan Li, Jirassaya Uttarapong, Guo Freeman, and Donghee Yvette Wohn. 2020. Spontaneous, Yet Studious: Esports Commentators' Live Performance and Self-Presentation Practices. *Proc. ACM Hum.-Comput. Interact.* 4, CSCW2, Article 103 (October 2020), 25 pages. <https://doi.org/10.1145/3415174>

1 INTRODUCTION

Esports commentators aim at entertaining and informing viewers of competitive gaming by narrating the game in real-time [6] both at in-person events and online live streams. Esports borrows many features from traditional sports, yet has unique intricacies that make esports commentators' practices quite novel. For example, while traditional sports are viewed from a perspective where commentators can see all the action at once (open stadiums or fields), esports presents widely different environments that their respective commentators are expected to specialize in and adapt

Authors' addresses: Lingyuan Li, Clemson University, Clemson, USA, lingyu2@g.clemson.edu; Jirassaya Uttarapong, New Jersey Institute of Technology, Newark, USA, ju35@njit.edu; Guo Freeman, Clemson University, Clemson, South Carolina, USA, guof@clemson.edu; Donghee Yvette Wohn, New Jersey Institute of Technology, Newark, USA, wohn@njit.edu.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from permissions@acm.org.

© 2020 Association for Computing Machinery.

2573-0142/2020/10-ART103 \$15.00

<https://doi.org/10.1145/3415174>

to. Some games are in a first-person perspective where the player(s) look through the eyes of their character, some have a third-person perspective where player(s) see their character(s) and surroundings from a fixed distance, others like MOBAs (Multiplayer Online Battle Arenas) are viewed in an aerial perspective, while fighting games always have a consistent side-view of the two opponents. The environments and rules that govern video games are incredibly diverse, where play styles range from shooting to character combat to real time strategy making.

Therefore, esports commentators seem to face three unique challenges regarding how they should gather and process information to orient their commentating, which are critical to manage their online presence and interactions with diverse viewers. The first is the challenge to be prepared for conducting real time commentating on highly dynamic virtual esports games. In diverse esports games, fights can range from 1v1 fights (i.e., one player versus another player) to 5v5 team (a team of five players versus another team of five players) fights such as in League of Legends. Despite commentating in traditional sports also requires solid background knowledge on statistics of both the athletes and the sport/game itself, the sheer number of components that esports commentators have to be familiar with are at least several times more than those required to understand in traditional sports. In particular, the majority of esports spectators watch to learn- how to tackle, how to score more, etc. Unlike commentators for traditional sports which are already familiarized by public, esports commentators are more like teaching than purely commentating [75] - not only the statistics of the players at hand, but the statistics of every playable character (often with varying abilities) and every playable item that exists in the game. The reason is that esports gameplay often involves many different aspects all at once, such as multiple fights going on across the game's map, what items the players buy, all of the player's continuously changing statistics, and the inputs of the players.

The second challenge is that though traditional sports commentators also have to make in-the-moment decisions if they are commentating live, esports commentating have to manage two layers of interpretation in their in-the-moment decisions - the player and his/her avatar [3]. Therefore, for esports commentators, they not only need to describe what players' avatars are presenting on the screen but also interpret players' techniques and strategies behind their avatars. In this sense, esports commentators must both make in-the-moment decisions and switch the angle of interpretation at any time during streaming to strategically choose what to highlight and focus on out of a multitude of factors to tell their audience.

The third challenge lies in how commentators should balance the presentation of themselves online and the presentation of content to the viewers. On the one hand, esports commentating is about creating an emotional connection with the viewer, making them feel like they are in the action [37]. Therefore, how commentators present themselves online and manage their interaction with viewers are critical to create such a connection. On the other hand, average viewers often depend on commentators to understand the minute details of every decision/action in gameplay and know when to transition to another topic before the previous one becomes irrelevant to the current gameplay. This imposes a high stress on a commentator to appropriately present and highlight the content (i.e., gameplay) to the viewers and adapt to changes faster than everybody else [66]. Such a high demand for both personal self-presentation and professional content-presentation naturally makes esports commentators' practices challenging for all types of commentators regardless of experiences and styles.

Extensive research has focused on how people play or watch esports games [17, 18, 25, 58, 85], the perspective of the commentators has been very much overlooked. Additionally, a small body of research has shown that commentators are a necessity to the esports viewing ecosystem, with some viewers choosing to watch only when their preferred commentator is present [42, 66]. However, very little has focused on the above-mentioned three unique challenges that esports commentators

face and how such challenges affect their live performance and self-presentation practices. The goal of this study is to address these limitations. We focus on three main research questions to explore the unique challenges that esports commentators face in their practices:

RQ1: *How do esports commentators prepare for their performances before the game?*

RQ2: *How do esports commentators manage and present information during the game?*

RQ3: *What aspects are important to esports commentators' self-presentation online?*

We believe that our focus would extend existing CSCW knowledge on esports and new interaction mechanisms in emerging sociotechnical systems. Like any other spectator sport, esports commentators play a key role in providing information, professional commentary/opinions, and entertainment, making them a key stakeholder in the esports experience. From a CSCW perspective, esports commentating as a computer-mediated activity not only differs from traditional sports commentating but also involves real-time decision making, rapid information processing, and balance between interpretations of the player and his/her avatar as well as between the presentation of commentators themselves online and the presentation of content in a digital entertainment domain, making it a unique sociotechnical situation. In addition, these activities take place as part of a performative act, opening the opportunity for exploration of nuanced self-presentation in this novel context.

2 RELATED WORKS

2.1 Esports, Spectatorship, and Commentators

In the past two decades, esports has evolved from a niche entertainment to a thriving global industry that receives broad publicity. Its unique combination of recreation, competition, interaction, and cooperation has also led to the emerging research agenda on esports in HCI and CSCW [16], bringing together concerns regarding new interaction modality designs [27, 28], live streaming technologies and communication strategies [41, 43, 47, 56], team coordination and social support [16, 86], marketing and business practices of esports [69, 70, 74] among others.

Though there is no consensus on the definition of esports due to its multidimensional nature, a high level understanding is that esports usually refers to competitive multiplayer gaming of a "professional type" that involves spectating [13, 16, 22, 25, 39, 62, 85]. It involves competitions "at various levels and scopes, ranging from a small local match using LAN to national and international tournaments" [16]. More uniquely, esports has established governing bodies to supervise and manage this new industry [16].

Another common interpretation of esports is to view it in light of qualities of traditional sports. The coined word represents a paradigm transition of sports (i.e., a culture of human motion) from an industrial society to today's digital era [81]. Following this trend, a few studies have investigated the "sport-like" qualities of esports. For example, Hamari and Sjöblom characterized esports as sports activities mediated by computing systems (e.g., online gaming) [25]. Lee and Schoenstedt analyzed the correlation between esports game patterns and traditional sports [48].

Especially, spectatorship has been considered one of the primary distinctions between esports and other forms of gameplay or traditional sports [25]. In the realm of esports, gaming activities have evolved from individual experiences in computer-generated environments to public experiences. The improvement of Internet bandwidth and the popularity of live streaming sites (e.g., Twitch, Youtube Gaming) further promote such a spectatorship and interactions between the spectator and the competitor (e.g., via computer-mediated communication such as Twitch web chat). As a result, both players and viewers have actively participated in and shaped the perception, understanding, and experience of gameplay [7, 64]. According to Twitch, the largest live streaming platform in the United States, there are five million active viewers watching live gaming each day [83]. The

number of global esports audience is estimated to be more than 600 million in the next two years [65]. This large and diverse base of spectators, therefore, leads to two emerging issues in the gaming/streaming ecosystem. First, esports viewers, some of whom are professional fans while many others may be newcomers to esports, often have a variety of backgrounds and knowledge of the streamed games. Second, insider jargon is both a significant feature of the esports culture and a main barrier for newcomers to enter [6].

The emergence and increasing popularity of esports commentators aims at addressing the above-mentioned two issues – they not only deliver blow-by-blow insight for existing fans but also provide new viewers with the necessary knowledge that they need to understand and appreciate this field [6]. As Bijan Karshenas noted, "shouts are the voices of esports, and, in a sense, they are its best hope for attracting new and different audiences to the industry" [40]. While esports streaming offers audience with on-demand content, commentators make viewers stick around and make the games shine [32, 80]: they provide viewers with both player strategies, game mechanics and other in-depth details and structure of the entire broadcast [32]. As a result, the more viewers learn about the game, the more engagement they feel, which leads to a more satisfying spectator experience [21]. Commentators, in this way, are taken as another channel through which people who love the game but are not able to play well at it express passion for the game [6]. They serve as a link between audience and the events. Their commentaries usually cover the whole process, lower the viewing threshold to engage spectators, and help them create close emotional connection with games. As Henderson summarized, "the most significant part [of streaming esports], though, is the commentators" [32].

However, despite the above-mentioned prior literature has explored the similarities and differences between traditional sports and esports or questioned the legitimacy of defining eSports in light of traditional sports (e.g., [36, 81]), little to none scholarship focuses on comparing esports commentating to traditional sports commentating or other general forms of online commentating. Instead, only limited public media coverage provides an overall image of the uniqueness of esports commentating from the general public's perspective.

