

Going crypto-native: enactive ethnography in online settings

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Abstract

Purpose – Digital ethnography is still a growing field within organization studies, with conflicting and still-developing understanding of how it should and can be conducted. This article aims to explore how enactive ethnography, in which the researcher engages in the phenomenon being studied, occurs in online research settings.

Design/methodology/approach – This article is based on over two years of digital ethnographic fieldwork in an open-source blockchain community. Confessional tales were produced after reviewing field notes to identify the challenges and benefits of such immersive fieldwork.

Findings – The article provides empirical examples of two challenges and three benefits of enactive ethnography in a digital setting. The challenges included issues of consent and privacy and financial complications due to the central role of tokens in blockchain communities. Benefits included a first-hand understanding of technical practices, experiences of asynchronous environments and the ability to take on multiple community roles. While many additional challenges arose, this article focuses on those unique to the context.

Research limitations/implications – Due to the confessional nature of the article, it may not be generalizable to all forms of digital ethnography. The article intends to serve instead as a starting point, from which researchers should carefully consider their own research aims and context.

Originality/value – This article fulfills the need for a greater understanding of the researcher's positionality in ethnography while providing empirical examples of how practices can be studied in online settings.

Keywords Ethnography, Immersion, Open source, Enactive ethnography, Digital ethnography

Paper type Research paper

From its beginning, the Internet has offered alternative ways of organizing and working. The opportunity for collaboration is no longer limited by distance or even time, as people from around the world can log in and contribute to a shared goal, whether it be two branches of an office joining a Zoom, or volunteers updating a Wikipedia article. One increasingly popular form of collaboration has been open-source software. Open source initiatives are production communities that collaborate toward a common goal (O'Mahony, 2007), creating code that is available for anyone to use, examine or change. Despite the fact most open-source communities begin as grassroots or underfunded ventures, they have the potential to create innovative products (Zorina, 2021). Free and open-source software makes up an estimated 70–90% of modern software, including popular programs like the operating system LINUX and the Internet browser Firefox (Black Duck, 2024; Perlow, 2022). It requires the

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collaboration and coordination of a large, often international group of people engaging in the development of code as well as nonprogramming roles, such as community management.

The distributed and remote nature of such work has similarities to the increasing use of online and remote forms of working, particularly since the COVID-19 pandemic. While open-source communities may not be exactly equivalent to more traditional contract-based employment relationships, they do reflect this changing working world and new, screen-centered practices (Ritter, 2023).

Studying these communities can be extremely challenging, as it can be difficult to understand the complex work undertaken in a digital and often asynchronous environment, not only because of the often highly technical nature of the work, but also due to the unorthodox and alternative forms of communication in digital environments (Pink *et al.*, 2016). The computer-mediated nature of digital ethnography risks amplifying the separation between researcher and community. Ethnography has already been recognized as a way to gain insight into complex environments (Brannan *et al.*, 2007; Howard and Mawyer, 2015), but digital ethnography has struggled with questions of how and how *deeply* to engage with the group being studied.

One potential answer to these questions lies with enactive ethnography. Enactive ethnography is a type of immersive ethnography where the researcher “performs the phenomenon” (Wacquant, 2015). Enactive ethnography requires the researcher to gain first-hand experience, actively engaging with the field, and considers the body as a tool of research (De Rond *et al.*, 2019) [1]. Central to enactive ethnography is the concept of *habitus*—the learned preferences and knowledge that influence how we perceive and interact with the world (Julien, 2015). Through recognition of the embodied nature of online collaboration and the development of the digital *habitus*, enactive ethnography opens new ways of understanding what occurs in online co-production settings. This article aims to explore how enactive ethnography, occurs in online research settings, and the impact such engagement has on the research process. This article is guided by the following research question:

In what ways may enactive ethnography’s concepts of *habitus* and participation enrich ethnographies of digital settings

This research question reflects a critical methodological interest in examining arguments for building online ethnographies on the principles of the enactive approach. In this article, I discuss my own experiences with enactive ethnography in a digital setting. By reflecting on my fieldwork in the form of a confessional tale (Van Maanen, 1988), I present both the constraints and benefits of such intense immersion. This article contributes to research on how practices can be studied in online settings, while adding a much-needed empirical exploration of researcher’s positionality in organization and management studies (Cunliffe and Karunanayake, 2013; Hauge, 2021).

The remainder of the article is organized as follows. It begins with a brief introduction to the context of open-source communities, as well as an overview of what makes enactive ethnography distinct from traditional ethnographic fieldwork. Next, I explain my methods and how these confessional tales were produced. I outline the challenges and benefits I experienced in this enactive digital fieldwork, before providing an overview of how such fieldwork could be beneficial to the wider field of organization studies.

