Livestreaming as therapy: Information experiences on Reddit's Public Access Network

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Abstract

Introduction. This paper presents the findings from a project that aims to broaden our understanding of how people experienced social livestreaming videos on Reddit's Public Access Network as digital informational boundary objects in the context of the global pandemic.

Method. A digital ethnography research approach was used consisting of 1) collecting data and fieldnotes from chatroom interviews and observations of interactions between livestreamers and their audiences; 2) content analysis; and 3) reflexivity.

Analysis. The data were coded and themed focusing on description, analysis and interpretation of each individual data set. This was followed by constructing a bricolage of the various coded data sets to generate a collective narrative.

Results. Six forms of livestreaming therapeutic information experiences were identified: exploring self-identity; self-improvement; positive vibing; vicarious wanderlust; mental health connections; and inclusive distant socialising.

Conclusion. The combination of streamer–audience information experiences, active livestreams, and digital social livestreaming platforms can function as an informational boundary object that facilitates witnessed authenticity through genuine connection, self-disclosure and self-acceptance. Witnessed authenticity provides a framework for designing supportive digital environments that can promote individual and collective resilience, particularly in times of crisis and uncertainty. Recognising this can open new opportunities for regeneration from stronger impact grounded in real-time co-presence.

Introduction

In the past decade, there has been a major shift in the nature of Internet communications from mainly asynchronous text or video content experienced without a sense of immediacy, towards growth in synchronous livestreaming videos, a shared virtual experience in real time. This includes exclusively video-based platforms (i.e. TikTok, Twitch, YouTube Live) and streaming features integrated into viral social media platforms (i.e., Facebook, Twitter (X), LinkedIn, Instagram) for the purposes of building online communities around synchronously interactive broadcasts of audio-visual multimedia. Social livestreaming involves content creators *going live* on their chosen platforms to connect directly with their followers in real time with immediate reactions. A wide array of interests is streamed daily, for example, a fitness instructor leading workout sessions, a gamer giving first impressions of a new video game, or someone engaging in casual conversation with their audience.

A growing body of research has begun to investigate social livestreaming experiences, including cohesion and belonging in online communities, with human-centred design implications for improving people's health and wellbeing (Kairam et al., 2022). Some studies have explored livestreaming from the perspective of human information behaviour, i.e., human motivators and demotivators for interaction or non-interaction with information, contrasting asynchronous communications through social media with synchronous livestreaming interactions (Scheibe et al., 2016; Stock et al., 2022) and digital copresence (Diwanji et al., 2020). As Scheibe et al. (2016, p. 18) describe:

> Research on social live streaming services shows it is important for information science to broaden its sometimes-limited view only on information seeking behaviour towards an entire view on users' information-related activities, including all aspects of information production and information reception behaviour.

In contrast to face-to-face social interactions, cyber social interactions lack spatial proximity and bodily contact and are characterised by reciprocity and temporal proximity. Additionally, the prevalence of cyber social interactions has increased coinciding with recent changes to the way people live and work virtually (Stocket al., 2022).

The ways in which people experience information or being informed through social livestreaming have not yet been studied. This project addresses this gap by investigating people's information experiences on popular social news and discussion platform Reddit .

In pre-pandemic late 2019, Reddit introduced a new livestreaming feature called Public Access Network (commonly known as r/pan), which operated between 2019 and 2022. This feature began casually as a novel social experiment to build on more traditional subreddit community discussion threads by integrating livestreaming video into those communities. The experiment unexpectedly escalated in usage by new and established redditors during the pandemic. r/pan rapidly grew into a social phenomenon over two years, particularly during the lockdowns, before Reddit decided to cease its livestreaming capacity indefinitely, coinciding with COVID-19 transitioning to an endemic phase. Regular r/pan livestreamers informally known as *panners* were left in shock to realise that the r/pan experience was irreplaceable; its unique culture could not be substituted on other livestreaming platforms, and they continue to discuss r/pan or something similar as having regenerative potential in the post-pandemic era.

This paper begins with a brief overview of the existing literature. This is followed by a discussion of the research approach, including how informational boundary objects are a form of information experience in the context of the current study. It then presents a detailed description of the research findings and concludes with a discussion of how this study broadens our understanding of information experiences in the social livestreaming context.

Literature review

Social information experiences on Reddit

Reddit has been acknowledged in medical journals as one of the most reliable Internet sources of public health information, particularly during the pandemic (Thompson et al., 2022). However, in a paper suggesting that social media sites be included in pandemic response information for the public, Reddit along with other popular social media platforms such as TikTok and Facebook have also been criticised for not enabling enough oversight from recognised medical authorities (Eghtesadi & Florea, 2020). Prior to the pandemic, among a plethora of topics of public interest, research shows that Reddit's online communities (or subreddits) were already established as safe and anonymous spaces for patients sharing information on personal experiences of physical health conditions (Du et al., 2020);, youth mental health issues (Sit et al., 2022), and substance use behaviour (Bunting et al., 2021). During the pandemic, Reddit was a major source of patient experience information about long-term effects of COVID-19 (Thompson et al., 2022). To the researcher's knowledge, there have been no in-depth studies published to date that focus on Reddit's former livestreaming platform.

Livestreaming for health and wellbeing during the pandemic

Current research and discourse around livestreaming and social media focuses on problematic use (e.g., cyberbullying, trolling, Internet addiction, misinformation) and the adverse impacts of social media, digital cultures, and digital design factors. There is very little research exploring the positive impacts and benefits of social media (including livestreaming) on people's mental, physical, social, and emotional health (Wang and Li, 2020). This research aims to fill this gap in knowledge. The small amount of existing research that focuses on livestreaming during COVID-19 reflects various common livestreaming platforms and usage purposes such as entertainment and gaming (Scerbakov et al., 2022; Vandenberg et al., 2020; Warren, 2020);, personal and company branding (Abidin et al., 2020); and everyday life streaming (Khobra & Gaur, 2020; Ruberg & Lark, 2021). There is some emerging research into livestreaming as a form of maintaining mental health and wellbeing (Gandhi et al., 2021; Johnson, 2019; Xu et al., 2021), most recently in times of social isolation and anxiety caused by the pandemic (Willcox et al., 2021).

