Understanding Digital Patronage: Why Do People Subscribe to Streamers on Twitch?

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ABSTRACT
Digital patronage is the act of delivering recurring direct support to content creators online. In this paper, we define digital patronage and examine why patrons engage in this behavior on the live streaming platform Twitch. Our mixed method research illustrates patrons' motivations, how patronage motivations differ from that of donations, and the motivational factors that are associated with higher levels of patronage. We discuss how results extend understanding of patronage in the context of social support theory and provide design implications for digital patronage platforms.

Author Keywords
digital patronage; Twitch; live streaming; subscription; social support

CCS Concepts
•Human-centered computing → Empirical studies in collaborative and social computing;

INTRODUCTION
Tyler Blevins is a professional video game player who goes by the online name "Ninja." Ninja live streams himself playing the game Fortnite. Fortnite is a survival-style shooting game also known as the Battle Royale genre where one has to eliminate all the competition and be the only person to survive on a remote island. He is his own media empire– a large part of his income comes from people who pay monthly "subscription" fees to him [7]. In 2018, based on Twitch subscriptions alone he made at least $875,000 a month [25] and when he switched streaming platforms to Mixer in August 2019, many of his subscribers followed him.

Ninja is certainly an exceptional case, but what is not exceptional is that he represents a growing generation and new industry of independent and oftentimes self-made content creators whose primary source of income comes from the direct recurring support, or patronage, of fans. The ability to provide patronage is built into certain patronage platforms such as Twitch [37], Patreon, and Drip.

In this paper we examine the phenomenon of digital patronage from the perspective of the patron. Why does a patron want to provide continued support to a content creator? We look at this in the context of the livestreaming platform Twitch, which allows patrons to provide regular support to streamers.

This research is important to the CHIPLAY community as live streaming gaming content is becoming a prominent part of gaming culture and esports [3], from the perspective of both streamers and spectators [36, 13]. Streaming is not only considered a performative art [22], game streamers are being increasingly recognized as creative content creators, and it is important to understand the psychological underpinnings of the people who are willing to give financial support to content creators. The research also extends our understanding of social support, as most of the literature on provision of social support in gaming contexts has been focused on informational support [4, 17, 18], emotional support, [5], or instrumental support within the game [10]. Many studies have examined collaboration among players and how players help each other to solve complex problems as well as mundane in-game tasks[21, 33, 34]. Supportive behaviors in games, however, are not just instrumental, but also emotional [8, 9], as reciprocity of supportive behaviors can lead to feelings of closeness [35]. Patronage takes financial support to the next level by indicating sustenance and loyalty to the content creator. In this study, we used mixed methods to understand the motivations of patrons and how these motivations relate to how much money they give to the streamer and other forms of support.

BACKGROUND

Digital Patronage
Patronage is the action of a patron in supporting, encouraging, or countenancing a person, institution, work, or art [12]. The Merriam Webster dictionary has several definitions for patron, including a) "A person chosen, named or honored as a special guardian, protector, or support, or b) "a wealthy or influential supporter of an artist or writer," c) "One that uses wealth or influence to help an individual," and d) "one who buys the goods or uses the services offered especially by an establishment."

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Patronage was one of the dominant social processes of pre-industrial Europe that was closely tied to the system of transactions, which was the fabric of interaction between social classes at that time [12]. During the European Renaissance, patronage was the basis of the production of all material high culture, which ranged from art to science, and even philosophy [12]. The advent of the printing press and other technologies for mass production of information shifted creative practices to make these commodities more commercial. The patronage system of funding creative works drastically changed in the mid 19th century as institutions such as publishing companies, agencies, and record labels replaced patrons and became distributors and curators of content catering towards a mass audience [20]. The digital revolution moved these functions online, but the editorial gate-keeping functions of the brokerages remained the same.

Now, we are witnessing a new era where people directly support content creators who are their own media entities through new online financial systems and form communities around the creators. We call this the digital patron economy. This digital patron economy facilitates interactions between creators, consumers, systems, and content that require new theoretical frameworks to explain complex sociotechnical exchanges. In an era where the traditional business models of advertisements or sales do not work well for small content creators, digital patronage offers an alternative approach to supporting content creators who are not mainstream, enabling financial viability for the production of diverse and niche content.

The main difference between traditional patronage and digital patronage is that the former relied on a small number of wealthy individuals while the latter relies on a large number of individuals who contribute a small amount of money. To a certain extent, digital patronage could be seen as a form of crowdfunding [11, 24], however, most crowdfunding research to date as only examined the funding of isolated projects, or campaigns. Crowdfunding projects tend to be either charitable in nature or a means of early investment in receiving a potential artifact or product. Supporters of digital patronage, however, may or may not receive a tangible product in return, and their support is continuous, which begs understanding of what contributes to that loyalty.

Twitch as Digital Patronage Context

Twitch, one of the primary live streaming platforms, has approximately 10 million daily active users and more than 2.2 million creators of content per month [27]. Anyone can watch for free, but can also choose to pay money through a monthly subscription. The “perks” that one receives through a subscription depend on what the streamer chooses to offer– by default, the system enables people who subscribe access to unique emoticons (emotes) specific to the streamer. Streamers may or may not choose to add other things, such as access to the streamer’s social media.

There are multiple levels of patronage. These levels are Prime Subscription, Tier one, Tier two, and Tier three. The Prime subscription is a “free” subscription given to Amazon Prime members (Twitch is owned by Amazon), and can be used to subscribe to a streamer on Twitch without paying extra [28]. Tier one, two, and three cost $4.99, $9.99, and $24.99 respectively [28]. Prime subscriptions must be manually renewed every month but the other subscriptions are automatically continued until withdrawn.