Therefore, we argue that it is important to study esports commentating not only for game researchers but also for HCI and CSCW researchers concerned with new interaction mechanisms and performance practices online. Despite esports has been considered an emerging research context in HCI and CSCW [16] and live streaming has been investigated as a form of cultural production [20, 26, 63], part of digital economy [35, 74, 85, 86], an engagement with cultural heritage [53], and affective labor and performance [87], very little study focuses on esports commentating except Kempe-Cook et al. [42] and Rambusch et al. [66]. These studies have both highlighted the strong connection between fans and certain commentators, as many viewers would not only watch a game for a team or player but also for a specific commentator [66]. Yet, they specifically focused on personal branding but did not provide a comprehensive image of what makes esports commentating a novel sociotechnical practice, including the unique challenges that esports commentators often face – the preparation for conducting real time commentating on highly dynamic esports games involving many different aspects and game elements all at once; the complexity of in-the-moment decisions during the game regarding interpretations of both players and their avatars; and the balance between personal self-presentation and professional content presentation. These challenges, therefore, lead to the three RQs that we proposed at the beginning of this paper.

An in-depth investigation of these unique challenges and how they affect esports commentators' live performance and self-presentation practices would help the CSCW community better unpack the complex information processing and decision making practices that esports commentators engage in, the mental models and tools they incorporate to make their decisions on-the-fly, and how they interpret information into a form of entertainment. It will also highlight how emerging

technologies are constantly shaping nuanced online interaction, novel practices of self-presentation, and collaborative community acts online.

2.2 Self-presentation and Performance Online

In particular, we use a self-presentation framework to situate esports commentating as a performative act, so as to better understand the challenges and interaction dynamics involved in esports commentators' sociotechnical practices. The digital presentation of self has been a long-standing concern in HCI and CSCW. In the past two decades, extensive work has collectively highlighted *selective self-presentation/performance* as an essential theoretical framework to understand how people perceive, construct, and manage their online identities. This framework is based on Goffman's metaphor of *theatrical performance* [19]. According to Goffman, self-identity is constructed in a collective and interactive process within different social settings; in doing so, it is important for performers (i.e., who endeavor to construct their self-identity) to identify audiences so as to adjust or customize their performance.

The popularity of various sociotechnical systems further complicate this practice. A large body of prior research has focused on *selective self-presentation/performance* in well-established mainstream sociotechnical systems such as Facebook [2, 9, 23, 24, 51, 52, 55], Twitter [82], and popular online games and virtual worlds including *World of Warcraft*, *Second Life*, *EverQuest*, and *Audition* [11, 14, 15, 34, 88]. Such studies have found that many systems support the creation of multiple separated profiles or "circles" to carefully "craft" which aspect of the self to be presented [38, 55]. In addition, people can choose to construct different facets of identities across different systems [12]. Lastly, some systems such as online gaming and virtual worlds afford the experimentation of completely new identities (e.g., cross-gender play) [34].

Therefore, this framework highlights how identity is portrayed and experienced as a combination of conscious personal choices and specific technological affordances of online social spaces. It sheds light on a number of identity practices and issues in sociotechnical systems, including the authenticity and multiplicity of digital identities [10, 12, 24, 55, 61], identity construction based on "the imagined audience" [51, 52], and cross-gender/queerness gameplay [14, 15, 34, 67].

More recently, there is an emerging trend in HCI to better understand more nuanced presentations of identity in sociotechnical systems, especially in those that have not been widely studied. Such studies have highlighted a number of new phenomena and sociotechnical practices, including: 1) *temporality* as shown in the so-called "throwaway accounts" on Reddit [46]; 2) *tagging and formatting* as in Tumblr LGBTQ bloggers' creative writing [60]; 3) *visualization* as in image-centric platforms (e.g., Instagram) [1, 45, 59]; and 4) *geography* as in location-based mobile dating apps for LGBTQ users [4, 30]. However, as we have demonstrated in Section 2.1, esports commentating, as a real-time, highly dynamic, interactive, and high-fidelity practice, is significantly different from any of these contexts (e.g., forum, blogs, sharing images, and online dating). In this paper, one of our goals is to contribute towards this body of literature on self-presentation and performance online by analyzing a new phenomenon of self-presentation in an emerging unique sociotechnical practice – esports commentators' practices to manage their personal self-presentation and professional content presentation.

3 METHODOLOGY

To recruit a diverse group of participants, we recruited commentators ranging from amateur to professional and looked into commentators of each group of popular competitive games: fighting games, first person shooters, strategy games, and MOBAs (multiplayer online battle arenas). Within fighting games, we looked into commentators for Super Smash Bros Ultimate, Super Smash Bros Melee, Tekken, Street Fighter, and Dragon Ball FighterZ. Within first person shooters, we looked

into commentators for Overwatch, Call of Duty, Fortnite, Halo, Splatoon and CS:GO. Within MOBAs we looked at commentators of League of Legends and Dota 2.

We utilized our connections with collegiate esports clubs in the USA to recruit potential participants. Through collegiate and local events, some commentators were already in touch with these clubs and were recruited via an esports Discord channel for a mid-sized university in USA. We also searched "commentators" and "casters" for each game genre on Twitter. For the commentators whom we found online, we either sent recruitment messages to their business emails or directly messaged them on Twitter or Discord depending on the information listed on their Twitter profiles. With the assistance from an informant who involved in the European gaming community, we also contacted 79 commentators in that community via Twitter and forwarded contacts through email.

We then interviewed all commentators who responded to our recruitment message and were willing to be interviewed via voice chat on Discord. As a result, a total of 19 semi-structured in-depth interviews were conducted. Table 1 summarizes participants' demographic information. Though it is important to distinguish casual amateur commentators from professional commentators in esports commentating, all our participants considered them "professional" but reported their status as part time or full time. They also mentioned that they conducted commentating at both offline and online (streamed) events.

Table 1. Demographic information of participants

Participant #	Age	Gender	Game(s)	Status	Yrs of Exp.	Occupation
P1	20	M	Overwatch	Part-Time	2	Systems Engineer
P2	23	M	Smash	Part-Time	4	Car Dealership Consultant
P3	22	M	Smash	Part-Time	4	Lyft Driver
P4	24	M	Overwatch	Full-Time	6	OWL
P5	28	M	Overwatch	Part-Time	8	Retail
P6	22	F	Smash	Part-Time	1	Desk Job
P7	N/A	M	CoD, Halo, Fortnite	Part-Time	6	Retail
P8	43	M	Street Fighter, Tetris	Full-Time	10	FGC / Former Software Programmer
P9	23	M	Smash	Part-Time	3	Burger Place
P10	29	M	Smash, Splatoon	Part-Time	3	Delivery Driver
P11	25	M	Overwatch	Full-Time	1	Overwatch Coach/ Commentator
P12	23	F	Smash, Overwatch	Part-Time	2	Twitch Streamer
P13	24	M	Smash	Part-Time	N/A	Animator
P14	24	F	OW, H.S, Pokemon	Full-Time	6 months	Esports
P15	24	M	Smash, Tekken 7	Part-Time	2	Auto-Parts Vendor
P16	23	M	League of Legends	Part-Time	1.5	Chef
P17	19	M	Rainbow Six Siege	Part-Time	6 months	Security Guard
P18	20	F	CS:GO	Part-Time	N/A	Internship
P19	23	M	Overwatch	Part-Time	Just started	Chef

Interviews ranged from 45 minutes to 90 minutes long. The interview started with ice breaker questions such as what games they like, what an average day looks like for them, and whether they have a group they game with. It then moved on to basic information about the commentator themselves such as how they got into commentating, how long they have been doing it for, the games they commentator, whether it is their full-time job or not, and whether they are self-identified as amateur or professional. The third part of the interview used the self-presentation theory to focus on questions that explored specifics of their commentating practices of commentary. Example questions included their physical and mental preparation for getting their online presentation ready before the commentating, how they managed their personality/persona online for their

commentating practices, and how they managed their language and vocabulary both for general online presentation and for specific game mechanics.

We then used an empirical, in-depth qualitative analysis to analyze the collected data [73]. Based on McDonald et al.'s [57] guidelines for qualitative analysis in CSCW and HCI practice, our analytical procedures focused on eventually yielding concepts and themes (recurrent topics or meanings that represent a phenomena) rather than agreement – because even if coders agreed on codes, they may interpret the meaning of those codes differently [57]. Therefore, we did not seek inter-rater reliability in our analysis but endeavored to identify recurring themes of interest, detect relationships among them, and organize them into clusters of more complex and broader themes.

In doing so, we first read through all interview transcripts to get a general understanding of the data regarding esports commentators' performance and self-presentation practices online. We also divided the interview questions based on the three research questions and color coded them. We then collectively identified thematic topics and common features in the data regarding each research question (e.g., preparations before the commentating, information process and decision making during commentating, and considerations for self-presentation and content presentation) for further analysis. We carefully examined and reviewed the thematic topics and developed sub-themes. We also collaborated in an iterative process to discuss, combine, and refine themes and features to generate a rich description synthesizing esports commentators' performance and self-presentation practices.

4 FINDINGS

Using quotes from participants' own accounts, in this section we divide our findings into three parts to answer our research questions: key preparations for live performances in esports commentating (*RQ1:How do esports commentators prepare for their performances before the game?*); esports commentators' in-the-moment information management processes (*RQ2:How do esports commentators manage and present information during the game?*); and important considerations to establish esports commentators' self-presentation (*RQ3:What aspects are important to esports commentators' self-presentation online?*).

4.1 Key Preparations for Live Performances in Esports Commentating

Our participants highlighted three key ways through which they would be ready for their live performances, including aesthetics (e.g., how they look or appearance), physical function (vocal, physical, internal preparation), and background information/knowledge.