Open-source communities

Free and open-source software (from hereon, open source) is a form of collective production, where individuals collaborate to build software as a shared goal, without the employer–employee relationship or hierarchy (West and O’Mahony, 2008). Open source is a form of peer production that emphasizes participation, shared values and connection (Bauwens and Pantazis, 2018) while rejecting bureaucracy and hierarchy (O’Mahony, 2007). Although much of open-source remains unpaid and driven by grassroots networks, it has also

been co-opted by commercial companies who sponsor communities to develop software according to their goals. This article focuses on an unsponsored open-source community building a blockchain.

Blockchain is a particularly unique form of open-source production, as decisions are defined by both “‘off-chain’ deliberations” and “‘on-chain’ software-based rules and actions” (Rennie *et al.*, 2022, p. 837). Blockchains can include built in rules of how voting and contributions are made and rewarded. Typically, contributions are rewarded with coins or tokens [2] (De Filippi and Lavyssière, 2020). While open source tends to be driven by intrinsic, nonfinancial motivations, blockchain tokens have the potential for massive profit (consider the Bitcoin boom) and therefore may result in different motivations and behaviors (De Filippi and Lavyssière, 2020).

Enactive (digital) ethnography

Ethnography allows us to learn what “actually happens” (Watson, 2011, p. 204) in a community. It can be particularly useful when trying to understand how practices are performed and developed over time (Pink *et al.*, 2016; Rouleau *et al.*, 2014).

Due to the positioning of the researcher within the community at study, the role of the researcher in ethnography has always been complex. Researchers attempt to maintain a balance between academic interest and gaining insider knowledge. The researcher must be attuned to the experiences and systems of others, while consistently considering their own biases (Dwyer and Buckle, 2009). This immersion into the field is necessary but draws into question how the researcher impacts and is impacted by bias, identity and relationships with participants (Cunliffe and Karunanayake, 2013; Del Rio, 2021; Langley and Klag, 2019).

This relationship between the researcher, the field, and participants has been given many names: insider vs. outsider; participant vs. observer; emic vs. etic; peripheral, active or complete member (Adler and Adler, 1987; Beals *et al.*, 2019; Seim, 2021). This insider/outsider binary has been criticized as potentially overly simplistic (Herndon, 1993). In reality, there is often a melding of or transition between roles (Bruskin, 2019; Seim, 2021).

Digital settings further complicate the participant/observer roles of researchers, as they allow for some level of unobstructive observation. Previous research on open-source and blockchain communities has often taken an ethnographic approach (see Caliskan, 2022; DuPont, 2018; O’Mahony and Ferraro, 2007). In these works, researchers have expressed varying and sometimes not fully transparent levels of researcher participation. For example, both Caliskan (2022) and DuPont (2018) provide clarification on their levels of participation, although Caliskan’s descriptions are spread throughout the article while DuPont is more upfront and in-depth. On the other hand, in their seminal work on an open-source software community, O’Mahony and Ferraro (2007) do not disclose what role they took in observations of Debian Linux.

Sociologist Loïc Wacquant rejects a clear division between researcher and participant and calls for complete immersion into the field through *enactive ethnography* (Wacquant, 2011, 2015; Wacquant and Vandebroek, 2024). In enactive ethnography, or carnal sociology, the researcher experiences the phenomenon at study first-hand, bringing the researcher even further into the lived environment of the community (Del Rio, 2021; Wacquant, 2015, 2022). The body becomes a tool of investigation, exploring emotional and embodied knowledge, situated and shaped by context (De Rond *et al.*, 2019; Wacquant, 2011; Wacquant and Vandebroek, 2024).

Wacquant developed his ideas on enactive ethnography during his doctorate in Chicago. Dissatisfied with the distant approach taken in sociological research at the time, he joined a nearby boxing gym, literally jumping into the ring to understand the “everyday reality of the black American ghetto” (Wacquant, 2011, 2022, pp. xiv–xv). This allowed Wacquant to see the “drab and obsessive routine” of boxing, rather than the solicited and dramatized representations that he may have received through interviews or analysis of preexisting materials (Wacquant, 2022, p. 6).

Key to enactive ethnography is the idea that humans interact with and in the world using their flesh and blood senses, bringing in their own evolving skills, desires and capital (Wacquant, 2015; Wacquant and Vandebroek, 2024). As humans understand the world through body and practice, the researcher can do the same, “subjecting herself to the same forces, profits, and perils as the agents she studies” (Wacquant and Vandebroek, 2024, p. 138).

Enactive ethnography is built on the investigation of habitus (Wacquant and Vandebroek, 2024). Wacquant extends Bourdieu’s conceptualization of habitus, viewing it as both a tool and topic of investigation (Hancock, 2009; Wacquant, 2011). By acquiring the habitus and dispositions of the group at study, the researcher gains a “technical vehicle for better penetrating” how such dispositions are socially produced (Wacquant, 2011, p. 82). The tacit dispositions and knowledge that comprise habitus drives practices (Wacquant, 2015).