Informational boundary objects as an information experience

In information and knowledge research, boundary objects are understood as abstract or physical artefacts that exist at the interfaces between groups (Huvila et al., 2017). While existing literature has explored boundary objects theory in various contexts, such as communication, evaluation, and knowledge sharing (Huvila et al., 2014; Star & Griesemer, 1989), the application of this theory to digital livestreaming platforms represents a significant gap in the field. This research addresses this gap by aiming to extend understanding of boundary objects by conceptualising livestreamed videos and embedded chat interactions on r/pan as informational boundary objects, defined as tangible yet malleable forms of information that different communities use and interpret in various ways (Miller, 2020). Additionally, this study builds upon emerging research into information experiences on social media (Miller et al., 2019), encompassing complex, multi-dimensional engagements with information that integrate actions, thoughts, feelings, and social-cultural dimensions (Bruce et al., 2014; Hughes, 2014). However, there is a conceptual tension around how *information* is defined in this digital context. Emerging conceptions of information experience focus on engagement with substantive content such as verbal communications, demonstrations or messages. This study adopts a broader perspective, viewing the digital platforms and their features as informational entities themselves. The technological infrastructure not only delivers information but constitutes the information experience through:

- Real-time interaction affordances that fundamentally shape communication (McLuhan, 1964);

- Embedded social information about community norms and participation patterns; and
- Participatory information creation through viewer contributions via chat, donations, and reactions (Jenkins, 2006).

Research objectives

Based on these gaps in the literature, this study addresses two primary research questions:

1. How do livestreamers on r/pan experience digital informational boundary objects through streaming videos and chat discussions?
2. How can social livestreaming experiences as informational boundary objects promote digital wellbeing and provide healthy influences during times of hardship, isolation, and uncertainty?

Research methodology: Digital ethnography approach

Digital ethnography was employed as the qualitative methodology for understanding the information experiences of r/pan livestreamers. The rationale was that the adaptation of traditional face-to-face ethnographic methods to digital-only environments enables investigation of cultural practices and social interactions within online communities. This allowed access to subjective experiences of participants (i.e., livestreamers), revealing in-depth narrative-based outcomes that offer holistic understanding of information experiences in social livestreaming and its cultural impacts (Pink et al., 2015). The methodology comprised three components: data collection through observation of participants' audio-visual broadcasts and subsequent chat-based interviews; digital content analysis using a combination of boundary objects theory and information experience; and reflexive analysis throughout the research process (Hammersley & Atkinson, 2019).

Data collection

The researcher conducted immersive digital fieldwork across two six-month phases (July–December 2020 and July–December 2021). This was designed to allow the data collection process to be shaped by observations of variations in livestreaming practices and social dynamics as they evolved throughout the COVID-19 lockdowns and peak periods. Observational data and fieldnotes from approximately 200 r/pan livestreaming sessions were collected, including the systematic documentation of streamer–audience interactions. Semi-structured chat-based interviews were conducted with fifty streamers. The researcher asked the interview question(s) only after the streamers indicated their consent to open discussion with audiences by inviting *Ask me anything* interactions during their broadcasts. This approach aligned with the informal nature of livestreaming platforms, whilst maintaining ethical research standards (Association of Internet Researchers, 2020). Chatroom interview conversations ranged from ten to forty minutes. Duration of interviews was influenced by how well conversations and questioning unfolded, and also audience engagement. There were three types of participant responses to the researcher's initial question, *Why do you livestream?* with each providing insights into participants' reflexivity levels : 1) reflective participation (i.e., being conscious of personal motivations and platform comparisons), 2) unreflective participation based on peer influence, and 3) defensive responses interpreting the interview question as criticism.

Digital content analysis: Informational boundary objects and information experience

In this study, livestreamed videos and embedded chat interactions were conceptualised as digital informational boundary objects. Each livestream was viewed as a malleable informational artefact that facilitates collaboration and meaning-making across different communities with flexible interpretations (Huvila et al., 2017; Miller, 2020). This theoretical framework was suitable for

analysing livestreaming because these digital artefacts simultaneously serve multiple functions, for example, entertainment content, social interaction spaces, and identity construction and validation sites. As Huvila et al. note, 'the inbetweenness of the concept of boundary object makes it a valuable analytical device for examining ensembles of people, information, and technology that are ever-shifting and multi-sited' (p. 1819).

The study developed specific analytical criteria based on Bruce et al. (2014) for identifying information experiences within participant narratives: *transformational engagement* involving interactions with information that produced changes in understanding, behaviour, or emotional state; *multi-dimensional processing* encompassing simultaneous cognitive, emotional, and social engagement with information; and, since this study adopts a broader perspective, viewing the digital platforms and their features as informational entities themselves constituting the information experience, *contextual meaning-making* involving information acquisition and interpretation situated within the specific affordances and norms of the digital livestreaming environment. The identification process was demonstrated through detailed analysis of participant narratives, such as Blake's identity transformation where audience feedback as information processed and shared through vulnerable self-disclosure resulted in transformed self-perception (categorised as *Exploring self-identity*), and Wax's performance development through positive feedback loops as information that facilitated competence development (categorised as *Self-improvement*).

Reflexive analysis

Reflexivity in this study involved multiple reflexive practices throughout the digital content data analysis process, including positionality examination involving continuous reflection on the researcher's status as anonymous observer rather than active livestreamer, considering how this position might limit experiential understanding whilst providing analytical distance, It also involved theoretical bias monitoring through regular questioning of how boundary objects theory shaped pattern recognition and whether alternative theoretical frameworks might reveal different insights. Additionally, interpretive transparency was considered through systematic documentation of selection criteria for exemplar quotes, thematic grouping decisions, and the handling of contradictory participants' interviews and digital traces of interactions and experiences (Pink et al., 2015).