4.1.1 Aesthetics. Esports commentators expect that their public image would show enthusiasm and professionalism. Being enthusiastic and professional also make them feel more confident in front of the camera. This is especially important when viewers are able to see them in some events, which means they have to be ready at all times. Our participants reported that they put effort into appearance prior to a casting. However, there is no one-fit-all dress code for professionalism. Rather, participants' dress code greatly varied based on the type of event that they were casting. P18 (20, female), a CS:GO commentator, said that she would always think of how she should dress and her decision often depended on the event:

"My mixed tournaments that I host myself, they're a bit more casual [...] a sweater and that's fine. But when I hosted XXX [a more formal tournament], I made sure I looked like quite smart cash. So I was running a blazer with a nice little shirt under it."

Similarly, P2 (23, male) said that he would prepare his appearance, "*depending on the occasion*". P8 (43, male) recounted how he typically tried to be himself and dressed casually no matter what. One

potential reason might be the type of games that he often casted. P8 is a fighting game commentator and talked about how the vibe of that community is a more comfortable and natural one. However, he also mentioned that in contrast to his opinion on a more casual dress code for fighting game events, a friend/co-commentator who he often worked with had an opposite stance and always wore dress shirts and ties to commentate. Furthermore, despite how P8 dressed casually, he said that before casting an important large scale event, he would still get a nice haircut to look professional.

In summary, the general consensus from the participants was that they preferred to dress "decently". Overwatch commentator P5 (28, male) described "dressing decently" as "not being in bum clothes". P17 (19, male) also liked to simply wear a "decent shirt" as oftentimes he only commentated from his own home. He said, "I'm not going to be showing anything below that obviously. So I try to wear a decent shirt and then make sure the lighting is good". In terms of dressing more "upscale", League of Legends commentator P16 (male, 23) described this as a "button up shirt with a blazer, no tie." Likewise, Smash P9 (23, male) talked about how he was "a bit of a diva" and would wear a blazer and a button down shirt. P13 also detailed his similar motivation for dressing well:

"I'm a big fan of [...] making sure that I look the part, making sure that I can present myself in a way that impresses people, because I think that just helps reflect better on not only myself [...] but on the event in general."

In addition to clothing, hair style was an important part to get the "look" ready. Smash P9 (23, male) explained his extensive hair care routine and how this was an essential pre-commentary ritual for him:

"I put [...] gel in my wet hair and [...] I comb it into a part you know, with my comb, get it to look all nice and even and I just do my hair like how I normally do before I get on the mic really. So that's probably my biggest ritual before".

In contrast to this, P2 (23, male), also a Smash commentator, had an interesting and very considerate take on using hair product as a . He said:

"My tip for commentators [...] try to avoid hair products like hair gel or hair spray [...] because you're probably going to be sharing the same headset with someone throughout the day and I'd rather not leave someone with my sticky, gooey headset."

Therefore, participants seemed to demonstrate different patterns and preferences to prepare themselves aesthetically. In general, there was no concrete and acceptable way to have a "physical look" for any particular game. These different patterns to approach aesthetics depended on both the specific norms for various gaming communities as well as subjective, personally defined criteria.

4.1.2 Physical Function. Physical activities or warm-ups were also reported as a key preparation before the live casting. These activities ranged from meditation to vocal exercises to full body exercises, or making sure to eat enough food and hydrate beforehand. P1 (20, male) talked about the importance of warming up his vocal chords and having water on hand because one of the easiest ways to burn a out was burning out his/her vocal chords. P15 (24, male) and P16 (23, male) also shared similar priorities in their physical preparations. P15 said:

"I try to drink a lot of water and keep myself hydrated, make sure that I have somewhat of a decent meal in my system already because [...] I've been spewing out this word energy for like the past like 10 minutes. And its important to [...] make sure that you have that energy."

Likewise, P16 made a pot of hot Korean tea with honey and talked about how the honey coated the throat and was good for it.

Many participants also considered internal preparations as an essential step for getting themselves mentally ready for the casting. The main goal of such preparations was to build up the necessary energy for a casting. As P15 (24, male) described, he would always keep this in mind knowing that if he commentated with dead energy then the spectators would respond negatively.

Additionally, building up confidence was part of the internal preparation. For example, P6 (22, female) explained how she needed to "lift up" herself before her casting by saying encouraging words ("*a pep talk*" to herself. This not only alleviated her anxiety but also helped with her self-confidence:

"In my regular life, I'm very anxious. I've gone to things in my normal life, like get togethers and not talk to anyone for a good hour before I'm comfortable. So when I prepare to commentate, I usually like to give myself a pep talk. In the car [...] I like to kind of say to myself [...] remember to do this [...] smile. I usually try to remind myself to appear bubbly and smile, because if I don't, I'm just going in miserable [...] it helps my self confidence, whether people are going to see me or not."

On top of this, P6 added how her past background in customer service fueled her preparation mentality. In customer service, she was trained to "*smile over the phone*". She described that she applied this same concept to commentating: when people hear her voice, she attempted to "smile" with her voice to make her voice more confident and to make herself sound confident in what she is saying.

Similar to how P6 drew from her customer service background, P10 (29, male) drew from his wrestling commentator background. For him, he would meditate before his esports casting in the similar way as what he did before his wrestling commentating. In this way, he could get into the mental state to be ready to stand in front of a crowd and be a performer. He further described the mindset as being aware that there were viewers, but also disassociating from it all to focus on the match at hand. P9 (23, male) meditated to calm down his nerves as well. During this process, he often thought about his style of casting and reflected on past experiences. This solidified the style and pace he wanted to present to spectators when he hopped on the mic.

4.1.3 Background information/knowledge. The content of the commentary is the key to bring the games to life. Beyond the physical preparations, participants also reported strategic preparations that involved extensive research to gain background information and knowledge before casting.

Overwatch P1 (20, male) kept up with the game in terms of game data, spending 10-14 hours out of the week doing this type of preparation. While he was a commentator and this preparation went towards commentary preparation, the amount of upkeep he put into the game was also because he was a game coach and an analyst. Overall, all of this work helped him be a better commentator. P4 (24, male) underwent similar preparation work and explained that collecting information and learning about games calmed him down:

"The more information I collect personally, that's my way of calming myself down and telling myself, yeah you're as prepared as possible. Like all the hard stuff is done, like I'm less worried."

The amount of research that goes into preparing for a casting block is also dependent on the "*caliber of the match*" (P16, 23, male). League of Legends, for example, is a particularly knowledge intensive game with a high learning curve due to its sophisticated game mechanics. P16 was a League of Legends commentator, who watched a great number of competitive League of Legends live streams to keep up with the game data. He explained that lower ranked matches required less research than higher ranked ones, due to the fact that lower ranked players were not as intensive with playing in conjunction with the current competitive meta as higher ranked players. Without

watching the game at a high competitive level as often as he did, he would not know how to make these distinctions.

Similarly, P6 and P8 reflected on their own practices and learned related knowledge by watching videos of games or commentators clips:

"When I watch tournament's except, I really take note of what the commentators do and learn related information." (P6, 22, female)

"As I was watching those games, I do try to explain stuff as a practice. I'm good at explaining it in a way that people who don't know about games can still understand." (P8, 43, male)

In addition, some commentators got a deeper understanding of their target games by playing those games themselves. P9 believed that this was the most effective way to gain background knowledge: *"You got to play the game that you're casting...that's like the best way for you to be able to get your knowledge by literally just going into the books."*

Although commentators did not have to be mechanically skilled at playing these games, it was a good step for them to better digest knowledge and help explain the games to audience, as P17 (19, male) discussed:

"It's an extra good thing to add on to it when you know the game extremely well and can play the game extremely well because that also translates well into what you're talking about and how you say it."

Background research in terms of history of players, as well as the event itself are also important attributes that commentators look into prior to a casting. P1 (20, male) defined this type of preparation as, *"making sure... notes, my research... for the day is accurate, is relevant. Stuff can change in the last minute"*. P2 (23, male) called this his "homework" and talked about how depending on the event, it could be a challenge as some events released information early while some released information in the last minute. In addition, he liked to mentally note who the notable players at an event were and make predictions of the top 10 or top 50 placements. He also looked into the location of the event:

"I look into the region I'm going to. I keep note of who the locals are, the hidden bosses of the region. You know, who's on a hot streak, who's on kind of a low streak."

However, while some commentators found it necessary to do extensive research, some others were in roles that helped them automatically keep up with their respective games. P19 (23, male) commented the team that he had coached, for instance.

"So I kind of already know all the players. I know a lot of their play styles. I know the way that they, the characters they like to play. I obviously know the maps that our team's good at, what they like to play. That makes life a little bit easier when preparing."

In summary, our participants highlighted that preparations and pre-event rituals consisted of a variety of physical preparations as well as strategic and mental preparations. While these efforts varied based on attributes such as game and personality, they were necessary and important for providing essential comfort and grounding the commentators before their casting.

4.2 Esports Commentators' In-the-Moment Information Management Processes

Esports commentating is a type of fast-paced live performance. In our study, we found that esports commentators perform a variety of practices to help them make quick decisions on which information they should focus on to deliver high quality content (i.e., the commentary).