It must be noted that by engaging in enactive ethnographic fieldwork, the researcher is not fully letting go of their researcher identity and must remain reflexive throughout the process (Wacquant, 2022). Wacquant (2011) calls for the researcher to “‘go native’ but ‘go native armed,’” bringing methodological, theoretical and academic tools with you (p. 87).

Wacquant and Bourdieu did not discuss habitus or practice in the context of online settings, but later scholars have identified an online, digital, or even social media habitus.

Julien (2015) states that participation in online communities instills “a unique habitus, which is engendered because the Internet constitutes a new field” (p. 362). For example, the creation, sharing and understanding of memes relies on a digital habitus (Julien, 2015). Through participation in the online field, researchers acquire their own habitus and are able to interpret online interactions from an insider perspective (Lu and Lu, 2022).

Enactive ethnography has since been used in a variety of fields, including religion (Winchester, 2022), wine tasting (De Benedittis, 2019) and education (Haskell *et al.*, 2002). In organization and management studies, De Rond *et al.* (2019) examined sensemaking by rowing the length of the navigable Amazon River. In this work, they recognize enactive ethnography’s usefulness in studying everyday processes, routines and practices, particularly in unpredictable settings. Enactive methods have not been traditionally recognized in digital settings, although Forberg and Schilt (2023) acknowledge that such engagement and embodied participation are possible in the virtual world, considering even simple actions such as liking, tweeting and upvoting.

Despite the recognition that emic understandings of the digital world are needed (Ritter, 2023), no academic field has seemingly developed a unified understanding of what digital ethnography is, how it should be done, or even what it should be called. Digital ethnography (also known as virtual ethnography, netnography, online ethnography) in general refers to the study of how we live and interact in digital environments (Pink *et al.*, 2016; Markham, 2020). The field is often ill-defined and requires following participants to relevant sites (both online and offline) (de Seta, 2020; Markham, 2020).

Interaction between researcher and participant becomes mediated through the screen (Pink *et al.*, 2016), rather than face-to-face. Indeed, much of the Internet is “reading, watching and querying” in ways that “are not explicitly participatory” (de Seta, 2020, p. 85). Hammersley (2006) recognized this lack of physical co-presence as a potential hindrance, while others have pointed out that co-presence does not require co-location and instead is developed through social engagement and the expectation of being perceived (Beaulieu, 2010; Campos-Castillo and Hitlin, 2013). This prolonged co-presence is what differentiates digital ethnography from textual analysis (Forberg and Schilt, 2023; Uberti, 2021).

For some, the separation offered by digital mediation may seem ideal: the opportunity for observation without any risk of impacting participant actions (Murthy, 2008). For others, “lurking” is considered intrusive and unethical (Eysenbach and Till, 2001; Taylor *et al.*, 2012), and possibly contrary to ethnography as a method and approach (Cera, 2023) [3]. More recent reflections on the researcher’s role recognize that nuance is important, as lurking may be considered a “socially accepted and technologically afforded activity” for platform users (Pentzold, 2017, p. 151).

Method

Following in the footsteps of previous works on the role of the researcher in ethnography (McAllum, 2018; Richards, 2019), this article takes the form of a confessional tale (Van Maanen, 1988). Confessional tales focus on the researcher themselves, rather than the research outcomes (Van Maanen, 1988) and are intended to be open and honest, even, if necessary, unflattering (Schultze, 2000). By focusing on the ethnographer and the process of engaging in and writing about fieldwork, confessional tales help others to understand the realities of qualitative methods and to reflect on their own practices (Langley and Klag, 2019; Schultze, 2000).

The confessional tales in this article recount over two years of fieldwork conducted in a digital setting, taking place from November 2021 to April 2024. The community, pseudonymized as Renada, engages in open-source peer production of a blockchain. This fieldwork was conducted as part of my doctoral dissertation, in which I endeavored to understand how organizational values were developed and negotiated in a blockchain setting, focusing on community practices.

My initial understandings of digital ethnography were limited. Much of what I read helped to solidify my grasp of what made digital settings unique from analog ethnography (Markham, 2020; Pink *et al.*, 2016; Postill and Pink, 2012). The most commonly cited works on digital ethnography (e.g. Kozinets, 2010; Taylor *et al.*, 2012) provided useful advice on how to take field notes and what to consider in analysis, but felt like an imperfect match for the context I was interested in. I did not find what I had naively hoped for: a step-by-step guide on how to conduct an ethnography of a crypto community on Discord. As such, my true ethnographic education was largely learn-as-you-go. I continued to read extensively throughout my data collection, largely focusing on studies of communities that interacted and organized online (see Cera, 2023; Maddox, 2020; Rennie *et al.*, 2022). I used these as guides on how to participate, how to take field notes, and what to analyze, while relying on my own intuition as someone who had been active online since grade school. Slowly, I developed my own ethical commitments and ethnographic sensibility (McGranahan, 2018; Van Maanen, 2010). I did not begin with the idea of partaking in enactive ethnography (or even knowing what enactive ethnography was), but I found myself drawn to deep immersion as a way to understand the complexities of Renada.