Following Lévi-Strauss's (1966) concept of *bricolage* as a metaphor, adapted for qualitative research by Denzin and Lincoln (2011), individual participants' interview data and digital traces were woven together to create collective narratives while preserving the integrity of individual experiences. This process involved iterative cycles of coding, memo-writing, peer consultation, and where possible, member checking to ensure participant voices remained central to the analytical outcomes. The study's validity was enhanced through multiple strategies:

- *Prolonged engagement*: Extended fieldwork periods allowed for deep immersion in the research context (Geertz, 1973).
- *Triangulation*: Multiple data sources (observations, interviews, platform analysis) provided comprehensive understanding (Denzin, 1978).
- *Reflexive documentation:* Systematic recording of analytical decisions and interpretive choices increased transparency (Finlay, 2002).
- *Theoretical sampling*: Purposeful selection of diverse streamers and streaming contexts enhanced transferability (Glaser & Strauss, 1967).

This methodological approach of digital ethnography captured the complex, multi-layered nature of information experiences within social livestreaming environments whilst maintaining

appropriate ethical standards for research in digital spaces (Association of Internet Researchers, 2020).

Findings

Digital content analysis revealed various themes. First, r/pan livestreaming was uniquely experienced by its streamers as a form of live therapy or self-counselling, promoting personal and social resilience to cope with the restrictions from the global pandemic and to recover and heal from some of its effects. The platform grew to become a lifeline and positive vibing space for people from all walks of life across the world, who were dealing with mental health issues in a time of social distancing and social isolation, fostering a growing sense of collective consciousness. As suggested by streamers who contributed to this research, r/pan was the only livestreaming platform they had experienced that had the capacity to moderate and generate truly humane or spiritual connections through dark and challenging times. As suggested by the streamers , r/pan moderated inclusive and intimate human connections through these challenging times. This conceptualisation is in stark contrast to that of a superficially polished marketing tool, as are mainstream social livestreaming platforms such as Twitch, TikTok, YouTube, and Instagram. Through data analysis, six forms of r/pan livestreaming therapeutic information experiences were identified:

1. Exploring self-identity
2. Self-improvement
3. Positive vibing
4. Vicarious wanderlust
5. Mental health connections
6. Inclusive distant socialising

1) Exploring self-identity

r/pan provided a low-key, semi-anonymous space to discover one's true self, values, and passions, and to share these with other people, often complete strangers, to help validate their self-disclosure, a key step for establishing a healthy self-identity. One young man, Blake, called r/pan his '*miraculous lifeline, as it buoyed [his] spirits in difficult times*', having experienced a job loss in the pandemic without a close support system. For forty minutes per day over a several weeks, he livestreamed his self-talk counselling sessions from his car where he was temporarily living in the depths of a 2020 *shelter-in-place* requirement in an American city. While he streamed his thoughts around what he had learned from the experience on a personal level, he invited interactions from an audience of hundreds across the world: faceless but warm and non-judgemental. Many audience members gave him encouragement to express his emotions through uplifting and empathetic comments in the chat room, sending upvotes and emoticons as rewards embodied by Snoo the alien (Reddit's mascot) such as '*faith in humanity restored*', so he could feel their love and relating in real time. This led to his epiphany that: '*Being alone has allowed me to embrace my self-worth – I'm no longer comparing my situation to others*'. Within months, he was back on his feet with not just a new job and place to live, but a new sense of self-worth and purpose, '*taking a more spiritual not materialistic life path*', and this was reflected in the new group of friends that he met through r/pan.

Blake's stream interactions with his audience brought to light the importance of self-disclosure (disclosing information about personal epiphanies and insights), in what was perceived as a safe space. The platform was closely moderated to instantly block antisocial behaviour, although these instances were rare on this platform because of the mostly friendly personalities who were using it. Not only were the informative insights shared having an impact on streamer and audience, but the act of self-disclosure itself was paramount to Laurence, a middle-aged single dad who streamed his self-talk about random topics from his living room in an undisclosed location. He was

not necessarily feeling socially isolated, but his current social network was not allowing for valued parts of himself to emerge. He mentioned that r/pan gave him a sense of being able to explore his authentic identity which he could not experience in any other social situation: '*I'm feeling free to totally be myself and say whatever I want uncensored as no one knows me and won't judge me*'.

Another benefit of r/pan was the ability to instantly receive positive attention and validation while streaming personal thoughts and opinions. Carrie, a middle-aged woman, said she streamed her self-talk for attention and to help others in the online community.

> *I didn't get a lot of attention as a kid and when I did it was negative so I look for positive attention in here. I'll never be one of those 'thousands of followers' people, but if I can say something that makes someone happy that's what I'm here for.*

Her growing sense of identity was closely tied to replacing past negative attention with positive validation, and to not having to become a famous online celebrity or influencer while still wanting to make a positive difference to other people's lives through her humble streaming appearances.

Identity discovery through r/pan was important for younger people who were coping with long periods of boredom throughout the lockdown and wanted to use the extended time to connect with what they enjoyed doing either as hobbies or a potential career. As Axel, a young man, put it: '*I'm not anyone special, just a guy in a garage who found out I really enjoy making cosplay suits*'. Axel was not so much concerned with influencing an audience but using the platform to broadcast talking out and enacting the learning process of discovering a special interest he could explore from his garage. This would help to manifest it from dream to reality, which he said he carried into his offline life.

Comedic and quirky monologues were also very common with younger livestreamers. However, unlike comedy that was edited, scripted, and performed on larger livestreaming services, r/pan allowed for impromptu open mic style appearances which laid bare the spectrum of human emotions that come from being socially awkward in front of a live audience of strangers. Eric, one of the more eccentric and spirited personal monologue streamers, enjoyed giving audiences a glimpse into his internal monologue: '*who I really am, with no filters…*' He also wanted to promote the ideal of a creative, fun and humorous life without doing drugs and drinking: '*People would like to know what goes through my brain, sober – I'm high on life, I'm high on me, I'm high on you!*'.