4.2.1 *Understanding one's own types.* Similar to any subjective, personalized, and improvisational performance, esports commentators demonstrated different commentating types. Based on the type that they chose, they tended to take different divisions of commentating work and focus on different aspects in their commentaries, which determined which information they selected to present. For example, a play-by-play esports commentator would highlight every action in gameplay to help viewers keep up with what is exactly happening in the game [8]. Therefore, they endeavor to capture the noteworthy moments of the game and bring the hypes and energy, as P5 (28, male) and P10 (29, male) discussed,

"Just telling the story of what's happening in front of the viewers so that way they're not confused." (P5)

"I try to focus on the gameplay. And that's my main deal is I'm a play by play commentator." (P10)

For these commentators, they often grounded what they chose to present in their castings on the gameplay itself – e.g., team fights, including spells, summoners used, and positioning during the fight. Such a decision resulted from their main goal to recount and help viewers learn or confirm what they are seeing. Another benefit of focusing on the gameplay itself was also to ensure that viewers, especially those with limited prior knowledge about the game, could follow up the fast paced, intense gameplay.

In contrast, color commentators assist play-by-play commentators by focusing on explaining motivations and strategies behind the gameplay. They often tell stories about the players or teams to provide the viewers with an all-round picture of the game, which would fill up the gap time between actions happening in the game [5, 8]. For them, information that help understand why players do certain actions and why they use certain strategies are more important than the actual gameplay. P19's account well explained this emphasis:

"Between fights is normally where I jump in and I kind of go more in depth about what happened, what to expect in the next upcoming fight." (P19, 23, male)

In addition, color commentators considered "*entertainment value*" (P11, 25, male) as an important component of their commentating. For them, any information that could "*keep themselves entertaining, without boring the audience*" (P11) should be emphasized in the casting, such as interesting stories or backgrounds about players or teams. This may differ from play-by-play commentators' practices: as they focus more on gameplay itself, any information (e.g., jokes and background stories) that may distract viewers from gameplay may be considered unnecessary.

However, this does not mean that commentators would always stick to a certain type. Very often, such commentating styles are fluid and commentators tend to switch types according to the specific context. This means the information they chose to focus in each live performance may also differ. For example, P2 (23, male) explained that how he often switched roles and the focus of the information he presented:

"With me, it's mostly depending on who I'm working with. If this guy tends to like to lead the conversation a little bit more so I'll kinda lean back and play more the color role [...] maybe convey some more storyline. Or vice versa. If this guy is definitely more comfortable in the color role so I'll practice leading the conversation and doing the analytical stuff."

In this sense, esports commentators appear to use different types as a practice to present in-the-moment complementary information to the viewers: when a major fight or gameplay session broke out in the game, a play-by-play commentator would almost make an immediate decision to take over the microphone and oriented the commentating for covering action, mechanics, character,

position, and any other crucial information relevant to the gameplay to help both experienced and new viewers quickly follow up the exciting moments in the game. After such a time sensitive event ended, usually the color commentator would take over and explain underlying motivations, rationals, and strategies behind it. For them, understanding one's own role represents a balance between the intense gameplay pace and relaxing moments for viewers to reflect on what they just saw and heard. Such a balance required careful decision making on information selection and presentation, which greatly affected how viewers experienced and evaluated their castings.

4.2.2 Learning by interacting with co-commentators. When there were more than one commentators involved in a live performance, commentators' decision making also depended on what their co-commentators may decide to do. For them, it was necessary to take their fellows' opinions and actions into account to present the best information to the audience - in this way, they could not only avoid redundancy but also provide more comprehensive and diverse perspectives of the game. Therefore, very often when casting, esports commentators would endeavor to craft their next comment based on what their fellows were saying, making it "*a conversation*" (P10, 29, male).

As the "conversation" proceeds, commentators in the same event often felt that they were supporting each other, as P13 (24, male) said: "*you have somebody else that you can bounce off of.*" Most importantly, many regarded their interaction with co-commentators and the feedback they received as one of the most significant inspirations that affected the potential direction of their commentary. For example, P1 (20, male) believed that it was important for esports commentators to learn from each other's strengths during casting, which would help them decide on which complementary information should be offered. As a result, the quality of the whole commentating could greatly improved by incorporating different perspectives:

"If you get a static partner, someone who really knows the game and then you can point out something really weird that happened or funny".

P6 also added that such interaction between fellow commentators was necessary to "feed" each other new topics:

"If I'm trying to be funny or entertaining, it's a joke or something that is not only obvious to the viewers, but like obvious to my partners, so they can kind of say something back and we can feed off of each other in that kind of way."

In addition, when covering a large scale or complicated gameplay session/event, esports commentators were usually willing to cooperate and divide the task: each of them would focus on and prepare for one specific aspect of the event and share relevant information as they interact with other co-commentators. P2 (23, male) described this process:

"We'll each watch one of the teams and kinda convey the interactions that way and see what's going on."

In this sense, esports commentating appears to be a community effort: co-work as a community to collect useful information about the game/event and distribute such information within the community, in hopes of making the casting more informative and efficient.

4.2.3 Depending on the nature and characteristics of specific events. Another factor that plays important role in esports commentators' decision making on presenting information is the diverse nature and characteristics of specific events. There is no "one-style fit-all" in the field of esports commentating, as esports competitions themselves are diverse at various levels and scopes, ranging from a small local match to national and international tournaments [16]. P17 (19, male) explained how commentators should adjust the way they present information based on the event itself:

"If it's kind of a more fun light match, I'll try to just be more fun entertaining. And if it's a more serious match, I'll try to really delve into the game itself."

According to this quote, each esports competition was unique with different themes, tones, and expectations. This required commentators' contextualized attention and flexibility to deliver a high quality commentary. In this process, they would have to carefully analyze the style of the specific event to decide on the content, direction, and tone of their commentary. For example, they often tended to add entertaining information in their commentary for small-scale, casual events to make it "fun," relaxing, and engaging for everyone:

"If I'm at Wednesday night fights, and if it's just the weekly, sometimes I'm not serious at all. There have been times on Wednesday night fights when I'm just making really terrible jokes all day. Not even caring, because it's a fun time." (P8, 43, male)

In addition, due to the small size of some local competitions, commentators would like to check the live chat system to gather useful supplementary information (e.g., what local viewers thought of the competition) in order to make their comments smoother and more relevant to the audience:

"Sometimes I feel like when it's kind of like a small local, I'm reading chapters in chat, especially during in between games. I wanted to see how you could fill up time in between games at a local." (P12, 23, female)

In contrast, when commentating on top level and large scale events, commentators will switch their attention to more formal and game-related information such as player actions, gameplay, and strategies rather than jokes or small talks. P1 (20, male) explained why this switch of focus was necessary:

"Some events are very formal so you have to tailor or gear your commentary towards the formal aspect."

Due to the fast pace and the level of intensity of such events, esports commentators also did not have time to look into information from the chat systems or integrate them into their own commentary, as P2 (23, male) mentioned, "*You don't ever want to say what the people in the chat are thinking because that's going to derail the whole cast and the players aren't going to be very fond of that.*" For them, such information became irrelevant, distractive, and even inappropriate to be presented.

4.2.4 Following the actual game flow. Lastly, a natural practice for many esports commentators to manage and present information in-the-moment was to follow what actually happened in the event/gameplay. Essentially, what esports commentators are watching is what production crew show to them, which is the very basis for what they can comment on and what viewers can get. P3 (22, male) and P5 (28, male) pointed out the importance to ground any interpretation and commentary upon the content that was available both for accuracy and for fulfilling viewers' expectations:

"Viewers want what they hear to match what they see." (P3)

"I tried to as best paint the picture of what's happening based on what I can see."
(P5)

Therefore, P18 (20, female) used "*a line that's got like going up and down*" as a metaphor to describe the progress of a game with both intense and exciting moments and calm and slower periods. For her, these ups and downs were indicators for what information she should choose and present to the audience:

"Once I see something exciting in that play, I think that's where my more entertained side shines."

In this sense, following the natural game flow became an effective practice for many esports commentators to manage and present information in their casting. When it came to the "up" moments, they chose to be informational and focused on strategies and knowledge. Yet at the slower "down" moments, they would cater to the atmosphere with jokes, memes, or amusing anecdotes. In this way, they were able to present the corresponding appropriate information to viewers based on different timing.

4.3 Important Considerations to Establish Esports Commentators' Self-presentation

Our third research question focuses on esports commentators' self-presentation since they are also actually "acting" to the audience in their live performance. When commenting on a certain event, they are not only presenting the game but also themselves to the audience. In many ways, how a commentator present himself/herself is both an important factor to attract the audience and a responsibility for creating high quality content. Specifically, our participants have highlighted three important aspects to establish their self-presentation online: the consistency between one's online and offline identity, being professional, and expressing passion.

4.3.1 The consistency between one's online and offline identity. For most esports commentators, it is extremely important to keep their online and offline identity consistent when casting. As we have described in 4.1.1, participants would make efforts to prepare their appearance before commenting. However, their behaviors of dressing differently did not suggest identity or personality inconsistency between online and offline. Regardless how they dressed up or prepared their physical appearance, they tended to still focus on presenting a consistent personality online and offline. In this sense, paying attention to physical appearance does not contradict their desire to be consistent with their offline personality. Above all, being the same person in the offline world as the one before the camera makes commentators look more natural and authentic to the audience. P12 (23, female) and P13 (24, male) noted that viewers would notice any inconsistencies and tended to dislike them:

"People notice fake. So when you try to be something that you're not, it's pretty obvious. And they don't like that." (P12)

"I always feel when it feels like an act, the audience tends to like it less." (P13)

P8 (43, male) also told a story about how his casting failed because he endeavored to pretend to have a different personality:

"I'm going to try to meet catchphrases and be irreverent, I have all these funny and it's not me naturally and so it just was terrible."