I joined Renada shortly after the project publicly launched and, over time, transitioned from a lurking observer to a core member, having unwittingly stumbled into enactive fieldwork. Renada membership numbers fluctuated, averaging around 7,000 members on Discord and over 12,000 miners. Not all members were necessarily active, or even individual people.

Data collection included observations of community meetings, discussions on Discord (an online messaging platform that uses text, images, and voice calls) as well the analysis of community documents and social media. This data collection resulted in approximately 350 h of observation, 221 pages of fieldnotes, and eleven documents and webpages analyzed. The majority of field notes focused on descriptions and explanations of what I was seeing, hearing and experiencing. Often, my own thoughts, feelings, and reflections drifted into the notes.

This notetaking took an iterative fashion (Emerson *et al.*, 1995), where more basic and descriptive notes were written in a physical notebook and then expanded on later as they were transferred to a word processor. This process included, e.g. explaining previously unknown acronyms or technical terms or copying-and-pasting specific quotes from the Discord.

As I continued in my fieldwork, I experienced stress regarding my own role and began to question whether it was better or worse to be involved in the community. I began to go back through my notes, focusing on sections that described my own experiences. I identified events and moments where my engagement with the community played a central role, for better or for worse and identified five key themes: two challenges and three benefits that resulted from my enactive ethnography approach. These are presented in the following sections, featuring excerpts from my field notes when relevant. In reality, I experienced more challenges than the

ones listed here, but many of these have already been identified in countless previous works. As such, I focus only on those I believe unique to the context and methodological approach.

Challenges: “anxieties ensue”

My initial entry into the Renada community was stressful in itself, although that stress was entirely self-inflicted. I had been introduced to Renada by a colleague who knew I was interested in studying decentralized blockchain communities, but I was not quite sure how to begin. I knew more than the average person about blockchain, but less than the programmers and enthusiasts that populated Renada and other Web 3 projects. Despite these fears, joining was simple and required only registering for Discord, joining the Renada community, and performing a simple task to prove I was not a robot. Ease of access is typical of digital fields, compared to traditional analog ethnography (Forberg and Schilt, 2023; Kozinets, 2010).

The first year, I merely observed. I had made my presence known to some community leaders, made a few comments or reacted to a few posts, and engaged in some informal interviews, but otherwise, I did nothing in the community. Aside from my profile picture (an image of an AI-generated cat) showing up as an attendee at community meetings, I was essentially invisible. I took descriptive notes on what I witnessed in meetings and on Discord, copying interesting or significant quotes and becoming familiar with key actors. Many of my notes also discussed the layout of the Discord itself, as thematic discussion channels were added or removed.

There is now a “start here” channel. Discussions on how to help others on board, how to transfer tokens, and resources to use. It offers very clear and step-by-step guides on how to do things.

It quickly became apparent that participation was entirely self-determined. Members could choose to be super involved or might join for a few days and never log in again. Some posted, wanting to learn more, then soon lost interest. Others embraced the ideas of Renada (and perhaps the potential to earn tokens) and became active, contributing to discussions or joining task forces to write code, design governance mechanism, or create marketing materials.

As time went on, I realized I was likely not getting the complete picture, while also feeling guilt that I was taking without giving anything in return. I immersed myself in the literature about the ethics of consent, privacy, and participation. Eventually, I found enough resources to convince myself I was not committing a research crime if I engaged with the community and decided to find a way to contribute. I began discussing with the community manager, Ralph73, and took on an official role as “event organizer.” This role was relatively easy and essentially required updating the calendar, introducing the speakers for the monthly meeting and recording a few special events, such as Q&A sessions about technology updates. This conveniently also created materials that I could revisit for analysis, but were also publicly available to anyone. As part of this role, I began to attend weekly meetings of the communications and marketing task force. I naively assumed I could easily maintain my objective position as a researcher without impacting the data. However, as Fuller (1999) noted in his reflections on a similar immersion into the field: “When such involvement occurs, anxieties ensue” (p. 221).

Many of these anxieties centered around ethical issues, particularly regarding consent and privacy. When I was simply observing, I felt I had “checked all the boxes” in terms of consent: I had informed community leaders, and I only used entirely public postings. In digital contexts with thousands of actors with varying degrees of participation, individualized consent can be essentially impossible to acquire (Pentzold, 2017). As I became more involved, this was no longer so straightforward. I was added to group chats and private discussions that the majority of members were not privy to. While all major decisions were voted on, there were clearly discussions going on behind closed doors that helped determine what options would be brought to a community vote. This was not necessarily intended to shirk transparency, but was instead considered a way to expedite decision-making. Even some public discussions that

could technically be accessed by anyone felt intimate ([British Sociological Association, 2016](#)). Was it within my right to write about a community member sharing about a family vacation or about recovering from a vasectomy?