Some streamers were discovering their identities through telling narratives that broke stereotypes and awareness of other unconscious biases. Streams like this were met with mixed comments in healthy debates, but people who thought differently to what was socially expected were encouraged on this platform. Evelyn, a young woman, talked about combining her strong self-awareness and public advocacy to promote more open discussions on topical social issues: '*I livestream to share my story of who I am and why I'm here… my opinions and social commentary*'.

In most cases, r/pan streamers were not concerned with digital identity or performing for an audience. Rather, they were oriented towards coming together and being with the mixed audiences through the platform to develop an identity in real life and perhaps inspire others to discover their true selves. In many cases, livestreaming on r/pan felt like the boundaries were blurred between streamers and audiences with both having shared equal status , and with visible streamers (i.e. non-celebrity status) being driven by the faceless audience's chat room reactions. It was the enactment of broadcasting *hidden* reality narratives around the development and reasons behind their life choices that was an important part of aligning their real lives with their true identities.

2) Self-improvement

r/pan provided a safe and enjoyable, low pressure motivating space to improve a skill and gain confidence (anything from public speaking, languages, music, art, writing, building, cooking) where one does not have to be a *polished persona*. This signified the *rise of the digital lofi amateur over polished pro*. Many people discovered or rediscovered their passions during the COVID-19 lockdowns. As musician Abby put it: '*This gives me a way to grow into a better version of myself*'. Wax, a young man, was learning to play guitar and gain experience performing for people, who offered positive gentle feedback though the chat, by livestreaming his practice sessions from his bedroom. He said it was '*a way for me to gain positive feedback to get better, while not feeling intimidated that I have to be professional or famous before I can show myself*'. Not having a large following and being able to stream comfortably was a huge motivator. Nori, a young woman, had started painting as a hobby since the pandemic began:

> I loved watching live videos of artists and wanted to try doing it. It's such a cool way to connect with other people from around the world. You need a following to do Instagram and here you don't, so I came across all kinds of people here doing this and made some cool friend'.

Social livestreaming usually means turning broadcasts into a conversation. This is not always the case with some wishing to broadcast without conversations, revealing a need for self-talk to boost self-motivation, without the expectation that someone will react. A young woman artist, Sora was battling art block and practicing her skills, broadcasting her live sketching process with sporadic self-talk. While many were lurking in the chat room she did not interact with them, being selective with who she responded to in the chat. She mentioned she was '*content to spend most of the stream time making art and drawing in positive energies just from the act of showing up here regularly*'.

Some recognised r/pan as a way of coping to simulate normalcy, practicing a skill while socially isolated to prepare for life, or inspire healthy lifestyle changes when 'returning to normal' at the end of the pandemic. Others recognised livestreaming as a new skill set that could help them to adapt to the new norm. Tina, a middle- aged woman, used quarantine time '*to practice my public speaking skills and to gain confidence in front of a camera for my remote working job*'. Similarly, Danielle, a young woman, valued the opportunity as she could '*directly interact with audiences to practice my social skills and small talk, which I don't do much of offline due to being introverted and isolated*'. Nikola, a middle- aged male video producer from a non-English speaking country: '*While in lockdown I like to practice my English with you, I want to keep my English levels good when I work professionally with native English speakers*'. Paula and Beck, two friends loving in an American city, streamed a quirky talk show to practice '*the new way of socialising - the new norm... to be live with people right here, right now, feeling the love and encouragement from people giving us fun awards*'.

3) Positive vibing

r/pan was a space for both streamers and audiences sending and receiving random positive vibe and emotional states: informational energies for relaxation and beating boredom in isolation. The act of livestreaming highlighted the comforting non-verbal aspect of streaming anything from live Nintendo video gaming with old school nostalgic commentary to cute animals to music jams, live memes, and amusing mixes. Will, a young man, livestreamed for no reason other than: '*Anyone can do it. This is not anything special so come chill... I'm not gorgeous or have exceptional talent but I feel appreciated by people who resonate with me anyway*'. Sunny, a young woman, was having fun answering random questions saying she enjoys receiving an instant positive feedback loop. Kurt, a young man, was not trying to become a comedian but enjoyed making people laugh with random humour and collectively make everyone feel better. '*We're coming together, I'm doing something, you're doing something and we're both confused!*'. Mick, a young man expressed the need to be randomly entertaining to decompress after a long hard day: '*This is my way of relaxing and chilling*

with you guys, sharing conversations, politics, playing music, having random funny moments... just relaxing and debriefing after work'.

4) Vicarious wanderlust

r/pan enabled vicarious live traveling around the globe and cultural learning for many who were unable to travel due to COVID-19 restrictions. Many travel streamers broadcasted the views on their walks around busy streets in Asian cities, or hikes around tropical islands in the Pacific or nature parks in the US. Additionally, during the pandemic travel streams had similar themes of showing what altered life looked like in different parts of the world. Kacey, a middle- aged woman livestreamed to share her experiences as an expat for the benefit of others: *'I'm an American living abroad in Thailand livestreaming and documenting my walk through a busy city and making cross cultural comparison commentary, such as differences in cooperating with face mask wearing'*. Pete, a young man who worked in tourism, livestreamed the empty ghost town tourist attractions like Sydney Harbour to capture lockdown life and its impact on tourism and economy. Matt, a truck driver, was livestreaming while driving across America to experiment, to stay awake and to be entertained while driving cross country: *'I love to share this beautiful picturesque road that I drive down'*.