In fact, keeping the consistency on and off the performance would benefit esports commentators in many ways. For example, they would not need to spend tremendous time and efforts to act or create a different persona, which would often relieve them from extra pressure and mental burden. This consistency allows them to save energy and rather concentrate more on the gameplay itself or improving their expertise. As P2 (23, male) said, such a consistency can help esports commentators feel more comfortable with the whole process and perform better:

"Don't try to be somebody you're not. Just be yourself and it'll all come naturally to you."

In addition, making one's online and offline identity consistent allows commentators to highlight their distinct personal characteristics, styles, and personality that set them apart from others. This often helps them attract audience.

For example, P13 (24, male) noted how his distinct British accent got him much more attention than that he expected: *"There aren't too many British English commentators at my level in the Smash scene. So that's kind of one niche that I have."* Others also highlighted how a commentator's personality played a significant role and could make the commentary itself more understandable, as P14 (24, female) explained, *"I think I'm very relatable. So whenever I say something, you can kind of relate to what I was saying in some ways."*

Offline games are most often branded, unique events that attract specific crowds, but for esports events that are live streamed, the audience often has the initiative to choose the events they want to watch or the commentators they like since there are so many that happen at the same time. In this sense, how to present one's distinct self compared to other commentators is crucial to attract audience, which also becomes an essential component of one's casting. In our data, many participants appear to consider presenting a consistent self as an effective strategy.

4.3.2 Be professional. Being professional is another important aspect to establish one's self-presentation as an esports commentator. However, it should be noted that professionalism does not merely mean dressing up in a formal way. As we described in section 4.1.1, there is no official dress code in esports commentating to show professionalism. Instead, many commentators choose to dress in a manner that is consistent with their personality that they expect to be perceived as in order to demonstrate professionalism. In doing so, they often focus on two dimensions of professionalism in commentating: the language being used, and the knowledge about the game.

First, it is obvious that for esports commentators, language is one of the most important ways of expression because their whole commentary is based on orally "talking about" the game. Therefore, though demonstrating one's natural personality is necessary and widely acknowledged, esports commentators tend to *"change up a few word choices"* (P19, 23, male) so that they can present a more professional and clearer version of themselves in their castings. For example, P9 (23, male) considered it necessary and important to avoid dirty words when commentating:

"You have to be professional, and by professional, it also means you can't really swear. This is a high quality stream, it's a prestigious event, you definitely can't say a bad word here."

According to these commentators, esports has penetrated into the lives of the youth culture and many viewers may be minors. In this sense, it is both ethical and professional to use proper language in esports commentating, which would ensure the healthy and sustainable growth of this community. Additionally, the language that a commentator uses directly reveals his/her professional skills in this field: the ability of oral expression, which should be both appropriate and accessible. As P19 (23, male) described, *jokes and memes are good, but there's a time and place for everything."*

Others also highlighted the importance of having professional knowledge of esports culture and the game to one's self-presentation. One reason, as P12 (23, female) described, is that esports commentators are *"tremendously influential"* for viewers:

"The first time you have no idea what the hell you're watching. Commentators are the first people that essentially introduce you to what you are watching. How they present themselves and how they present the game would greatly affect how you understand esports." (P12)

In this sense, it is the commentators that translate what is happening in the game to viewers (who may or may not have prior knowledge) and help them understand the context and actions. To what degree commentators establish solid knowledge to correctly interpret the content and effectively deliver such information to the viewers, therefore, becomes part of the professionalism that affects their online image.

4.3.3 *Expressing passion.* Many participants also highlighted the aspect of expressiveness in establishing their self-presentation. In particular, the expression of passion and enthusiasm throughout the casting not only makes the commentary more appealing to viewers by heightening their moods but also reflects the seriousness and devotion of commentators. For example, P11 (25, male) reflected,

"I'm more enthusiastic because I'm more into the game. Because I'm the one commentating it right, so I have to be enthusiastic about it."

How could esports commentators express passion? "*The tone of voice,*" as P19 (23, male) pointed out, is the key. In many live castings, viewers usually sometimes do not pay much attention to commentators' faces (if they choose to show theirs) but tend to focus on the game in progress on the screen while listening to what commentators' are saying. Therefore, a commentator's voice is an essential channel through which nonverbal cues such as emotions, feelings, and passion can be conveyed. P17 (19, male) and P19 further explained that showing passion through voice both kept audience "in tune" and built one's image as someone who was enthusiastic about esports:

"I'm always there 100% and always interested in what's happening. I've been told that some of my insight has been nice and refreshing and interesting to hear."
(P17)

"If you sound like you're excited every time you're explaining stuff [...], it kind of keeps people a little more in tune with the stream. They would also see you as someone who likes what you are doing." (P19)

However, participants expressed concerns that many esports commentators may not understand the importance of voice and passion to the commentary and to themselves. Since many esports matches and events are fast paced and require quick response rate, some commentators tend to speak fast but ignore the need to express emotions and passion. P16 (23, male) explained this issue:

"If something's going on, they'll speak in a monotone voice, they'll speak very fast and they'll speak exactly what's happening, but they won't be expressive while they're saying it."

As a result, it is very likely that viewers "*will mute the stream and just watch it with no sound*" (P15, 24, male) and commentators "*don't really put any influxion in anything*" (P17, 19, male). Obviously, neither would help esports commentating sustain nor build a positive and dynamic image of esports commentators that make them closer to the viewers.

Twenty years ago, one could only see commentators at offline tournaments or on special television channels dedicated towards esports (e.g., in South Korea). However, these days, esports is easily accessible via live streaming platforms and not only provide every esports commentator with opportunities to show their talent but also make it more convenient and autonomous for viewers to choose which events/commentator they would like to watch. Now it is increasingly crucial for esports commentators to present themselves as someone who is close to the audience and who can understand their needs and expectations. Expressing passion, thus, is also important to achieve this goal. As P14 (24, female) said, "*something that sets me apart is I'm a very approachable person.*" Being accessible truly made her stand out.

Similarly, P5 (28, male) preferred to personalize his language by adding passion and emotions to reduce the sense of distance between him and viewers:

"I try to always address whoever is watching as 'you' by saying glad YOU are with us rather than glad you are all watching."

For these commentators, showing passion makes their casting more like "*talking to somebody through the microphone*" (P5) and "*treat viewers less like fans and more like family-supporter*" (P3,

22, male). In doing so, they not only build close connections with the audience but also present themselves as caring, friendly, and supportive.

5 DISCUSSION

To answer the three research questions that we propose at the beginning of this paper, our findings have highlighted: 1) aesthetics (e.g. clothing and appearance), physical functions (e.g. voice, physical activities, and pep talk) and background game knowledge were three main aspects to be taken into consideration when esports commentators prepared for their live performance (RQ1); 2) in the process of live commentating, esports commentators endeavored to make fast decisions on which information they should focus on through four ways: establishing a clear understanding of what type of commentator role they play; learning from interactions with co-commentators; understanding the nature and characteristics of the casting events; and naturally following the game flow (RQ2); and 3) the consistence between their online and offline identities, the professionalism, and the ability to show passion were considered the most significant aspects in esports commentators' self-presentation (RQ3). We now use our findings to discuss the implications of this work for extending our current understandings of esports and self-presentation in HCI and CSCW.

5.1 The Complex Interaction Dynamics Involved in Esports Commentating

Compared with the traditional sports commentators who mainly appear on TV with one-way communication channel, our findings indicate that more complex interaction dynamics involved in esports commentating as afforded by the emerging live streaming platforms. Increasingly, live streaming has transformed watching and listening to video from a passive and isolated activity into a more social and participatory experience [29, 33, 72, 84]. As our findings have shown, esports commentators prepared for their live performance with their potential audience in mind; they decided on how to present information during their live performance as a community effort by interacting with co-commentators; they also focused on expressing passion during casting so as to be closer to the audience. All these highlight how esports commentating has become a more social and interactive form of practices that transforms how people perceive, understand, and experience commentating, gaming, and live streaming.

However, our findings also show that esports commentating demonstrates unique interaction dynamics compared to general live streaming. As prior research has shown, the streamer-viewer interaction is the core in the live streaming ecosystem. In fact, one of the main reasons why people participate in live streaming is that they enjoy interacting with others in this online space [29]. With real-time chat system, viewers are able to directly interact with streamers, while streamers can acknowledge and respond to the audience [33, 72]. In many ways, responses and interactions from the audience and the interaction between streamers and viewers naturally make up an essential part of the streamed content.

Yet in the context of esports commentating, commentators seldom interact with viewers except for some special situations. Most of them tend to focus much more on the game flow itself but less on viewers. Only a few participants told us that they would communicate with viewers off-camera, such as via Twitter or getting feedback by writing FAQ.

In general, the basic rule is not to interact with viewers, especially when commentating large-scale, formal tournaments. This unique focus on "not interacting" in live streaming may be grounded on two rationales. On the one hand, the intense and fast-paced natures of esports not only require players to have a fast decision-making and response rate [16] but also apply to esports commentators. It is a commentator's responsibility to concentrate on the gameplay, avoid missing noteworthy moments, and translate what is happening to the audience. This intense and time sensitive workload does not leave much room for real time interaction with the audience, especially during a live

gameplay session. On the other hand, many commentators express concerns that the real time chat system is often cluttered with both relevant and irrelevant discussions, which may distract them from delivering high quality commentaries. As a result, esports commentators tend to be "*alone together*" [79] in a high frequency interaction and social online environment.