In line with [Pentzold \(2017\)](#), I determined that any public and accessible data was available for analysis, as public observation was a social norm and a technological affordance. In voice meetings, I took more careful consideration of what may be viewed as public. If the meetings were recorded (either through video or meeting minutes) and shared online, informed consent was deemed unnecessary. If meetings were recorded *but* potentially private or identifiable information was shared, I did not include the specifics in my analysis. For example, if a user revealed their real job or name in a meeting, it was not identified in my field notes. Instead, I would take notes such as “programmer mentioned their real name.”

To maintain ethical boundaries, I made sure to tell anyone I spoke to in one-on-one chats or in private group chats that I was conducting this research and offered to share more information about myself (an offer that was always declined). I felt, however, this was not enough. I could not expect everyone to remember at all times that I was watching them. I created clear rules: no private chats could be included in my data unless explicitly approved by all participants. Of course, these chats still impacted my understanding of what was happening in Renada. Before analysis, I deleted any notes that referred to the content of private chats I was added to. Additionally, I attempted to maintain the privacy of community members by using pseudonyms for the community and usernames and by utilizing fabrications rather than direct quotes ([Kozinets, 2010](#); [Markham, 2012](#)). Fabrication refers to practices such as creating composite quotes, events, or narratives to maintain privacy while still illustrating the data. In this way, curious readers would not be able to input quotes into a search engine and find the original posting. Fabrication comes with risks of distorting meaning ([Cera, 2023](#)), further reinforcing the need to develop a deep understanding of the community’s norms and subculture.

I also chose to pseudonymize Renada, not only to prevent the identification of individuals, but to protect Renada itself. When conducting research within organizations, [Kristensen \(2023\)](#) argues that we must consider our ethical obligations to the organization. Identification of the community could result in an influx of new members, potentially causing disruption, trolling, or affecting the value of the Renada token. While avoiding harm to organizations is important ([Kristensen, 2023](#)), I found it to be particularly significant in the volatile setting of a relatively young, crypto community.

As I continued my fieldwork, I felt more confident in the boundaries I had developed and my role as a researcher and community member. I had even created a wallet and begun mining [4] to gain an understanding of what this central process to blockchain communities was like. In total, I earned only a few Renada tokens (as of January 2025, worth less than 0.01 USD; at its peak, worth approximately 0.25 USD). I had no intention to profit from my research experience and did not want to risk a conflict of interest ([DuPont, 2021](#)). According to community practice, I was entitled to payment for my contributions. In my analysis of Renada, I found that rewarding community labor was central to their ethos, as contributions drove Renada’s continued existence and growth ([Shaw et al., 2024](#)). Core community members I had become friendly with encouraged me to accept these payments when the topic came up, but I chose not to accept them. This was a relatively easy decision, in part because I did not find my contributions particularly worth reimbursement. I must also note the Renada token was essentially worthless for the majority of my time in the community.

Toward the end of my fieldwork, the Renada token began to receive more attention from the wider Web 3 world and was listed on a major token exchange. This meant that, for the first time, the tokens could be easily exchanged for real, fiat currency. Around the same time, I was again offered payment for my contributions as event manager due to the redistribution of a community contribution fund. This time, I could put a price on what I had “earned”: over \$30,000 at the peak exchange rate. In the spirit of confessional tales, I must be honest and say this sum did give me pause. Was my integrity as a researcher worth covering a significant portion of my mortgage? Was it *really* a conflict of interest if I accepted the tokens?

In the end, I chose to pass on the tokens and stick to my original commitment to reject any payment. While I likely could have formed some justification for why it was “okay” to take it, I found I was uncomfortable renegotiating my ethical commitments for the sake of profit. I even debated accepting the tokens and donating them to charity, but chose not to after several phone calls with the Finnish Tax Administration revealed I would still be on the hook for income taxes.

These challenges did not disappear at any point. I constantly wrestled (and continue to wrestle) with these moments of discomfort that would not have appeared if I had stayed a silent observer. I can only hope however, that I have, in the words of [Wacquant \(2011\)](#), gone native “but come back a sociologist!” (p. 88). Or, more specifically, an organizational researcher.

Benefits of going crypto-native

My involvement in the community was not solely defined by anxiety, but also by a much deeper and enriched understanding of the community: “Some of their experiences are my experiences too although we may well understand and value them differently” ([Van Maanen, 2011](#), p. 227).

Even as a “non-technical” person, I was able to build an understanding of the technicalities of Renada. I found myself able to easily and in real-time clarify incidents and practices in the community, mitigating the risks of misrepresentation associated with digital ethnography ([Tunçalp and Lê, 2014](#)). This was particularly important when it came to understanding programming and technology decisions made by the community. While I came into the research with a basic knowledge of blockchain, I had little experience in programming. I quickly found out that, compared to core community members, I knew next to nothing. While this lack of technical expertise may be seen as a limitation, [Wacquant \(2015\)](#) argues it is still possible to become fully immersed. As Wacquant puts it, you do not need to be a ballerina to study ballet.