5) Mental health connections

r/pan was experienced as an everyday mental health booster; free counselling using self-talk; and telling stories while knowing people present are listening and not judging. Faith in humanity was restored with some transitioning to a more spiritual, non-materialistic life path. A young man, Tyler, livestreamed to ultimately turn his life around:

> *I'm not going to capitalise on my homeless situation by asking for donations. Hard times can reveal the difference between opportunists and people who want to be known for modeling and practicing the moral thing. My mental health has improved because I'm no longer thinking about failed expectations trying to keep up the race to maintain society's standard, which causes depression. I can focus on loving myself and looking after my mental health.*

Ann, a middle-aged woman, said she wanted to share her struggle with mental health as *'it's never visible and we should break the stigma of talking about it. I live in a place where it's never talked about and I want to connect outside of where I live'*. Similarly, as a way of establishing a collectively shared empathy, Bonnie wanted to livestream *'to vent emotions about experiencing a lesser known health condition for others who may be going through something similar'*. Paola, a young woman with a clinically diagnosed mental health condition, livestreamed her typical day getting therapy and answering questions from the audience who were a mix of patients and people interested in mental health. Patients listening to the stream commented around the discussion that they *'benefited from watching her typical day getting treatment and listening to her personal experiences trying various forms of treatment, with more awareness of their choices'*. This personal knowledge that was generated from a livestream of her typical day, exposing people to her lifeworld, was empowering people to seek help while being informed in ways that circumvented traditional sources of medical information.

Others were livestreaming as a way of coping with increased feelings of anxiety and loneliness during the lockdowns. A young male porter, Thomas, who felt isolated in his job in a large American city, live streamed the moments of his typical day as a way of socialising and to calm him when he felt anxious. Sam, a middle- aged man, livestreamed his self-talk therapy from his home to deal with what he described as *'common problems from Covid such as increased loneliness and anxiety. It helps clear my crazy thoughts'*. Vince, a young man, was feeling bored and isolated in his bedroom and decided to livestream reading from his book collection as a way of dealing with insomnia: 'It

made me feel connected to everyone else who was going through this'. Bailey, a young woman, livestreamed her daily walk to get her '*out of her head and connect with others*'.

6) Inclusive distant socialising

Streamers commonly mentioned that in any other era, r/pan would be seen as a social taboo and frivolous waste of time. This meant that participants perceived it as more socially acceptable to spend time distant socialising during the lockdown period, when it was described by participants as '*a lifeline for many in isolation*' and '*a great way to socialise and I like having company when I'm all by myself*'. Many questions arose around this experience: Have our perceptions on distant socialising changed since the pandemic? Has it been normalised to be socially acceptable? Would this normalisation continue into the post-pandemic future? As one young man, Tyler put it:

> *I'm in self-isolation and tonight I'd typically be out with friends. I think r/pan is huge because we are basically searching for a sense of normalcy, we are trying to communicate with people. I used to sit and watch people on r/pan for hours and I thought it was pretty cool, you meet a lot of interesting people. But this is trying to get back to normalcy, in a sense.*

Amelia, a young woman, livestreamed about the inclusive nature of distant socialising on r/pan:

> *I love talking to people from all over the world. With Covid you can't go out and socialise. I don't drink and go to the bar, it's harder to make friends these days so being able to livestream and connect with people on a deeper level even though I don't get to see people, I can still feel the love and care and that's what really matters.*

Shyla, a young woman live streaming from a city in India, enjoyed distantly socialising with people not only from India but also from other countries and cultures: '*Conversations get unexpectedly interesting and I never thought there would be much interest in the kind of things I am into, in a fairly mainstream kind of arena*'.

Discussion and Implications

Commonalities in therapeutic information experiences

All six forms of livestreaming therapeutic information experiences on r/pan share foundational elements that create their therapeutic quality. Each form emerges from r/pan's capacity to provide a safe, low-stakes environment that was described as '*low-key, semi-anonymous*', '*closely moderated*', or simply non-judgmental, reducing social risk and vulnerability. Unlike mainstream platforms that focused on polished content, all six forms emphasise authenticity over performance, with streamers consistently mentioning they don't need to be professional, famous, or polished. This therapeutic value stems from self-expression without entertainment or influencer expectations. Additionally, each form involves connection through vulnerability, whether it's Blake's car-based therapy sessions or artists sharing creative struggles, where therapeutic benefits emerge from willingness to be seen in an unguarded state. All the forms also feature reciprocal information exchange, involving dynamic flows of validation, feedback, and connection that suggest therapeutic quality is inherently relational and interactive.

Key differences and therapeutic value of witnessed authenticity

The six forms differ across several dimensions: temporal orientation ranges from process-oriented approaches focused on present-moment states (*positive vibing*, *exploring self-identity*) to outcome-oriented emphases on progression toward specific goals (*self-improvement*, *mental health connections*); focus varies from internally directed personal understanding to externally directed connection with others and the broader world; and information flow direction spans from self-revelatory sharing to skill demonstration, experience-sharing, and mutually interactive exchange. However, what unites all the forms is *witnessed authenticity*, the therapeutic value

emerging from being genuinely seen and accepted while being true to oneself. This creates a unique informational environment where information becomes transformational rather than transactional, sharing simultaneously enables self-discovery and other-connection, and vulnerability becomes a source of strength. Even seemingly outcome-oriented forms derive therapeutic value from authentic sharing and connection processes, suggesting that the information experience itself serves as the therapeutic mechanism. This analysis reveals that r/pan's therapeutic quality emerged from creating conditions where information sharing could be simultaneously self-affirming and other-connecting, a rare combination in digital spaces typically designed for either performance or consumption.

Implications for therapeutic information experiences

This study also has significant implications for understanding livestreamers' informational and mental health and wellbeing experiences, and the impacts of humane social livestreaming in the context of the global livestreaming ecosystem, social change, and regenerative post-pandemic futures. This study suggests that many people experienced their time in lockdown as a call to work on themselves and to ensure their daily lives were more in tune with their purpose. The therapeutic information experiences of exploring self-identity, self-improvement and making mental health connections represented ways in which people attempted to heal and develop resilience from adverse effects of the pandemic. The information experiences of positive vibing, vicarious wanderlust and inclusive distant socialising represented short-term coping mechanisms from the restrictions and isolation imposed by the pandemic restrictions impacting their normal lifestyles, while also contributing to overall resilience.