Subscriptions can only be toward streamers who are Affiliates or Partners, who earn a percentage of the subscription fee. Affiliates are streamers who meet a certain criteria: they must have at least 50 followers, 500 total minutes of broadcasting, and at least three or more concurrent viewers on average [31]. Partners don’t have any objective criteria, and are evaluated by Twitch on a case by case basis [26]. Aside from subscriptions, streamers can also make money when viewers "cheer." Viewers can cheer with a digital currency called “bits” that they have to purchase with real money [29]. These bits then can be used to purchase emotes. When typed into the chat, a portion of what the viewer spent to buy the emote goes to the streamer. This "tipping program" generated six million dollars in the second half of 2016 alone [4]. Viewers can also gift subscriptions to other viewers in the stream. This will give the recipient the same subscription benefits and the person who gifted the subscription will receive a special badge [30].

Research Questions

With digital patronage, we suspect that tangible and non-tangible support motivations will be intertwined, but with lack of scholarship in this area, it is necessary to conduct more open-ended, exploratory research to identify and understand why patrons engage in digital patronage.

Motivations for digital patronage can be considered a type of social provision, which differentiates between different types of support such as tangible support (e.g., instrumental aid, goods, services, money) and non-tangible support (e.g., emotional concern, information) [2, 32]. In Human Computer Interaction, potential for social support has also been used interchangeably with social capital, with mostly a focus on the potential to receive informational and/or emotional support through one’s connections [6, 19]. There is limited research on tangible support, since most studies on the provision of social support in online communities/ social media have been focused on informational support (e.g., [4, 17, 18]) or emotional support (e.g.,[1, 10]).

Moreover, we have little understanding of why people engage in varying levels of patronage, since some people pay more and some pay less. Thus, our first research question aims to understand which motivations are associated with higher amounts of subscription.

RQ1: *What are the motivational factors that contribute to the variation in the subscription level?*

Another aspect that we wanted to see is how the motivational factors correlate with contribution outside of subscriptions, as streamers might have other contribution pipelines set up on and off Twitch, such as merchandise shops. This presented itself to the following research question:

RQ2: *How are different subscription motivations associated with other types of supportive behavior?*

Although patronage is a recurring form of support, we may learn about basic motivation to give through research on monetary giving. Gerber et al. [11] found that people who fund campaigns on crowdfunding sites do so to seek rewards, create community, and support creators and causes. Wohn et al. [37] found that interest in the streamer was associated with how much money people gave to Twitch streamers. However, as mentioned earlier, patronage may or may not have the same motivations because of its recurring nature. Thus in understanding patronage, it will be essential not only to examine initial motivators but also reasons for continuance of support:

RQ3:*What made the viewers subscribe to their favorite streamers in the first place?*

Viewers are often subscribed for various lengths of time to their streamer. We wanted to understand why they are committed to remaining subscribed. What keeps them interested?

RQ4: *What makes the viewers continue to subscribe to their favorite streamers?*

In addition to subscription, there are also other avenues of providing financial support towards streamers. We wanted to understand from the viewer's perspective what the differences between donations and subscriptions are and whether there is any value that makes a particular method more ideal. This led to the following question:

RQ5: *What is the difference between a single time donation versus subscription?*

The research took a mixed-method approach; Study One (RQ1, RQ2) was conducted with a survey and Study Two (RQ3-RQ5) was based on semi-structured interviews.

STUDY ONE: SUBSCRIPTION MOTIVATIONS

Method

The survey data was collected during TwitchCon, a convention for Twitch enthusiasts that is hosted yearly by Twitch. Six researchers asked attendees of the conference to fill out a paper survey. Only participants who were subscribed to a streamer at the time on Twitch were eligible to take the survey. Participants were given a small, custom pin that we designed (pins are considered to be a desired ornamental object at TwitchCon) for completing the survey. Participants were first asked to think about the streamer that they subscribed to and answer all subsequent questions with regards to that streamer. The survey included 24 questions about subscription motivation and patterns, demographic questions, and an optional place to add an email if the participant was interested in being contacted for helping with future research. The subscription motivation items were based on prior research about crowdfunding motivations [11] and motivations to give money to Twitch streamers [37]. There was also an open-ended area where participants could write in any reasons that were not related to the survey items.

The researchers would move throughout the convention and ask people to take the survey, especially those waiting in the many lines at the event. A total of 375 surveys were collected over the course of the three days and the data from the surveys was input into SurveyGizmo by research assistants and then exported as an SPSS dataset.

Survey Results

Survey participants

The sample (N=375) was white (44.4%), 13.1% claimed that they are of Latino or Hispanic heritage, 10.2% are of Asian descent, about 3.7% were from Pacific Islander descent, and two people (0.5%) said that they were Native American or Native Alaskan. There were also 15 people (4%) who claimed that they were of mixed heritage and three people (0.8%) gave answers that were not discernible. Since the question was optional, about 75 people (20.1%) chose not to give an answer. Most of the participants were male (64.2%), 23.3% were female, and 0.5% (n=2) identified as non-binary. About 12% of the participants chose not to answer since the question was optional. Age (M=26.05 SD=6.56) of the participants ranged between 12 and 52 years.