As an active community member, I had easy access to the engineers who found it useful to help me understand the technology and the choices behind it, as this process aided them in communicating with the wider community. Being a “normie” in this sense was beneficial as I could assist in translating complex or technical concepts into figures or texts that would be accessible to nontechnical community members and an outside audience. Because I was interested, people were willing and excited to share their knowledge with me.

While my technical skills remained somewhat limited and I did not have a desire to learn code (nor did I feel it was necessary), I found that I could engage in other community practices that at first seemed daunting. By downloading and installing a crypto wallet and mining Renada tokens, I gained a sense of how easy it was to be part of Renada.

I’ve also started mining using the app. Well, I set it up so I can mine. It’s really really easy to do. Literally just flipping a switch. Let’s try it now. Mining progress 1%.

The simplicity of mining was an intentional choice, reflecting Renada’s central values of openness and accessibility ([Shaw et al., 2024](#)). The community aimed to be open for anyone to join, ensuring that the Discord itself was accessible, but also that the technology was easy to use and understand.

As the technology went through updates, I also experienced the frustration of troubleshooting and following guides to fix connection issues, exposing the emotional (and sometimes visceral) reactions that technology can trigger. These frustrations were experienced by most other Renada community members (and something many complained about in the Discord).

A digital experience is not limited to what we can see and hear. Clicking, typing, liking: while these (inter)actions might be performed through a screen, they are embodied. I felt the tension in my shoulders as I spent too long hunched over the screen catching up on what happened the day before, while many engineers talked about staying up late into the night

writing code or fixing bugs. I felt a spark of pride when someone laugh-reacted to my comments and I experienced the frustration and annoyance of connection issues when trying to join a meeting with uncooperative software or hardware:

Very strange but Spyro could not hear me. Everyone else on the call could, and Spyro could hear everyone else.

Call fell apart. Ugh. I had some problems with connecting to the audio.

Even noncrypto-specific practices, such as liking or reacting to a post with emojis, allowed me to feel more immersed in the community. Memes, gifs, and reactions are a significant form of communication in Web 3 communities; they are part of the “actual experience” of the user (Forberg, 2022, p. 295). To understand what these memes, gifs, and reactions meant required immersion in the field and the acquisition of a local lingo of sorts (Julien, 2015). For example, a rocket ship emoji reaction may be meaningless without an understanding of its link to the phrase “to the moon”, indicating a crypto-asset will (or should) rise in value.

While much of what I observed was essentially the same as when I had been lurking, I was no longer limited to analyzing only what I could see. Interactions (whether user-to-user or user-to-technology) within Renada were emotional and embodied, serving as a reminder that the community participants were not merely usernames and avatars on a screen. By purposefully taking a more involved role in Renada, I unintentionally positioned myself to experience multiple perspectives of Renada community communities. Participation in online communities varies dependent on level of participation and relationships, from newbies to insiders (Kozinets, 2010). I started as a silent lurker, experienced the periphery by occasionally commenting and mining, and found my way into the inner circle, being added to private chats and included in conversations about the future of Renada. I was able to witness the different ways people present themselves, whether using their real first (and sometimes last) names or going completely anonymous. At one point, Ralph73, the community manager, and I met for coffee while I was on a trip to his home country. I interacted as and with all types of Renada members, gaining insight into the multiple modes of participation available (de Seta, 2020). This transition across the observer-participant spectrum allowed for the strengths of being an outsider to counter the weaknesses of being an insider, and vice versa (Seim, 2021).

Because technology mediates all communication within Renada, it brings together people with different motivations, commitment levels, and time zones. As other community members did, I felt tired when staying up late for a meeting with someone from another part of the world and intrigued when I woke up to Renada notifications on my phone. The somehow both asynchronous and instant nature of online communication meant Renada was always with me.

Additionally, because I always had access to Renada, I was able to capture something that would have been missed in a retrospective analysis: edits and deletions. I could see if a comment had been removed or edited, although often I was left only to speculate why and how: was it removed by the writer or by a community moderator?

More significantly, by maintaining active membership in Renada, I experienced the community’s growth in real time. I witnessed the periods of high excitement, when upgrades were about to happen or when Renada would gain a sudden influx of new members, and the long periods of slow development:

I’m back from the conference and stressed. Despite estimated timelines, it seems like the next update will never be ready to launch and it’s impossible to plan around. People expect me to plan events around an unknown date.

Indeed, these slow periods could be quite demotivating for both community members and myself. Not much was happening, so there was not much for me to write about. In reality, the way community members reacted to these slow periods proved just as significant to my research questions as the boom periods, and I was right alongside them to see their actions and reactions. These periods offered different insights into how values were negotiated and tested.