Only in small-scale, local and/or low-stakes events that are streamed will esports commentators, like streamers, pay some attention to the chat system and interact with viewers, especially during the intervals between gameplay sessions. With a smaller group of audience, streamers are more likely to make direct acknowledgement and appreciation of viewers' presence [33]. Similarly in the context of casual esports commentating, communicating back and forth such as asking if viewers have a good time or answering some questions can bring commentator much closer to the audience, leading to a higher viewer engagement.

It is worth noting that due to the scale of esports events, in some top-level, large-scale live events, esports commentators are sometimes required to sit on a podium and commentate in front of all the spectators. Even without the chat system at hand, being in the same physical location greatly affects esports commentators' approach of how they should interact with viewers. Compared with sitting in one's bedroom, commentators may receive much more information and "noises" from the audience such as expressions, voices, shouts. This would also potentially result in more interaction between commentators and viewers under such a circumstance.

In summary, esports commentating involves more complex and multidimensional interaction dynamics than both traditional sports commentating and live streaming in general. As we have shown in our findings, esports commentating is a new way to experience commentating, gaming, and live streaming all in one, which is intrinsically more interactive and participatory than traditional sports commentating. Esports commentators may also need to master a variety of technical skills such as setting up the streaming channel, camerawork, and interacting with audience via computer-mediated means if the event occurs online, especially if it not an event that is professional produced. While audience of the traditional sports commentators tend to be passive observers due to the one-way broadcasting media, esports commentating tends to be more interactive as spectators can interact with commentators and other viewers via a built-in live chat system (e.g., Twitch chat).

Compared to live streaming in general, our findings have shown that esports commentating creates another layer of information and content on intense, competitive and fast-paced gameplay rather than just producing the gameplay content alone [50]. In fact, some games that they commented on are not live streamed but recorded and broadcast. In this sense, the commentators are not always streamers *per se* even if they appear on streams; they also conduct commentating at in-person events instead of exclusively online and can also commentate a recorded event with a voice-over, creating a medium where the "live" commentating is synchronous with the game but the broadcast of that game may not necessary be live. In addition, while interacting with co-commentators is often considered beneficial for delivering high quality content, interacting with viewers is not.

More research, therefore, is needed for reconsidering the role of interactivity in live streaming and online commentating in general. For example, should interaction, regardless of format and recipients, be always encouraged and supported in any type of live streaming practices? How do commentators change (if at all) their style depending on the modality of how the event reaches audiences (e.g., offline, live stream, pre-recorded stream)? And should all types of interaction as well as their potential consequences be treated the same in all types of live streaming activities (including online commentating)? Exploring these questions would help further unpack the intertwining relationships between different stakeholders (e.g., streamers, producers, content, commentators, co-commentators, and viewers) involved in the live streaming ecosystem.

5.2 The Nuances of Esports Commentators' Self-Presentation

Selective self-presentation still remains to a certain degree. One of the main foci of our research is a unique and understudied group's (i.e., esports commentators) self-presentation practices through an emerging sociotechnical system. Our findings still confirm that selective self-presentation, such as using impression management strategies to create a desired persona for the audience [44, 68], plays an important role in any technology users' online presentation through any systems/platforms. Our findings also confirm the tension between one's demanded impression and the affordance of the specific sociotechnical system where one's self-presentation is accomplished [78]. As our data have shown, though esports commentators considered the consistency between their online and offline identity important, they also took advantage of the live streaming platforms to actively customize their presentation and portray themselves for the game, the specific event, or the audience. In our interviews, a number of participants chose to showcase a more positive personality to deliver high quality commentaries: some became more passionate and enthusiastic about the event than usual so that the audience were more likely to feel engaged; some also endeavored to highlight their professionalism to both effectively deliver accurate information to the viewers and present the esports culture and themselves appropriately.

The importance of professionalism. Yet our study highlights some unique aspects of self-presentation as shown in the context of esports and live streaming, which may contribute to expanding our current understanding of self-presentation online. The first is the importance of professionalism in esports commentators' self-presentation practices. Many participants pointed out "being professional" as part of their desired image online. For them, being professional was not to "selectively" present themselves or to "perform." Rather, it suggested one's deep acknowledgement and embodiment of the esports culture itself.

In fact, one of defining features of the esports culture is its sophisticated sociocultural structure of "professionalism" [16, 77]. Professionalism in esports not only refers to highly skilled gameplay and strategic team management [76, 81] but also emphasizes the so-called "pro culture" [76]. It explains the broader structural mechanisms that make this field distinctive – the collaborative efforts of gaming companies, players, communities, spectators, and many other stakeholders who contribute to establishing a set of stable, widely acknowledged, and abided standards [70]. Our participants felt urged to comply with this culture when casting and when presenting themselves online. As our findings have shown, before their live performance, they would carefully prepare themselves in all means (e.g., in terms of look, clothing, and voice); during the casting, they focused on how to deliver high quality content (commentaries); to establish their online images, they endeavored to convey the most accurate and appropriate information to the audience by using the proper language and acquiring solid domain-specific knowledge.

All of these demonstrate the uniqueness of esports commentators' self presentation practices. Compared to social media platforms or online gaming/virtual worlds, they do not aim at presenting the "best" selves but the "professional" selves. The ultimate aspiration is to collectively present esports and esports commentating as an established, organized, and stable "pro culture". Such an intertwining relationship between a subculture community's collective identity (e.g., as professional gamers) and individuals' personal self-presentation practices (e.g., as an esports commentator) may suggest a more nuanced self-presentation mechanism: in addition to the traditional factors of self, others, and technological affordance, the specific subculture where one belongs to, would also affect the presentations of identity in sociotechnical systems.

The focus on co-commentators' social presence. Another interesting aspect emerging in esports commentators' self-presentation practices is their focus on co-commentators' social presence. Social presence often refers to the degree of awareness of others in an interaction [71]. For example,

Li et al. found that general live streamers strongly sensed audience's peripheral performances and often encouraged their involvement in steaming, which was supported by the themes of streamed content and the technological affordance of streaming platforms to send Danmaku and gifts [49]. In the context of esports commentating, social presence mainly comes from conversing with other commentators [31]. Our study shows that despite the fast pace and intensity of the esports games, commentators still tended to engage in a social learning process: obtaining information, cues, and emotional support by interacting with and implicitly or explicitly learning from their colleagues and peers. This process is also often used to form, manage, and adjust one's own self-presentation. It is also very common for several esports commentators to sit together and collaboratively commentate for the event in live streaming.

Therefore, in many ways, co-commentators seem to be more important than the audience for esports commentators to decide how to present themselves. Very often, when presenting themselves, they may need to adjust their roles, styles, and emphases based on co-commentators' actions and complement each other. While maintaining such self-presentation, they are also expected to constantly interact smoothly with their co-commentators so as to avoid overlapping each other or overtalking. This dynamic appears to be different from any directly audience-driven self-presentation practices – for example, crafting which aspect of the self to be presented to different audiences [38, 55] or identity construction based on "the imagined audience" [51, 52]. It is also different from general live streaming practices. In general live streaming, co-streamers' social presence becomes part of the created content – streamers often use co-streamers' social presence to create popular content about the relationships between co-streamers [54]. In this way, viewers can enjoy the content about friendship or romantic relationship between co-streamers that is presented in a spontaneous, unscripted way [54]. In contrast, in esports commentating, the presence of co-commentators still serves to better present the gameplay itself rather than becoming part of the content – commentators expect the interaction with co-commentators to help lead audiences, interpret game, and show professionalism.

This interesting phenomenon, therefore, points to a potential new angle to study self-presentation online – not only focusing on the audience but also co-commentators. These empirical observations and evidence also shed light on potential future directions to design esports/live streaming technologies to improve commentating/audience experience. For example, for esports commentators, due to the spontaneity and instantaneity of esports events, they should have control over the camera so that they have more agency over the content to present in a more effective way rather than waiting for camera to change. Furthermore, more features are needed on current commentating platforms to increase awareness of co-commentators by improving channels of communication and interaction between co-commentators.

5.3 Limitations and Future Work

It should be noted that this study has several limitations. First, our research focuses on esports commentators who primarily conducted their castings online through live streaming platforms such as Twitch. Therefore, our results may lean towards a selected group of esports commentators who focus on performances targeted toward online audiences. However, esports commentating could also occur offline such as on site. Currently, it is unclear to us whether there are any differences between these two forms of esports commentating in terms of their performance and self-presentation practices. Second, we did not differentiate between people who were commentating on an esports live stream that was being run by someone else or if they were the primary streamer commentating on a pre-recorded game where they themselves were the main content. Moreover, in the study, we did not compare professional and nonprofessional esports commentators. It is possible that these two groups of commentators may also demonstrate distinct styles and characteristics in

their practices. Furthermore, live streaming in general and esports commentating sometimes may employ similar forms of preparation and information dissemination. Differences between gaming live streaming and esports commentating need to be further clarified.

For our future work, first, we plan to expand the study and focus on a more diverse group (e.g., more women and underrepresented population) to explore esports commentators' experiences. For example, it is important and necessary to discuss toxic behaviors in the gendered culture of esports. However, in this study our participants did not specifically mention the topic of misconduct such as online harassment. Future work would focus on recruiting a more diverse sample including more female, LGBTQ, and minority participants to further investigate how esports commentators prepare for and manage toxic behaviors online. A variety of other data sources (e.g., large-scale surveys) is also needed to further confirm results based on interview data as qualitative studies may not statistically representative. Moreover, we plan to further explore the differences between professional and nonprofessional esports commentators' practices as well between those who commentate online and offline. In addition, more efforts would be made to compare how gaming live streamers and esports commentators prepare and practice differently with regard to online performance and self-presentation.