Descriptive Data

We asked the participants what level subscriptions they have for the streamer they subscribe to and their answers were as follows: 31.6% said that they give their prime subscription to their favorite streamer. 46.3% give $4.99 a month, 7.8% subscribe with $9.99, and 13.1% subscribe with $24.99. The participants were also asked about how often do they view their favorite streamer. From the responses that were acquired for the survey 9.9% said that they watch less than four times a month, 20.1% said that they watch once a week, 34.2% said that they watch two-three times a week, 34.8% watch four or more times a week, and there were about four missing data points (1.1%). Also the participants were asked how many hours they view per week (M=9.76 SD=9.33), the minimum number of hours was less than an hour, and the maximum was 69 hours. Participants were also asked how long they have been subscribed in months (M=12.09 SD=11.49). The minimum amount of months was under one month and the maximum was 69 months.

The subscribers were also asked how they supported their favorite streamers outside of the Twitch platform. 51.3% said that they only support within the platform. 23% said that they also buy merchandise, 42.2% also give bits to their favorite streamer. 34.8% said that they also give money directly to their favorite streamer, 14.7% said that they also have sent physical gifts, and 38.8% said that they have gifted subscriptions to other people. Participants reported giving an average of 12.64 subscriptions (SD=23.69). The maximum number of gifted subscriptions from a single individual was 150.

Modeling Patronage

To answer the first research question, "What are the motivational factors that contribute to the variation in the subscription level?" we first needed to identify the motivations. The factor analysis shown in Table 1 was run based on the survey questions asking about different motivations.

When asked the question *"Why do you subscribe to this streamer?"* our participants were given a variety of possible answers and were asked to rate how strongly they agreed

Factor Analysis						
Why do you subscribe to this streamer?	Factor Loadings					
Monetary Support (*M*= 3.34, *SD* = 1.57, α = .83)						
To help the streamer achieve a financial goal (e g , paying rent or bills)	**.872**	.038	.039	.158	.120	.016
To supplement the streamer's income	**.863**	.036	.086	.176	.146	.097
To help the streamer buy something for the stream	**.731**	.078	.212	.053	.094	.220
Wanting Attention (*M* = 1.84, *SD* = 1.23, α = .82)						
To make other people in the stream notice me	.115	**.844**	.232	-.099	-.032	.092
To improve my personal popularity	.044	**.818**	.176	-.062	.222	.112
To get a shoutout/recognition from the streamer	-.034	**.806**	.149	.099	-.63	.086
Personal Connection (M = 2.81, SD = 1.52, α = .82)						
To become closer with the streamer	.178	.212	**.842**	.073	.078	.124
To get access to exclusive communication with the streamer	.067	.144	**.842**	.041	.069	.084
So the streamer remembers me	.130	.455	**.683**	.063	.065	.165
Enjoying the Content (*M* = 4.53, *SD* = .95, α = .78)						
Because I appreciate the quality of content	.102	.006	.039	**.894**	.045	.057
Because the content is entertaining	.085	-.021	.039	**.893**	.166	.068
To help the streamer continue to produce content	.447	-.026	.100	**.622**	.074	.064
Wanting Benefits (*M* = 4.53, *SD* = .95, α = .63)						
To get access to additional content/perks (emotes)	.123	.026	.130	.163	**.829**	.193
To get a special badge next to my username	.162	.295	.159	-.001	**.791**	-.036
Educational Value (*M* = 3.20, *SD* = 1.52, α = .63)						
Because the content is educational	.074	.056	-.002	.129	.058	**.879**
Streamer provides tips about the content	.314	.026	.211	.119	.104	**.723**

Table 1. Factor loadings from a Principal Components Analysis on why people subscribe to their favorite streamers. (1= strongly disagree to 5=strongly agree

or disagreed with each answer. A Principal Components Analysis with Varimax rotation was run on all the items. We took out a number of factors that cross-loaded onto two or more factors. The deleted factors were *"I randomly subscribed," "Because I feel obligated to," "I relate to the streamer," "To get access to private groups (i.e., sub chat)," "Because it's someone I know on a personal level," "I show that I'm involved in the streamer's community," "Because I want a personal relationship with the streamer," "I show that I'm involved in the streamer's community,"* and *"Because the streamer is very physically attractive."*

After taking out these factors, the rotated component matrix showed that the analysis grouped the remaining factors into six different components. The motivations were: 1) to provide monetary support to the streamer, 2) wanting attention, 3) desire to be closer to the streamer, 4) because they enjoyed the content, 5) to get digital benefits (e.g., emotes, badges), and 6) because there is educational value. The components are shown in Table 1, which shows all the factor loadings.

After identifying these six motivational factors, we ran a regression model to see which motivations are associated with a higher subscription level. The regression model had subscription level (The different subscription levels were from Prime subscription (lowest) to $24.99 (highest)) as the dependent variable and six motivational factors, along with frequency of viewing segments, duration of hours viewed per week, and duration of subscription time in months, as the independent variables.

The model was significant, (F(9,312)=9.17, p<.001), explaining 20.9% of variance of the dependent variable. The two significant motivations were financial support (β= .07, p<.001) and wanting benefits (β=.04, p=.042). How often the subscriber watches the streamer (β=.13, p=.024), and how many hours the subscriber views the streamer per week (β=.02, p<.001) were also significantly related. Non-significant factors included: Wanting attention (β=-.02, p=.283), personal connection (β=.02, p=0.197), enjoying content (β=-.01, p=.789), educational value (β=.00, p=.845), and length of subscription time (β= .00, p=.619).