This study shows that the experience of livestreaming was an essential part of the self-discovery process. Previous research points to streamers crafting an image based on their understanding of self and social identities. However, this research shows that the acts of self-talk, particularly self-disclosure of information in the form of personal and experiential narratives such as epiphanies or monologues (Nabity-Grover et al., 2020), connecting with personal passions and authentic self-expression are essential to the discovery of self-identity as a journey unfolding, leading to a greater sense of wellbeing (Bailey et al., 2020). Enacting the learning and creating process in a blurred boundary (i.e., equal status) real time co-presence with an audience of kind strangers, whose chat comments and reactions sometimes shape streamers' narratives, and whom streamers feel they might inspire, are also essential to the discovery of self-identity. This experience was helping streamers align their reality to their true self, allowing them to be the change they wish to see in the world. r/pan also gave people a live space to practice skills in front of a supportive audience who they could also connect with on a similar plane without fear of (perceived) failure (i.e. not being highly rated, no large followings) and boosting motivation by giving them an opportunity to show up, not primarily for the audience but for themselves, to help develop a skill to its full potential, both online and offline.

r/pan also enabled shared empathetic mental health connections where people shared information in the visual contexts of their place of therapy, showing how they experienced recovery and consequently, promoting greater awareness of patient needs and experiences beyond the traditional, breaking stigmas and empowering alternatives in the health experience. For some, the calming act of livestreaming in a low stress environment provided anxiety relief. Positive vibing was experienced as sharing feel good energies and emotions (including nostalgia) through non-verbal communication as a form of co-presence of being *in the moment* and relaxing with others, reminding people *we are all in this together*. Streamers provided viewers with vicarious wanderlust experiences involving a surrogate co-presence of cross-cultural learning and comparison, in an attempt to cope with pandemic related restrictions. This was effective for people to be informed about cultural differences in pandemic responses, and also to meet their travel bug adventuring needs and inspire future dreams to explore the world. As Li et al. (2022) found,

information sharing and entertainment are identified as the most important motivations of travel livestreaming. The cross-cultural aspect of livestreaming co-presence, where one streamer could reach across worldwide audiences in one broadcast session, promotes inclusive distant socialising, resulting in deeper connections affecting people beyond their normal everyday life social sphere. This unique connection was often experienced as '*a higher quality social experience than going to the local bar*'.

In this study, digital boundary objects can be conceived positively as a form of human resilience building through digital wellbeing. Digital wellbeing may be defined as having the ability to engage in healthy and positive digital behaviour and to use technologies in ways that help us thrive. Categorising livestreaming videos as informational boundary objects reflects the notion that the experiences during the pandemic involved cross-boundary responses, and, in some cases, started to break down barriers between people such as race, social status or geographic location. Boundary objects facilitate bringing people together so that moments of collective transcendence, human spirit, and consciousness are heightened (Vandenberg et al., 2020). During the time spent observing the r/pan livestreaming cultures, the researcher witnessed almost utopian moments where public live videos could draw in an inclusive range of people from across different backgrounds, to listen, comment, question, and generate a peaceful, compassionate discussion. In some cases, this was already happening on related subreddits but in a text-based discussion board format. The real time livestreamed format gave people a sense of immediacy and realism, especially during lockdowns when people had much less physical contact with others. Even after social distancing measures were eased, participants remarked that inclusive moments like this were hard to come by, since the pandemic has been linked to increases in social isolation (Pietrabissa & Simpson, 2020) and social inequalities (Ryan & Nanda, 2022).

Implications for information experience research

This study positions the livestreaming platform itself, combined with active livestreams and experiences shared between livestreamers and audiences, as an informational boundary object that actively shapes and constitutes the information experience. The research expands the definition of *information* to include social learning through community participation, real-time co-creation of meaning through interactive chat, non-verbal emotional exchanges, and embodied experiences like vicarious travel, advancing the field toward a more comprehensive understanding of digital information engagement.

Significant theoretical innovations are introduced by identifying therapeutic qualities as a legitimate dimension of information experience, intertwining information science with health and wellbeing research through six therapeutic information experiences: exploring self-identity, self-improvement, positive vibing, vicarious wanderlust, mental health connections, and inclusive distant socialising. This study addresses the role of a real-time, interactive platform and introduces the concept of *witnessed authenticity*, where therapeutic value emerges from being genuinely seen and accepted while remaining authentic. The research employs digital ethnography as a methodological innovation, using livestreaming videos and chat rooms as units of analysis to capture the dynamic, processual nature of information experience.

This research demonstrates how information experiences involve simultaneous engagement with content, social norms, community dynamics, and technical affordances as an integrated phenomenon. The study reveals how the medium fundamentally shapes the message through real-time interaction affordances and participatory information creation where audiences actively contribute to the informational environment. These advances suggest underexplored intersections for future research, including greater attention to platform-specific affordances, investigation of therapeutic dimensions across different contexts, development of methodologies for studying dynamic information experiences, and exploration of how synchronous versus

asynchronous orientations create different types of information experiences in increasingly complex digital environments.

Limitations

The study has limitations including its focus on a single platform during a specific historical moment, and the cessation of the studied platform in 2022. Future research directions include investigating similar experiences across different platforms and cultural contexts, conducting longitudinal studies on lasting mental health impacts, and examining how specific design features contribute to therapeutic outcomes.

Conclusion

This research has provided crucial insights into how social livestreaming experiences function as informational boundary objects that can promote digital wellbeing during times of crisis and uncertainty. Through digital ethnographic investigation of Reddit's Public Access Network (r/pan) during the COVID-19 pandemic, this study has revealed the profound therapeutic potential of synchronous, interactive digital platforms when designed with community care and authentic connection at their core.

These six distinct forms of therapeutic information experiences demonstrate that digital platforms can facilitate *witnessed authenticity*, where therapeutic value emerges from being genuinely seen and accepted by others while remaining true to oneself. The study reconceptualises the digital platform, combined with active livestreams and experiences shared between livestreamers and audiences, as an informational boundary object rather than a mere content delivery mechanism, treating the platform's affordances for real-time interaction and community engagement as integral parts of the information experience itself.