6 CONCLUSIONS

As esports commentating is increasingly transforming how people experience traditional sports commentating, gaming, and live streaming simultaneously, how would esports commentators prepare and manage such novel and complicated practices? And what are their strategies to present themselves in this complex ecosystem consisting of players, co-commentators, viewers, and technology? In this study, we endeavor to explore these questions by understanding 1) how esports commentators prepare for their live streaming in terms of aesthetics, physical function, and game knowledge; 2) methods they employ to choose what information to focus on during casting; and 3) their unique considerations when presenting themselves online.

Especially, we highlight the complex interaction dynamics involved in esports commentating, which points to the need for future research to reconsider the role of interactivity in live streaming. Our insights on the importance of professionalism and social presence in esports commentators' self-presentation may also lead to potential new perspectives to study self-presentation online – by taking the specific subculture where one belongs to and the co-presenters (not just audience) into account. Therefore, we contribute to the growing CSCW literature on esports commentating and live streaming by revealing esports commentators' unique decision making process for streaming and self-presentation. Our focus on esports commentating, an understudied sociotechnical practice, also offers new empirical evidence of nuanced self-presentation practices afforded by emerging technology.

ACKNOWLEDGMENTS

We thank Aaron Samuel, Nicholas Abadiotakis, Dale Schofield, and Christine L. Cook for data collection. We also thank our participants and the anonymous reviewers.

REFERENCES

- [1] Nazanin Andalibi, Pinar Ozturk, and Andrea Forte. 2017. Sensitive self-disclosures, responses, and social support on instagram: the case of# depression. In *Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing*. ACM, 1485–1500.
- [2] Jane Bailey, Valerie Steeves, Jacquelyn Burkell, and Priscilla Regan. 2013. Negotiating with gender stereotypes on social networking sites: From “bicycle face” to Facebook. *Journal of Communication Inquiry* 37, 2 (2013), 91–112.
- [3] Jaime Banks and Nicholas David Bowman. 2016. Avatars are (sometimes) people too: Linguistic indicators of parasocial and social ties in player–avatar relationships. *New Media & Society* 18, 7 (2016), 1257–1276.

- [4] Jeremy Birnholtz, Colin Fitzpatrick, Mark Handel, and Jed R Brubaker. 2014. Identity, identification and identifiability: The language of self-presentation on a location-based mobile dating app. In *Proceedings of the 16th international conference on Human-computer interaction with mobile devices & services*. ACM, 3–12.
- [5] Jennings Bryant et al. 1982. Sports and spectators: Commentary and appreciation. *Journal of Communication* 32, 1 (1982), 109–19.
- [6] Seamus Byrne. 2015. *Shouting about games: When e-sport commentators turn pro*. <https://www.cnet.com/news/shouting-about-games-e-sport-commentators-turn-pro/>
- [7] Sven Charleer, Kathrin Gerling, Francisco Gutiérrez, Hans Cauwenbergh, Bram Luycx, and Katrien Verbert. 2018. Real-Time Dashboards to Support eSports Spectating. In *Proceedings of the 2018 Annual Symposium on Computer-Human Interaction in Play*. ACM, 59–71.
- [8] Gifford Cheung and Jeff Huang. 2011. Starcraft from the stands: understanding the game spectator. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 763–772.
- [9] Michael A DeVito, Ashley Marie Walker, and Jeremy Birnholtz. 2018. 'Too Gay for Facebook': Presenting LGBTQ+ Identity Throughout the Personal Social Media Ecosystem. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 44.
- [10] Joan Morris DiMicco and David R Millen. 2007. Identity management: multiple presentations of self in facebook. In *Proceedings of the 2007 international ACM conference on Supporting group work*. ACM, 383–386.
- [11] Nicolas Ducheneaut. 2010. Massively multiplayer online games as living laboratories: Opportunities and pitfalls. In *Online worlds: Convergence of the real and the virtual*. Springer, 135–145.
- [12] Shelly D Farnham and Elizabeth F Churchill. 2011. Faceted identity, faceted lives: social and technical issues with being yourself online. In *Proceedings of the ACM 2011 conference on Computer supported cooperative work*. ACM, 359–368.
- [13] Kyle Faust, Joseph Meyer, and Mark D Griffiths. 2013. Competitive and professional gaming: Discussing potential benefits of scientific study. *International Journal of Cyber Behavior, Psychology and Learning (IJCBPL)* 3, 1 (2013), 67–77.
- [14] Guo Freeman, Jeffrey Bardzell, and Shaowen Bardzell. 2016. Revisiting computer-mediated intimacy: In-game marriage and dyadic gameplay in Audition. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. ACM, 4325–4336.
- [15] Guo Freeman, Jeffrey Bardzell, Shaowen Bardzell, and Susan C Herring. 2015. Simulating marriage: Gender roles and emerging intimacy in an online game. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*. ACM, 1191–1200.
- [16] Guo Freeman and Donghee Yvette Wohn. 2017. eSports as an emerging research context at CHI: Diverse perspectives on definitions. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. ACM, 1601–1608.
- [17] Guo Freeman and Donghee Yvette Wohn. 2017. Social support in eSports: Building emotional and esteem support from instrumental support interactions in a highly competitive environment. In *Proceedings of the Annual Symposium on Computer-Human Interaction in Play*. ACM, 435–447.
- [18] Guo Freeman and Donghee Yvette Wohn. 2019. Understanding eSports team formation and coordination. *Computer supported cooperative work (CSCW)* 28, 1-2 (2019), 95–126.
- [19] Erving Goffman et al. 1978. *The presentation of self in everyday life*. Harmondsworth London.
- [20] Kishonna L Gray. 2017. They're just too urban': Black gamers streaming on Twitch. *Digital sociologies* 1 (2017), 355–368.
- [21] Sam Greszes. 2016. *Why eSports commentary is so difficult?* <https://killscreen.com/previously/articles/why-esports-commentary-is-so-difficult-2/>
- [22] Mark D Griffiths. 2017. The psychosocial impact of professional gambling, professional video gaming & eSports. *Casino & Gaming International* 28 (2017), 59–63.
- [23] Oliver Haimson. 2018. Social media as social transition machinery. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 63.
- [24] Oliver L Haimson and Anna Lauren Hoffmann. 2016. Constructing and enforcing "authentic" identity online: Facebook, real names, and non-normative identities. *First Monday* 21, 6 (2016).
- [25] Juho Hamari and Max Sjöblom. 2017. What is eSports and why do people watch it? *Internet research* 27, 2 (2017), 211–232.
- [26] Daniel Hamilton. 2018. *Shoutcasting and sportscasting have similar elements; Both can be throaty*. <https://www.sportsbroadcastjournal.com/shoutcasting-and-sportscasting-have-similar-elements-both-can-be-throaty/>
- [27] William Hamilton, Andruid Kerne, and Jon Moeller. 2012. Pen-in-hand command: NUI for real-time strategy esports. In *CHI'12 Extended Abstracts on Human Factors in Computing Systems*. ACM, 1455–1456.
- [28] William Hamilton, Andruid Kerne, and Tom Robbins. 2012. High-performance pen+ touch modality interactions: a real-time strategy game eSports context. In *Proceedings of the 25th annual ACM symposium on User interface software and technology*. ACM, 309–318.