Relationship Between Subscriptions and Other Forms of Support

The second research question asked about supportive behavior beyond the subscription mechanism. We ran a correlation between the motivational factors and different methods of support aside from subscriptions (see Table 2). Results indicate that desire to financially support the streamer was related with buying more merchandise, giving bits, money, and gifts. Desire to give financial support, however, was negatively related to wanting to gift subscriptions to others. People who wanted a personal connection with the streamer were more likely to buy merchandise, but less likely to gift subscriptions to others. People who enjoyed the content were more likely to buy merchandise, give bits, and give money, but not give physical gifts. People who wanted benefits were more likely to give bits and gifts. People who appreciated educational value were more likely to buy merchandise and give gifts. People who wanted attention did not have any relationship with other supportive behaviors.

In summary, in Study 1 we identified six reasons why people subscribe to streamers on Twitch, and found that only people who wanted to provide financial support or wanted benefits were willing to pay a higher subscription fee. We found that not all motivations are alike and only some motivations were related to the provision of other types of support such as gifts.

STUDY 2: UNDERSTANDING DIFFERENCE BETWEEN PATRONAGE AND OTHER SUPPORT BEHAVIORS

In Study 1 we examined how subscription motivations relate to how much people subscribe as well as how those motivations relate to other supportive behaviors. In Study 2, we took a deeper dive into the subscription motivations, differentiating between initial motivation to subscribe and motivation to continue. We also asked about how subscriptions differ from one-time donations. These questions aimed to answer the broader question of whether patronage is similar or different from what we already know about financial support, and how.

Method

We conducted semi-structured interviews with 16 participants in February-March 2019. The interviews were approximately 30-50 minutes long. We reached out to people who opted into being contacted for future research opportunities through our TwitchCon survey in Study one. 11 interviews were recruited in this manner, with a response rate of 18%. Five interviews were conducted through personal referral, i.e., members of our research lab reached out to friends and friends of friends outside the lab who subscribed to a Twitch streamer. Four authors conducted the audio interviews using the audio function of Discord or by phone; the interviews were recorded with the participant's knowledge and consent. The interviews were later transcribed using Temi, an audio-to-text transcription service, and manually edited. Participants were given a $20 Amazon gift card as a token of appreciation for their time.

The interview was semi-structured with three parts, "Getting to know the participant," "Twitch related questions," and "Research related questions." The first part involved getting the participant acclimated to the interview by asking them about mundane things going on in their lives. The second part focused on understanding the participant's knowledge and experience with the Twitch platform. The third part contained our primary research questions, which included: "Thinking about the favorite/primary Twitch streamer you're subscribed to, what aspects of their brand/content inclined you to be a supporter of theirs?" "Why are you interested in continuing support for your favorite/primary Twitch streamer?" "What differences do you see between being a Twitch subscriber versus a giving one-time donation?"

The qualitative data was analyzed by 5 authors in which quotes were selected based on the relevance of their testimonies to our research questions. We utilized a spreadsheet where the column was the respective research question and each row was a participant. The cell intersecting would contain the participant's testimony. 5 researchers met together and individually analyzed each cell to ensure the relevance of the data to the question. Afterward, researchers then made themes based on patterns of participant's testimonies per question.

Interview Participants

Participants' ages ranged from 20 years to 37 years inclusive (M= 24.75, SD= 4.55). Seven said they were white, four identified as Asian, while two people said they were of mixed descent. One participant was black, one was Latino, and one was a Pacific Islander. There were four females and 12 males. The length of subscription time in months (M=13.5) ranged between two to 36 months.

Initial Reasons Why Viewers Subscribe

The third research question asked participants what motivated them to subscribe to the streamer in the first place. The purpose of this question was to understand what viewers were looking for when they decided whom to subscribe to.

Importance of Genuineness

Twelve out of 16 participants felt that if a streamer was genuine in their personality or actions, it would be a motivating factor to make them initially subscribe to their channel on Twitch. Participants expressed what qualifies as being "genuine" to not only them, but to the whole stream. Genuineness stemmed from multiple aspects including the streamer's interaction with viewers, his/her personality, reactions to subscriptions and donations, passion for what he/she are doing, and the presence of a community within the stream. Participants stated that the streamers were humanized through their genuine actions. Viewers felt more comfortable interacting in a manner which made it possible for them to relate to the streamer.

> Like he's not like, you know, some entirely like an actor you see in like a movie or something like that? Like you can interact with him and feel like you're just interacting with like a real person. (P1 Male, 29, Asian).

> They're probably one of the nicest people that I've met on the Internet... Yeah, it feels like a, I guess a more genuine connection instead of it just being like, I know meeting like an actor or something that has a role to play. (P8 Male, 27, Black).

Interaction was an important aspect for viewers. It can range from how streamers interacts with the chat and whether they are reading it and responding to it live. Another form of interaction that occurs between the streamer and viewer is the giving of donations or subscription notifications. Viewers preferred if their payment was genuinely appreciated; it made their contribution more gratifying. Having a genuine connection with the streamer made the viewer feel more comfortable. They could approach the streamer as if he/she were a normal person, which made viewers feel less stressed about what to say and how to act.

> The connection honestly like I have to have, if I'm going to sit there and actually put my money towards somebody, I need to have that general interaction, that genuine connection, things like that. (P9 Female, 27, White).