The research introduces significant methodological and theoretical innovations. It uses digital ethnography to investigate real-time information experiences whilst developing a framework that treats the combination of the digital platform, active livestreams and livestreamer–audience experiences, as a boundary object. This approach expands information science by integrating perspectives from health research, social psychology, and platform studies, creating a novel application area that addresses contemporary concerns about digital wellbeing and mental health support. The findings reveal critical design principles for promoting authentic connection , including the importance of safe, low-stakes environments, real-time interaction capabilities, and community norms that prioritise mutual support.

This research contributes to the growing body of information science work on pressing social challenges by examining digital engagement experiences that foster individual and collective resilience alongside other forms of social support and community building, The therapeutic potential of social livestreaming represents an underexplored frontier with significant implications for mental health support, community building, and digital wellbeing. As societies continue to navigate the challenges of increasing digitisation, social isolation, and mental health concerns, understanding how to design and foster digital spaces that promote therapeutic information experiences becomes increasingly crucial. The six forms of therapeutic information experiences identified in this study provide a roadmap for creating digital environments that support human flourishing rather than merely capturing attention. The concept of *witnessed authenticity* offers a framework for understanding how digital spaces can facilitate genuine connection and personal growth.

Ultimately, this research demonstrates that information experience research has the potential to contribute not only to theoretical understanding but also to creating more humane and supportive digital futures. The therapeutic information experiences documented on r/pan serve as proof of concept that alternative models of digital engagement are possible. This includes models that

prioritise community care, authentic connection, and mutual support over the extractive engagement patterns that dominate contemporary digital platforms. As we move forward into an increasingly digital future, the insights from this study offer hope that technology can serve as a tool for healing, connection, and collective resilience rather than division and isolation. The challenge for researchers, designers, and platform creators is to learn from experiences like r/pan to create digital environments that support the full spectrum of human needs for connection, growth, and wellbeing.

About the author

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References

Abidin, C., Barbetta, T., & Lee, J. (2020). Influencers, brands, and pivots in the time of COVID-19: a look at Australian, Japanese, and Korean Issues. *M/C Journal*, 23(6). https://doi.org/10.5204/mcj.2729

Association of Internet Researchers. (2020). *Internet research: Ethical guidelines* 3.0. https://aoir.org/reports/ethics3.pdf (Archived at https://archive.org/details/ethics3_202509)

Bailey, E. R., Matz, S. C., Youyou, W., & Iyengar, S. S. (2020). Authentic self-expression on social media is associated with greater subjective well-being. *Nature Communications*, 11(1), 1-9. https://doi.org/10.1038/s41467-020-18539-w

Bruce, C., Davis, K., Hughes, H., Partridge, H. & Stoodley, I. (Eds.). (2014). *Information experience: Approaches to theory and practice*. Emerald Group Publishing Limited. https://doi.org/10.1108/S1876-056220140000010060

Bunting, A. M., Frank, D., Arshonsky, J., Bragg, M. A., Friedman, S. R., & Krawczyk, N. (2021). Socially-supportive norms and mutual aid of people who use opioids: An analysis of Reddit during the initial COVID-19 pandemic. *Drug and Alcohol Dependence*, 222, 108672. https://doi.org/10.1016/j.drugalcdep.2021.108672

Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods*. McGraw-Hill.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research* (4th ed.). SAGE Publications.

Diwanji, V., Reed, A., Ferchaud, A., Seibert, J., Weinbrecht, V., & Sellers, N. (2020). Don't just watch, join in: Exploring information behavior and copresence on Twitch. *Computers in Human Behavior*, 105, 106221 . https://doi.org/10.1016/j.chb.2019.106221

Du, C., Lee, W., Moskowitz, D., Lucioni, A., Kobashi, K. C., & Lee, U. J. (2020). I leaked, then I Reddit: Experiences and insight shared on urinary incontinence by Reddit users. *International Urogynecology Journal*, 31(2), 243-248. https://doi.org/10.1007/s00192-019-04165-8

Eghtesadi, M., & Florea, A. (2020). Facebook, Instagram, Reddit and TikTok: a proposal for health authorities to integrate popular social media platforms in contingency planning amid a global pandemic outbreak. *Canadian Journal of Public Health*, 111(3), 389-391. https://doi.org/10.17269/s41997-020-00343-0

Finlay, L. (2002). Negotiating the swamp: the opportunity and challenge of reflexivity in research practice. *Qualitative Research*, 2(2), 209-230. https://doi.org/10.1177/146879410200200205

Gandhi, R., Cook, C. L., LaMastra, N., Uttarapong, J., & Wohn, D. Y. (2021). An exploration of mental health discussions in live streaming gaming communities. *Frontiers in Psychology*, 12. https://doi.org/10.3389/fpsyg.2021.575653

Geertz, C. (1973). *The interpretation of cultures*. Basic Books.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine Publishing Company.

Hammersley, M., & Atkinson, P. (2019). *Ethnography: Principles in practice* (4th ed.). Routledge.

Hughes, H. (2014). Researching information experience: methodological snapshots. In C. Bruce, K. Davis, H. Hughes, H. Partridge, and I. Stoodley (Eds.), *Information experience: approaches to theory and practice* (pp. 33-50). Emerald Group Publishing Limited. https://doi.org/10.1108/S1876-056220140000010060

Huvila, I., Anderson, T. D., Jansen, E. H., McKenzie, P., Westbrook, L., & Worrall, A. (2014). Boundary objects in information science research: An approach for explicating connections between collections, cultures and communities. *Proceedings of the American Society for Information Science and Technology*, 51(1), 1-4. https://doi.org/10.1002/meet.2014.14505101003

Huvila, I., Anderson, T. D., Jansen, E. H., McKenzie, P., & Worrall, A. (2017). Boundary objects in information science. *Journal of the Association for Information Science and Technology*, 68(8), 1807-1822. https://doi.org/10.1002/asi.23817

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. NYU Press.