In slow periods, I was able to see who was truly committed to keeping the dream of Renada alive, while also sitting in on discussions of whether to change directions to boost interest. In busy periods, I witnessed a centralization of power despite a commitment to community decision-making (Hütten, 2019). In a retrospective or less immersive approach to studying Renada, I may have missed out on the insights offered by the slow periods due to low numbers of posting.

Becoming attuned to the timing of Renada also allowed me to find a more natural ending point for my research. Things were always changing, and I found new research questions emerging. I felt I could write a hundred papers about what I was learning in Renada. I realized though that at some point, I needed to end my data collection and move on. Because I had been a part of Renada for so long, I recognized the listing of the Renada token as the start of a new period in Renada and felt it fit as a stopping point. As of writing, Renada is still continuing and growing, and I am still keeping my eye on the community.

Discussion

At first glance, it may seem odd to propose enactive ethnography for a fully digital research setting. Complete, embodied immersion can seem contradictory when the majority of communication is written text and emojis. Enactive ethnography is not, however, simply deep immersion in the field; it requires first-hand experience of the phenomena being studied, whether that is boxing, ballet or crypto (Wacquant, 2015). It requires careful attention to the body as intertwined with the mind and both shaping and shaped by their surroundings (Wacquant, 2015; Wacquant and Vandebroek, 2024). The mind-body is also home to habitus, or the dispositions through which someone “judges and acts in the world” (Julien, 2015, p. 367). Wacquant argues that, if “agents ‘out there’ know the world by body, through tacit schemata acquired in and for practice, . . . the sociologist can tap that knowledge by subjecting herself to the same forces, profits, and perils as the agents she studies” (Wacquant and Vandebroek, 2024, p. 28).

I did not begin my time in Renada with the idea of enactive ethnography in my head; my introduction to Wacquant came over a year after I had jotted my first field notes down. I had already recognized that a purely observant point of view was not providing the insights I hoped for, and I was already an active member of Renada when I began investigating Wacquant’s ideas on carnal sociology. His desire for a deep and everyday understanding aligned with my own hopes for understanding how values developed in an online community. In my work, I have found that enactive ethnography provides deeper and embodied ways of understanding how work and cooperation occur in online settings. By engaging in community practices, I was able to acquire the dispositions that make up the habitus of the community. It allows the researcher to experience embodied technical interactions, participate in the social construction of presence and co-presence, and form a contextualized definition of ethics.

Enactive ethnography allows us to experience first-hand how community members coexist and collaborate in a complex environment. Open-source work is driven by technical interfaces and social interaction mediated through screens (Pink *et al.*, 2016). This co-constitutive relationship is especially true in blockchain settings, where governance and decision-making can be conducted through formalized voting procedures. As in Renada, these votes are always preceded by “conversations that take place on social platforms” (Rennie *et al.*, 2022, p. 837). By engaging with the interfaces used by community members, ethnographers can see first-hand how practices are performed. These practices will be dependent on the community and could include voting, mining, submitting code, liking, or posting comments. Even for those without the technical expertise central to the production of open source, immersion is still possible (Dumont, 2023), particularly when considering the importance of non-coding roles in open-source communities (Cánovas Izquierdo and Cabot, 2022). Ritter (2023) recognizes the significance of engaging with technology as it allows a comparison between how technology is described versus how it is actually used. It also highlights the role played by non-human actors in digital settings.

Additionally, by taking part in digital practices, researchers are able to experience the embodied interactions of digital settings: “We participate, just like our ‘research participants’, through a wide range of modes of participation tightly connected to social dynamics and technological affordances, that go from the choice of shutting down one’s smartphone to the visceral need to sustain one’s presence in a tense online discussion” (de Seta, 2020, p. 88). Online practices include visual and auditory, but also tactile engagement (Whyte *et al.*, 2023). The online world is not separate from the physical, but rather, they are integrated (Dall’Alba and Barnacle, 2005; Hine, 2020; Lupton, 1995; Osler and Zahavi, 2023). By performing the phenomena being studied (Wacquant and Vandebroek, 2024), researchers experience how interactions with technology are both of the mind and the body. As Forberg and Schilt (2023) point out, the digital ethnographer is as embodied as the community members they study. We have physical and emotional reactions to what occurs on our screen. By paying attention to these aspects of our experiences as researchers, we gain insight into the bodily experiences of community members as well.

Enactive ethnography recognizes humans as situated in space and time (Wacquant and Vandebroek, 2024), requiring attention to how context impacts interactions and understandings. Renada—as all other open source communities—is not located in a single place or even time. The working site, and therefore the field site, are created and cocreated (Burrell, 2009; Caliendo, 2018; Markham, 2020). Presence is not defined by physical location, but rather interaction (Beaulieu, 2010; Campos-Castillo and Hitlin, 2013). By jumping into the thick of it, we move with our participants from Discord to Twitter to voice calls and even to offline coffee shops. Through enactive ethnography, we develop temporal awareness and experience events at the same jumbled pace as the communities we study (Dawson, 2014; Dumont, 2023). In a digital environment, this means work is conducted in an asynchronous way, where participants connect and contribute when they can (Pink *et al.*, 2016). Time is stretched, as we are able to view conversations from days, months, or years beforehand (Tunçalp and Lê, 2014; Zayed, 2021). Additionally, those in other time zones (or on different sleep schedules) may continue posting and working when the ethnographer is asleep or offline. This often means the researcher is spending a lot of time catching up on what happened when they were offline (Postill and Pink, 2012). While this may not seem ideal to all, it is the reality of how such work occurs.