> I guess her personality is kind of down to earth. She makes jokes with her. She has a lot of community engagement. She doesn't act high and mighty. She seems like someone who cares about what she's doing a lot more than making the money out of it. Obviously money

Correlations Between Subscription Reasons and Other Supportive Behaviors						
	Financial Support	Wanting Attention	Personal Connection	Enjoying Content	Wanting Benefits	Educational Value
Buy Merch	.154**	.074	.144**	.108*	.065	.179**
Give Bits	.222**	.-002	.086	.183**	.164**	.078
Give Money	.182**	-.022	.088	.218**	.090	.008
Give Gifts	.194**	.076	.117	.039	.123*	.142*
Gifted Subscription	-.266**	-.106	-.135**	-.197**	-.182	-.066
**. Correlation is significant at the 0.01 level (2-tailed)						
*. Correlation is significant at the 0.05 level (2-tailed)						

Table 2. Table showing correlation between motivational factors and subscription behaviors

> is a benefit, but she seems more like a friendly person then. But you expect famous people to be, if that makes sense. (P13 Male, 23, Asian).

Participants explained that having a streamer who is genuine humanizes them and makes their streaming experience more enjoyable because they feel like they are interacting with someone who understands them.

Quality Content

When our participants were asked about why they support their favorite streamer, nine out of 16 said that entertainment was the selling point. A streamer can do many things in order to entertain their audience and indirectly convince them to come back for future streams and additional content. One of the methods of entertainment that participants talked about was humor and the streamer's ability to make them laugh. Another reason participants mentioned was the streamer being skilled at the game or just had a good time playing the game.

> "And then also his play styles, like very fun to watch...But he's just like very funny and very good with his chat too" (P14 Male, 23, Mixed).

> She isn't exactly, you know, the most talented at the game. But whenever she plays, she always has like a good time and is always trying to like learn and get better. And it's just fun to see like even if she does bad, it's like she's still trying to have as good as a time as possible. (P16 Male, 21, Mixed).

Viewers also noticed the work ethic of the streamers they chose to support, and appreciated their dedication in enriching the stream experience.

> You know she really grinds. You can see the work that she puts in her streams. It's not just she comes on the clicks, you know, stream. She has all the overlays, she has all the new things she does. (P5 Male, 20, White)

Sense of Community

Eight out of 16 participants gravitated towards a particular streamer based on a combination the content the streamer showcased, the recognition the streamer offered in terms of his/her influence and status, as well as the type of entertainment that resonated with viewers. These themes come together to develop the streamer's community. These factors were also related to each other in a cyclical manner: the content and entertainment the streamer offers will draw certain kinds of people; the more people who are engaged increase the influence and status of the streamer, and this again attracts different types of people in larger numbers each time. This was a major factor influencing viewers' decisions about whom to support.

> They have a very inclusive community and they are a very inclusive person so they treat pretty much all the members of their community like family so it bridges the barrier between computer screen to computer screen. (P8 Male, 29, Black)

> "I think she just does it for the community because she's like very passionate and a very nice person. And she honestly is deserving of everything because she's just extremely kind" (P5 Male, 20, White).

Viewers appreciate streamers who interacted and provide a personalized approach with their community like real people instead of giving off a celebrity-like vibe. Lastly, participants stated that the influence of a particular streamer and his/her community also impacted their decisions on whom to support. Some viewers believed that streamers with a huge fan following will not be as interested in the individuality of each member in their community, so they chose to support streamers with smaller fan followings instead. On the other hand, there were participants who wanted to use the influence of large communities to their advantage and chose to support streamers of higher status instead.

Motivational Factors To Remain Subscribed

The fourth research question was about what motivated participants to continue supporting their favorite streamers. Since viewers were under no obligation to support the streamers, responses to this question gave insight into why viewers wanted to renew their support.

The Relationship Between Viewer-Streamer

Five out of 16 of our participants expressed that the relationship the viewer has with the streamer is a factor influencing how much support they gave the streamer. Within this importance of relationship emerged three levels of connection:

- Level one: Casual Fan
- Level two: Celebrity Fan
- Level three: Emotionally Attached

The first level of viewer-streamer connection can be described as a "casual fan." They view their streamer fairly often and interact with them in a casual way. A casual relationship with a streamer can be seen as having a relaxed time and enjoying the stream experience without putting too much effort or emotion into their decisions. Viewers who share this mindset engage

with the streamer in various ways without having to put too much effort such as talking on Discord or participating in chat or seizing the opportunity to play with the streamer when the chance emerges. Participants who share this mindset don't have tremendous amounts of emotional investment and will casually follow the streamer regardless of what they decide to pursue while they stream.

> Even if he like stops playing games and changes his Twitch too, I guess just. Whatever other stuff he does, I would still do it (sub to him). (P1 Male, 29, Asian)

The next level of connection is a "celebrity fan." Viewers perceive their favorite streamer as a celebrity figure where they admire everything they do whether or not they are skilled at it. The viewer will provide this "blind support" because they admire the streamer so much and appreciate anything they do. During this level, there was a more noticeable emotional connection that the viewer had for the streamer.

> Mang0[1] has been taking Ultimate pretty seriously. He's at Beyond The Summit, which is a Smash invitational that he got into, just from the support of his viewers and his fans. So he's doing it for us, man. He's definitely still like one of the best players I guess, but he's not doing very well at this tournament but it's interesting to see him try different Smash games. (P14 Male, 23, Mixed)

The third level of relationship is emotional attachment. In this level, viewers have a strong and often intense relationship with their streamer. They want to continue supporting because of this accumulated history and connection they have with the streamer because of how much it has meant to the viewer's life. The deeper the relationship that a viewer has for their streamer, the more emotionally invested they are and Twitch subscriptions are an avenue of showing their appreciation for how much that streamer means to their life as having another friend means more happiness and having someone that they can emotional lean on.