- [29] William A Hamilton, Oliver Garretson, and Andruid Kerne. 2014. Streaming on twitch: fostering participatory communities of play within live mixed media. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems*. ACM, 1315–1324.
- [30] Jean Hardy and Silvia Lindtner. 2017. Constructing a desiring user: Discourse, rurality, and design in location-based social networks. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*. ACM, 13–25.
- [31] Carrie Heeter. 1992. Being there: The subjective experience of presence. *Presence: Teleoperators & Virtual Environments* 1, 2 (1992), 262–271.
- [32] Daniel Henderson. 2019. *What Makes a Good eSports Commentator?* <https://craft.gamercraft.com/esports-careers/what-makes-a-good-esports-commentator/>
- [33] Zorah Hilvert-Bruce, James T Neill, Max Sjöblom, and Juho Hamari. 2018. Social motivations of live-streaming viewer engagement on Twitch. *Computers in Human Behavior* 84 (2018), 58–67.
- [34] Searle Huh and Dmitri Williams. 2010. Dude looks like a lady: Gender swapping in an online game. In *Online worlds: Convergence of the real and the virtual*. Springer, 161–174.
- [35] Mark R Johnson. 2019. Inclusion and exclusion in the digital economy: disability and mental health as a live streamer on Twitch. tv. *Information, Communication & Society* 22, 4 (2019), 506–520.
- [36] Kalle Jonasson and Jesper Thiborg. 2010. Electronic sport and its impact on future sport. *Sport in society* 13, 2 (2010), 287–299.
- [37] Wil Jones. 2018. *Professional FIFA commentators tell us what it's like to be the Gary Neville of esports*. <https://www.joe.ie/life-style/professional-fifa-commentators-tell-us-like-gary-neville-esports-621360>
- [38] Sanjay Kairam, Mike Brzozowski, David Huffaker, and Ed Chi. 2012. Talking in circles: selective sharing in google+. In *Proceedings of the SIGCHI conference on human factors in computing systems*. ACM, 1065–1074.
- [39] Daniel Kane, Brandon D Spradley, et al. 2017. Recognizing ESports as a sport. *Sport Journal* (2017).
- [40] Bijan Karshenas. 2017. *The Shoutcaster's Role in Esports Inclusivity*. <https://medium.com/@bdkarshe/the-shoutcasters-role-in-esports-inclusivity-9dc37b7b1627>
- [41] Mehdi Kaytoue, Arlei Silva, Loïc Cerf, Wagner Meira Jr, and Chedy Raïssi. 2012. Watch me playing, i am a professional: a first study on video game live streaming. In *Proceedings of the 21st International Conference on World Wide Web*. ACM, 1181–1188.
- [42] Lucas Kempe-Cook, Stephen Tsung-Han Sher, and Norman Makoto Su. 2019. Behind the Voices: The Practice and Challenges of Esports Casters. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 565.
- [43] Yong Ming Kow and Timothy Young. 2013. Media technologies and learning in the starcraft esports community. In *Proceedings of the 2013 conference on Computer supported cooperative work*. ACM, 387–398.
- [44] Mark R Leary. 2019. *Self-presentation: Impression management and interpersonal behavior*. Routledge.
- [45] Tama Leaver and Tim Highfield. 2018. Visualising the ends of identity: pre-birth and post-death on Instagram. *Information, Communication & Society* 21, 1 (2018), 30–45.
- [46] Alex Leavitt. 2015. This is a throwaway account: Temporary technical identities and perceptions of anonymity in a massive online community. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*. ACM, 317–327.
- [47] Alex Leavitt, Brian C Keegan, and Joshua Clark. 2016. Ping to win?: Non-verbal communication and team performance in competitive online multiplayer games. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. ACM, 4337–4350.
- [48] Donghun Lee and Linda J Schoenstedt. 2011. Comparison of eSports and traditional sports consumption motives. *ICHPER-SD Journal Of Research* 6, 2 (2011), 39–44.
- [49] Jie Li, Xinning Gui, Yubo Kou, and Yukun Li. 2019. Live Streaming as Co-Performance: Dynamics between Center and Periphery in Theatrical Engagement. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–22.
- [50] Yao Li, Yubo Kou, Je Seok Lee, and Alfred Kobsa. 2018. Tell me before you stream me: Managing information disclosure in video game live streaming. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 1–18.
- [51] Eden Litt. 2012. Knock, knock. Who's there? The imagined audience. *Journal of broadcasting & electronic media* 56, 3 (2012), 330–345.
- [52] Eden Litt and Eszter Hargittai. 2016. The imagined audience on social network sites. *Social Media+ Society* 2, 1 (2016), 2056305116633482.
- [53] Zhicong Lu, Michelle Annett, Mingming Fan, and Daniel Wigdor. 2019. I feel it is my responsibility to stream: Streaming and Engaging with Intangible Cultural Heritage through Livestreaming. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 229.
- [54] Zhicong Lu, Michelle Annett, and Daniel Wigdor. 2019. Vicariously experiencing it all without going outside: A study of outdoor livestreaming in China. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–28.

- [55] Alice E Marwick. 2005. I'm more than just a Friendster profile: Eidentity, authenticity, and power in social networking services. *Association for Internet Researchers* 6.0.
- [56] Phillip J McClelland, Simon J Whitmell, and Stacey D Scott. 2011. Investigating communication and social practices in real-time strategy games: are in-game tools sufficient to support the overall gaming experience?. In *Proceedings of Graphics Interface 2011*. Canadian Human-Computer Communications Society, 215–222.
- [57] Nora McDonald, Sarita Schoenebeck, and Andrea Forte. 2019. Reliability and Inter-rater Reliability in Qualitative Research: Norms and Guidelines for CSCW and HCI Practice. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–23.
- [58] Ilya Musabirov, Denis Bulygin, Paul Okopny, and Ksenia Konstantinova. 2018. Event-driven Spectators' Communication in Massive eSports Online Chats. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, LBW564.
- [59] Melissa J Newman. 2015. Image and identity: Media literacy for young adult Instagram users. *Visual Inquiry* 4, 3 (2015), 221–227.
- [60] Abigail Oakley. 2016. Disturbing hegemonic discourse: Nonbinary gender and sexual orientation labeling on Tumblr. *Social Media+ Society* 2, 3 (2016), 2056305116664217.
- [61] Elliot T Panek, Yioryos Nardis, and Sara Konrath. 2013. Mirror or Megaphone?: How relationships between narcissism and social networking site use differ on Facebook and Twitter. *Computers in Human Behavior* 29, 5 (2013), 2004–2012.
- [62] Andrew Paradise. 2018. *The Rise of Esports as a Spectator Phenomenon*. <https://venturebeat.com/2018/11/30/the-rise-of-esports-as-a-spectator-phenomenon/>
- [63] Anthony J Pellicone and June Ahn. 2017. The Game of Performing Play: Understanding streaming as cultural production. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. ACM, 4863–4874.
- [64] Anthony D Pizzo, Sangwon Na, Bradley J Baker, Mi Ae Lee, Doohan Kim, and Daniel C Funk. 2018. eSport vs. Sport: A Comparison of Spectator Motives. *Sport Marketing Quarterly* 27, 2 (2018).
- [65] Play2Live. 2017. *Interactivity is what sets eSports platforms apart*. <https://medium.com/play2live/interactivity-is-what-sets-esports-platforms-apart-a0d3d70a5057>
- [66] Jana Rambusch, Anna-Sofia Alklind Taylor, and Tarja Susi. 2017. A pre-study on spectatorship in eSports. In *Spectating Play 13th Annual Game Research Lab Spring Seminar, Tampere, Finland, April 24-25, 2017*.
- [67] Bonnie Ruberg and Adrienne Shaw. 2017. *Queer game studies*. U of Minnesota Press.
- [68] Barry R Schlenker and Beth A Pontari. 2000. The strategic control of information: Impression management and self-presentation in daily life. (2000).
- [69] Tobias M Scholz. 2019. *ESports is Business: Management in the World of Competitive Gaming*. Springer.
- [70] Yuri Seo. 2013. Electronic sports: A new marketing landscape of the experience economy. *Journal of Marketing Management* 29, 13-14 (2013), 1542–1560.
- [71] John Short, Ederyn Williams, and Bruce Christie. 1976. *The social psychology of telecommunications*. John Wiley & Sons.
- [72] Max Sjöblom, Maria Törhönen, Juho Hamari, and Joseph Macey. 2017. Content structure is king: An empirical study on gratifications, game genres and content type on Twitch. *Computers in Human Behavior* 73 (2017), 161–171.
- [73] Anselm L Strauss. 1987. *Qualitative analysis for social scientists*. Cambridge university press.
- [74] Julian Heinz Anton Ströh. 2017. *The eSports market and eSports sponsoring*. Tectum Wissenschaftsverlag.
- [75] Dean Takahashi. 2019. *Our deep dive into how esports broadcasting differs from traditional sports*. <https://venturebeat.com/2019/04/13/our-deep-dive-into-how-esports-broadcasting-differs-from-traditional-sports/>
- [76] TL Taylor. 2018. *Watch me play: Twitch and the rise of game live streaming*. Princeton University Press.
- [77] Tina Lynn Taylor. 2012. *Raising the Stakes: E-sports and the Professionalization of Computer Gaming*. Mit Press.
- [78] Catalina L Toma and Jeffrey T Hancock. 2010. Looks and lies: The role of physical attractiveness in online dating self-presentation and deception. *Communication Research* 37, 3 (2010), 335–351.
- [79] Sherry Turkle. 2017. *Alone together: Why we expect more from technology and less from each other*. Hachette UK.
- [80] Suriel Vazquez. 2017. *What It's Like To Be An eSports Commentator?* <https://www.gameinformer.com/b/features/archive/2017/02/11/what-it-s-like-to-be-an-esports-commentator.aspx>
- [81] Michael G Wagner. 2006. On the Scientific Relevance of eSports.. In *International conference on internet computing*. 437–442.
- [82] S Courtney Walton and Ronald E Rice. 2013. Mediated disclosure on Twitter: The roles of gender and identity in boundary impermeability, valence, disclosure, and stage. *Computers in Human Behavior* 29, 4 (2013), 1465–1474.
- [83] Tom Ward. 2018. *The Biggest Gamer In The World Breaks Down Twitch For Us*. <https://www.forbes.com/sites/toward/2018/05/01/the-biggest-gamer-in-the-world-breaks-down-twitch-for-us/#2c864b8a5bb5>
- [84] Justin D Weisz, Sara Kiesler, Hui Zhang, Yuqing Ren, Robert E Kraut, and Joseph A Konstan. 2007. Watching together: integrating text chat with video. In *Proceedings of the SIGCHI conference on Human factors in computing systems*. ACM, 877–886.

- [85] Donghee Yvette Wohn and Guo Freeman. 2019. Live Streaming, Playing, and Money Spending Behaviors in eSports. *Games and Culture* (2019), 1555412019859184.
- [86] Donghee Yvette Wohn, Guo Freeman, and Caitlin McLaughlin. 2018. Explaining viewers' emotional, instrumental, and financial support provision for live streamers. In *Proceedings of the 2018 CHI conference on human factors in computing systems*. ACM, 474.
- [87] Jamie Woodcock and Mark R Johnson. 2019. The Affective Labor and Performance of Live Streaming on Twitch. tv. *Television & New Media* (2019), 1527476419851077.
- [88] Nick Yee, Nicolas Ducheneaut, Mike Yao, and Les Nelson. 2011. Do men heal more when in drag?: conflicting identity cues between user and avatar. In *Proceedings of the SIGCHI conference on Human factors in computing systems*. ACM, 773–776.

Received January 2020; revised June 2020; accepted July 2020