Johnson, M. R. (2019). Inclusion and exclusion in the digital economy: disability and mental health as a live streamer on Twitch. tv. *Information, Communication & Society*, 22(4), 506-520. https://doi.org/10.1080/1369118X.2018.1476575

Kairam, S. R., Mercado, M. C., & Sumner, S. A. (2022). A social-ecological approach to modeling sense of virtual community (SOVC) in livestreaming communities. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW2), article356. https://doi.org/10.1145/35550

Khobra, U., & Gaur, R. (2020). Live (life) streaming: virtual interaction, virtual proximity, and streaming everyday life during the COVID-19 pandemic. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 12(5). https://dx.doi.org/10.21659/rupkatha.v12n5.rioc1s26n2

Lévi-Strauss, C. (1966). *The savage mind*. University of Chicago Press.

Li, F. S., Ma, J., & Tong, Y. (2022). Livestreaming in tourism: What drives tourism live streamers to share their travel experiences?. *Tourism Review*, 79(3), 780-795. https://doi.org/10.1108/TR-09-2021-0420

Makri, S. (2020). Information informing design: Information science research with implications for the design of digital information environments. *Journal of the Association for Information Science and Technology*, 71(11), 1402-1412. https://doi.org/10.1002/asi.24418

McLuhan, M. (1964). *Understanding media: The extensions of man.* McGraw-Hill.

Miller, F. (2020). *Producing shared understanding for digital and social innovation: Bridging divides with transdisciplinary information experience concepts and methods.* Palgrave Macmillan.

Miller, F., Davis, K., & Partridge, H. (2019). Everyday life information experience in Twitter: A grounded theory. *Information Research*, 24(2), paper 824. http://InformationR.net/ir/24-2/paper824.html (Archived by WebCite® at http://www.webcitation.org/78moc4YgU)

Nabity-Grover, T., Cheung, C. M., & Thatcher, J. B. (2020). Inside out and outside in: how the COVID-19 pandemic affects self-disclosure on social media. *International Journal of Information Management*, 55, 102188. https://doi.org/10.1016/j.ijinfomgt.2020.102188

Pietrabissa, G., & Simpson, S. G. (2020). Psychological consequences of social isolation during COVID-19 outbreak. *Frontiers in Psychology*, 11. https://doi.org/10.3389/fpsyg.2020.02201

Pink, S., Horst, H., Postill, J., Hjorth, L., Lewis, T., & Tacchi, J. (2015). *Digital ethnography: Principles and practice.* Sage.

Ruberg, B. B., & Lark, D. (2021). Livestreaming from the bedroom: Performing intimacy through domestic space on Twitch. *Convergence*, 27(3), 679-695. https://doi.org/10.1177/1354856520978

Ryan, M., & Nanda, S. (2022). *COVID-19: Social inequalities and human possibilities.* Routledge.

Scerbakov, A., Pirker, J., & Kappe, F. (2022). When a pandemic enters the game: the initial and prolonged impact of the COVID-19 pandemic on live-stream broadcasters on Twitch. *Proceedings of the 55th Hawaii International Conference on System Sciences* (pp. 1-10). http://hdl.handle.net/10125/79725

Scheibe, K., Fietkiewicz, K. J., & Stock, W. G. (2016). Information behavior on social live streaming services. *Journal of Information Science Theory and Practice*, 4(2), 6-20. http://dx.doi.org/10.1633/JISTaP.2016.4.2.1

Sit, M., Elliott, S. A., Wright, K. S., Scott, S. D., & Hartling, L. (2022). Youth mental health help-seeking information needs and experiences: A thematic analysis of Reddit posts. *Youth & Society*, 56(1), 24-41. https://doi.org/10.1177/0044118X221129642

Star, S. L. (2010). This is not a boundary object: Reflections on the origin of a concept. *Science, Technology, & Human Values*, 35(5), 601-617. https://doi.org/10.1177/0162243910377

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science*, 19(3), 387-420. https://doi.org/10.1177/030631289019003001

Stock, W. G., Scheibe, K., & Zimmer, F. (2022). Cyber social interactions: Information behavior in between social and parasocial interactions. *Journal of Information Science Theory and Practice*, 10(3), 15-23. https://doi.org/10.1633/JISTaP.2022.10.3.2

Thompson, C. M., Rhidenour, K. B., Blackburn, K. G., Barrett, A. K., & Babu, S. (2022). Using crowdsourced medicine to manage uncertainty on Reddit: The case of COVID-19 long-haulers. *Patient Education and Counseling*, 105(2), 322-330. https://doi.org/10.1016/j.pec.2021.07.011

Tim, Y., Pan, S. L., Ractham, P., & Kaewkitipong, L. (2017). Digitally enabled disaster response: The emergence of social media as boundary objects in a flooding disaster. *Information Systems Journal*, 27(2), 197-232. https://doi.org/10.1111/isj.12114

Vandenberg, F., Berghman, M., & Schaap, J. (2020). The 'lonely raver': Music livestreams during COVID-19 as a hotline to collective consciousness?. *European Societies*, 23(S1), S141-S152. https://doi.org/10.1080/14616696.2020.1818271

Wang, M., & Li, D. (2020). What motivates audience comments on live streaming platforms?. *PLOS One*, 15(4). https://doi.org/10.1371/journal.pone.0231255

Warren, S. (2020). Good vibes Friday: reflections on livestreaming during the COVID-19 lockdown. *Dancecult: Journal of Electronic Dance Music Culture*, 12(1). https://doi.org/10.12801/1947-5403.2020.12.01.05

Willcox, M., Hickey-Moody, A., & Harris, A. M. (2021). Isol-AID, art and wellbeing: Posthuman community amid COVID-19. In D. Lupton & K. Willis (Eds.), *The COVID-19 crisis* (pp. 115-127). Routledge. https://doi.org/10.4324/9781003111344-13

Xu, S., Murrell, G., Golding, S. E., Brockett, B. F., Gatersleben, B., Scarles, C., & Wyles, K. J. (2021). With nature via social media and wellbeing during the COVID-19 lockdown. *Frontiers in Psychology*, 12. https://doi.org/10.3389/fpsyg.2021.701769

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