> I feel like, yeah, even though I've never obviously met them and, and anything, I feel like, you know, we're much closer than most friends I've met in real life. (P5 Male, 20, White)

> He is so super, super supportive of me and I basically want to support those that support me because it's one of those things where he went from a person I watch to becoming one of my closest friends and now mod[2] for him it's one of those people that you want to see grow. (P9 Female, 27, White)

Perceived Impact of Subscription

A prevalent factor related to the interest of a user continuing support for a streamer is the perceived impact that their continued support has. Eleven out of 16 participants expressed that a factor of their motivation to continue supporting a streamer was connected to them feeling like they were impacting the streamer in a meaningful way.

> I don't want to treat this as if it's like a job job...I just really like what he's doing. I just wanted him to continue supporting that, you know? And I mean he is huge. And if I wanted to subscribe to make him bigger than like, I dunno, if everyone thought that way then no one would subscribe cause he's already huge...He's a cool guy like this is how he makes his living. (P3 Female, 23, White)

People treat this recurring financial support as a means to stabilize income for people to make their livings and provide for themselves. Even when a streamer has a bigger audience and was fairly popular, the thought that they are contributing to the streamer's growth and financial stability pushed people to continue donating. The participants understand that the streamer needs money to continue supporting themselves so giving a sustained income gives predictable income and helps show growth.

> I think it just gives an extra layer of support like, 'hey I got you. If anything happens, I got your back' type thing. It's a motivation thing too. When they see someone subscribed to it helps them stay motivated. So if I can go there and renew my subscription every month and post some Dab emojis in chat and say, 'hey look, I'm still here', you know, and it keeps her motivated, to stream then, then I'll do it. (P5 Male, 20, White)

P5 mentioned using subscription as a form of financial support to induce confidence and motivation in a streamer. They feel as though a streamer getting growth and financial benefits from streaming reinforces their motivation to continue to produce content.

> It feels like the money I'm giving him is that like I would like him to be in a world where he doesn't have to work another job and can just strictly focus on Twitch/YouTube content because I really, really like his tutorials. And so I want to keep giving him my money or my Amazon Prime, which is still money, but I want to keep subscribed to him because if he can reach that point, he can quit his job and then focus more on Twitch. (P7 Male, 26, White)

> At this point she's still mid level. I don't think she no longer needs my support anymore. And she seems to be growing at this current point. And I like to support them until they get to a point where, they're big enough to sustain. (P13 Male, 23, Asian)

The money given through subscriptions leads to perceptions that the streamer has increased freedom to continue making content. The financial assistance is seen as a way to let the streamer allocate more time to streaming and allow the streamer to focus on Twitch more than other obligations required to generate income. This makes the participant feel like they helped the streamer continue streaming and had an impact on their ability to produce content.

Intensity of Loyalty

Five out of 16 stated that loyalty is a factor that motivates viewers to continue subscribing to streamers because of the

[1] A popular Twitch streamer

[2] Mod stands for moderator. Twitch streamers can appoint viewers to be moderators for their channel. Moderators have privileges such as banning disruptive users or deleting negative comments.

history and influence they have with them. There is an attachment to the brand of the streamer rather than the content produced. The viewer values the streamer's brand more than the satisfaction they receive from the streamer's content.

> I mean the reason why I liked him, it still exists. He hasn't really changed too much in terms of personality and the direction of like what he does on like Twitch, I see no reason not to continue supporting him...I think so even if he's like stops, like playing games and like changes his Twitch too, I guess whatever other stuff he does, I would still do it (follow him). (P1 Male, 29, Asian).

P2 explained how he's currently a full-time Lyft driver and wants to become a full-time streamer because streaming is his passion. He explained how he felt inspired to make similar changes in his life to evolve his streaming career and had to make the tough decision between financial security verse happiness for himself and his viewers. P2's favorite streamer also had to make a similar decision and chose the unconventional route of happiness over financial security. This decision was brave of the streamer and it influenced P2 to make the same decision. As a result, P2 developed loyalty towards the streamer for teaching him this important life lesson.

> He's influenced me a lot and really the one of the biggest things...he made this big move to quit Overwatch. The game that made him a lot of money. When he said one day to play games he enjoys, cause he doesn't enjoy the game anymore. You know, I was there last year where I didn't know what to do with my streaming career...I took the worst, I would say I took a very, very strong turn to do the same thing. I just switch games where I went from, what people wanted to play againstâĂęAnd I have viewers who are along for that ride as well and that's why to that, to this very day, that big move that he made has been such a big influence on me to where I'll keep subscribing to him for as long as he goes. (P2 Male, 21, Latino).

As a viewer develops this sense of loyalty to support their streamer over time, the loyalty acts as motivation to keep streamers producing content and P8 shows his support in this mindset.

> Yeah, I will probably continue to support them as long as they're streaming. I would keep my sub up and running so that when they came back and they could see that I still supported them. (P8 Male, 27, Black).

Content Persistence

Nine out of 16 participants stated that the streamers' content influenced their decisions for continuing to support that particular streamer; they wanted it to stay the way it was.

> He hasn't really changed too much in terms of personality and that direction of like what he does on like Twitch, I see no reason not to continue supporting him. (P1 Male, 29, Asian).

> As long as he keeps streaming and as long as he stays doing what he's doing, You know the journey he's on. I mean I'd like to say that I'll be supporting him. (P6 Female, 37, White).

This viewer also suggests that the material being presented should stay the same and the streamer should just do whatever he/she is currently doing. This will ensure that the streamer has the viewer's loyalty.