As researchers continue to engage with digital settings and to study these online practices, questions of ethics will continue to arise. Despite many attempts, it is clear that there is no one-size-fits-all ethical checklist for digital ethnography (Franzke *et al.*, 2020; Lavorgna and Sugiura, 2022). Instead, it requires a nuanced understanding of the community at study that may only be attainable through first-hand, enactive engagement. This nuanced understanding can be understood as a form of habitus, developed through prolonged participation in the field (Julien, 2015; Lu and Lu, 2022). Negotiated ethics (Convery and Cox, 2012; Lehner-Mear, 2020) is a contextual approach that considers the specific online community, methodology, and research questions. It does not mean that anything goes, but rather that researchers must recognize the nuances of the communities they study, while keeping in mind their own ethical commitments.

For example, it is not always feasible or necessary to tell everyone they are being observed (Pentzold, 2017). Researchers must instead assess the vulnerabilities of the community, the risks of engagement and publication, and the basic need for respect. Understandings of public versus private are cocreated in the moment (British Sociological Association, 2016; Chua, 2022; Pentzold, 2017). Going forward, it is likely I will lurk again, if it is a social norm of the community and if such participation (or lack thereof) aids in answering my research question.

On the other hand, I find it unlikely I will change my stance on token ownership, even though it is a recognized and important aspect of blockchain and Web 3 communities. Owning some tokens may be helpful in the research process (DuPont, 2021), but careful attention must be paid to avoid crossing the line into speculation for profit.

All in all, the application of negotiated ethics requires consideration of what is important to the community members (Chua, 2022; Pentzold, 2017). This necessitates a deep understanding of the community norms, values, and practices and continued reflexivity on the part of the researcher.

Conclusion

While it may not be as glamorous as Wacquant joining a boxing gym in Chicago (2015) or de Rond, Holeman and Howard-Grenville's account of rowing the Amazon (2019), I have attempted to call attention to what enactive ethnography can bring to digital settings. By opening ourselves up to becoming members of the communities we study, we make ourselves available to understanding the changing world of work and how the digital alters "what it means to be social and human in the world" (Markham, 2016).

Future work may further refine the concept of digital enactive ethnography, and indeed whether such a term is even necessary. Further explorations of asynchronicity and embodied (inter)action would greatly benefit understandings of digital enactive ethnography, as well as online digital interaction more generally. Consideration must also be given to research involving more than one immersed researcher and how this may alter the way digital enactive ethnography is conducted.

This article raises several questions on digital ethnography as an approach more generally. Digital enactive ethnography benefits mainly from the prolonged co-presence with community members. More clarity is needed on how co-presence occurs in digital organizations and whether it is possible in cases of lurking, or instead if lurking negates the ethnographic intent. Without a commitment to co-presence, researchers risk mislabeling archival or textual analysis approaches as ethnographic (Forberg and Schilt, 2023; Uberti, 2021).

Additionally, Abidin and de Seta (2020) have identified the prominence of "buzzword" ethnographies in the digital sphere, highlighting the confusion around what exactly digitally situated ethnography entails. Buzzword ethnography further risks fragmenting research into platform-specific methods, which may lose relevance as technology rises and falls in prominence (Forberg and Schilt, 2023). I recognize that in writing this article, I may add to that uncertainty. Instead, I hope future discussions will help to unify the many definitions and names of digital ethnography, ensuring that future "buzzword" ethnographies provide value rather than confusion.

Finally, researchers should recognize that this form of deep immersion may not be useful or applicable in studying all forms of online production. The tales in this article instead serve as an empirical example against which researchers should consider their own research aims and contexts.

Notes

1. As De Rond *et al.* (2019) point out: "Enactive ethnography, while resembling autoethnography, is distinct from it. Enactive ethnography considers the self a means of inquiry rather than an object of study, as is more typically the case with autoethnography."
2. Tokens and coins are not perfectly interchangeable terms. Coins operate on their own blockchain network, while tokens work on already existing blockchains (De Filippi and Lavyssière, 2020). While one may be considered more valuable than the other, this article is mainly focused on their potential to hold any value. For ease of understanding, the term "token" will be used for the remainder of the article.
3. There have been some exceptions to this, particularly when researchers determine that revealing their identity may be dangerous, e.g. when studying extremist groups.
4. Mining refers to the process of adding transactions to the blockchain. Tokens are produced as a result and are rewarded to the miners.

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