> It's literally the same stuff that I've been watching since day one... I just feel like if you ever change his content, like if he's playing Fortnite and he changed his resolution like Myth for example, he was playing in a stretch resolution. I wouldn't like to watch that. I mean I'd still probably have subscribed, but I just wanted to watch him until he changes that resolution back. So that's why I wouldn't want him to change anything that he's done. I'd rather him keep doing what he's doing. (P10 Male, 23, Asian).

It seemed that viewers get attached to whatever the streamers show, and then they don't want it to change. This will ensure that they keep supporting the streamers. This was a bit different from those who said they would support the streamer regardless of content. It can be inferred that viewers who are currently happy with what streamers are showcasing will continue to support the streamers. This support is primarily contingent on the streamer's content remaining the same.

The Differences Between A Subscription and Donation

The final research question focused on what patrons viewed as the differences between one time donations and long term subscriptions.This question helped to glean information about the different ways in which viewers showed their support for streamers and the differences between those methods.

Return on Investment

Seven out of 16 participants expressed the importance of having a Return on Investment (ROI) which helps differentiate a subscriber from a someone who gave a one-time donation. ROI is used to measure the efficiency of the viewer's investment (the subscription). This helps the viewer decide which method of support will provide more benefit or value for the money they've invested to a streamer's channel.

Participants identified two different measurements of gauging whether the ROI they receive is beneficial, considering the cost of making the one-time monetary transaction. The ROI participants receive through subscribing can be measured through intangible and tangible resources. An intangible resource is the viewer's time; tangible resources are perks such as the viewer having access to a streamer's Discord, sub badges, emotes, etc.

Time was more valuable to the viewer than money. The logic is that money can regenerate over time, for example, $50 can be recovered eventually, whereas the time committed to watching a stream cannot. Because of this, time was more important than the monetary value of subscriptions. The duration of the subscription, which can be seen through the subscription notification, was perceived to be more meaningful when it came to supporting a streamer.

> I guess it's a different level commitment. Anybody could really donate 50 bucks if they had it, but not everyone will take time out of the day to watch your four hour stream, you know, so I'm thinking it means more because people aren't just like sacrificing two seconds and 50 bucks, they're sacrificing like an afternoon to watch you because they want to. So I think that it means a little bit more maybe. (P3 Female, 23, White).

> You can't judge how much time that hundred dollars took and we don't know. And you can very obviously gauge the subscription... Like there's no question about it. It doesn't matter if you're a millionaire, it doesn't matter if you are broke or borderline homeless. Like it took you three months to get that subscription. That's why I say subscriptions mean a lot more. (P7 Male, 26, White).

Other participants believed that having a ROI based on utility meant more for them and is more beneficial than just donating for example. Being a subscriber gives you access to perks from your favorite streamer. This mutual exchange justifies the money spent on subscribing.

> I think a lot more people sub for those other amenities. People don't want to give up money unless they get something in return because [it's] not a charity, it's a business transaction and the sub is one of those ways they can still donate money in a sense, but they get something back from Twitch. (P9 Female, 27, White)

> You have more benefits than donating...You get a badge, you just get to speak if it's just a subscriber chat only. (P10 Male, 23, Asian)

When donating, it was viewed as an act of kindness rather than having an agenda of receiving some reward when subscribing to a channel. When donating, there was a preconceived assumption that there is little to no benefit of having a good ROI. This made donating less valuable through the intent of having a good ROI from the viewer' s perspective, making it easier to identify the difference between subscribing or donating.

> I feel like the subscription definitely has a more of like an ROI, but the donation is kind of like, when I do donate, it's strictly out of the kindness of my heart. Obviously I'm not expecting anything back unless they have some kind of incentive up (P9 Female, 27, White).

Legacy and Loyalty Towards Streamer

Twelve out of 17 participants mentioned that loyalty is an important factor that differentiates between viewers who are subscribed and viewers who donate. Participants explained that viewers who donate large sums of money only to never return to the stream are those who selfishly seek attention and don't really care about the supporting the streamer. These individuals are seen as "clout chasers," meaning those who seek fame and influence.

> I think if you're donating a $1000 to a streamer, you're probably looking for more of a reaction, like 'Oh my God, really?!' And then you see all of chat freaking out, right? So there's definite value to where you can see your continuous support to that streamer is there compared to someone who just drops a big wad of cash and then never comes back. (P2 Male, 21, Latino)

> I think when you go into a big stream it has a lot of viewers and you donate $100, get your name on screen, you're doing that [for] selfish reasons to brand and market yourself. (P15 Male, 29, White)

In addition, loyalty is viewed as a priceless status wheres viewers want to show off their contributions, but not in an egotistical manner. Participants explain that having a sub badge is tangible proof of their loyalty and commitment towards the streamer. Money is viewed as less meaningful than the viewers' loyalty. Viewers have dedicated their money and time to see the streamer grow and become more popular, so they feel that they were a contributing factor to that success. Witnessing this sensation of growth and seeing the streamer happy is gratifying for the viewers.

> Being a sub is kind of like getting like a badge of honor, like you're showing your support and it's something that other people can see. (P8 Male, 27, Black)

> A subscription shows that you show enough interest to have their emotes and sub badge. One time donations, basically the person may leave and not come back... Meanwhile, the subscriber is showing their support each month by resubscribing (P4 Female, 21, Pacific Islander).

Recognition

When asked about the difference between continuously subscribing and donating one time, seven out of 16 participants said that subscribing allowed them to be gain more recognition. Streamers are more likely to remember people who come to their stream often, so they recognize such viewers with friendly gestures through notifications or sub badges whenever they return. In comparison, a viewer who watches the stream only once and just donates some amount of money might create some noise at the time, but won't be remembered in the long run. This sensation of specific recognition from these celebrity-like figures is satisfying for viewers. Viewers also enjoy showing off their sub badges as bragging rights to gain recognition within the community, especially if they've been subscribed for a long time.

> The streamers will tend to recognize you more, and they will be more friendly with you if you're someone who's constantly like subscribing or donating, but if you're just there once like especially with large streamers. And if you only are donating like $5, you're much less likely to be remembered the next time (P12 Male, 20, White).

> With a subscription, if they recognize your name, you know, they'll like say hi to you at TwitchCon. Like, you know, talk to you more or it's just, how would I say it? Like for like someone that you admire, it's amazing to feel like they recognize you. (P10 Male, 23, Asian)

> When you're paying the money to somebody, like on YouTube, you don't really get any recognition at all, when you do it on Twitch when you subscribe to somebody you get a very specific sub badge that shows people how long you been subscribed. So it's cool for me because I'm like,

> cool, I'm part of like this a special club... I can show off to the entire community. (P2 Male, 21, Latino)

DISCUSSION

From our results, it seems that viewers develop parasocial relationships with the streamers [37], in which the streamer intentionally or unintentionally creates an illusion of intimacy which makes viewers feel special. This feeling of being appreciated motivates viewers to watch, subscribe, and remain subscribed, and is consistent with research on why people view live streams [14, 16, 23, 15]. This is how viewers eventually develop a sense of loyalty towards the streamers. Different from previous research, however, is patrons' desire to continue patronage require more than warm feelings– patrons see their patronage as an investment and expect some kind of tangible or emotional return, even if it is an ephemeral acknowledgment from the streamer or a virtual icon that signals their loyalty.

From the quantitative results of this paper, it can be seen that streamers who provide better incentives will have greater chances (a higher probability) of getting subscriptions of higher tiers. Currently, the responsibility of providing perks to the viewers lies with the streamers themselves. If the Twitch platform starts providing further incentives, this may increase the number of viewers purchasing higher tier subscriptions, which could then generate additional revenue.

Study 2 looked into the differences between one-time donations and continuous support. There was much overlap between why people initially subscribe and why they continue to subscribe, with some distinct differences. The reasons for initial subscription were centered around characteristics of the streamer– their personality, their method of content delivery, and sense of community that the streamer created. In other words, it was all about the streamer. The reasons to remain subscribed were divided into those who wanted to help the streamer and those who were more concerned about what they were getting out of the subscription, whether it be an emotional gratification or a tangible one. Of note, we found that a subset of participants viewed digital artifacts such as emotes as something of tangible value. This dichotomy between desire to be loyal to the streamer and to reap the benefits of their financial input was also apparent in understanding how participants differentiated subscriptions from donations. Participants associated the recurring nature of patronage as a form of emotional and financial investment that was incomparable to one-time donations because of the added time and effort it entailed. Participants also thought that subscriptions would benefit the streamer more than one-time donations, no matter how large the latter is. It would be interesting to see how the streamer feels about donations vs. subscriptions.

Participants also differentiated monetary donations from subscriptions because subscriptions were associated with visible rewards. These rewards included having a badge in front of their username that indicated their length of subscription, and access to the streamer's special emotes. It was unclear, however, if this association of subscriptions to tangible rewards is something facilitated by the system or not. The Twitch platform currently does not have a permanent reward structure for people who give money– which is perhaps why participants viewed donations as ephemeral and patronage as lasting.

The patterns for gifting subscriptions to others did not have a strong correlation to the other supportive behaviors and in some cases was negatively associated with subscription motivations (Table 2). This could suggest that gifting is a different psychological phenomenon that warrants further study.

Limitations

Since survey participants were recruited at TwitchCon, it is more likely to assume that these participants were more passionate about Twitch than the average Twitch user. For the quantitative results, there were two factors that could have been more reliable; future studies may want to add more related items to establish a better scale. The interview participants were disproportionately male, but they were interviewed on a first-come, first-serve basis. Future research may look into gender-related differences. This study only focused on the context of Twitch, so the results may or may not apply to other content areas; future research should examine how digital patronage works in other creative industries such as news or art. Investigation of other patronage platforms is also necessary to see how different affordances can influence patronage.

CONCLUSION

This study defines digital patronage and is one of the first to examine why people engage in patronage behaviors on Twitch. The results of this study show that viewers will initially subscribe to streamers based on how the streamers present themselves as individuals. Viewers will be more inclined to subscribe if the streamers develop relationships with them. Viewers will *remain* subscribed to their streamer based on what they get in return, including emotional and digital rewards such as emotes as well as the satisfaction of financially helping someone while doing something they enjoy. Compared to single donations, patrons viewed their patronage as a form of emotional and financial exchange.

The content on Twitch is easily accessible. Since the platform does not require upfront payment, money does not inhibit viewers from using Twitch, but we were able to identify why viewers were still willing to provide and continue providing financial support.

Understanding the psychology of patronage is a key factor to be considered while designing patronage platforms in the future. The reasons behind why people initially get attracted to the content and those behind why they continue supporting the streamer have similarities but the differences highlight the importance of the feelings of entitlement, emotional intensity, and perceived labor that are associated with loyalty.

Digital patronage could be a key method that enables the sustenance of independent content creators. Our research not only provides technical solutions for patronage platforms but also informs content creators of patrons' expectations.

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