Who is "I"?: Subjectivity and Ethnography in HCI

Tejaswini Joshi
College of Information Sciences and Technology,
Pennsylvania State University, University Park,
Pennsylvania, United States
trj5216@psu.edu

Heidi Biggs
School of Interactive Computing, Georgia Institute of
Technology, Atlanta, Georgia, United States
hbiggs7@gatech.edu

Jeffrey Bardzell
College of Information Sciences and Technology,
Pennsylvania State University, University Park,
Pennsylvania, United States
jbardzell@psu.edu

Shaowen Bardzell
School of Interactive Computing, Georgia Institute of
Technology, Atlanta, Georgia, United States
sbardzell@cc.gatech.edu

ABSTRACT

HCI research applies ethnographic methods to understand and represent practices that involve the use of interactive systems. A subdomain of this work is interpretivist ethnography, which positions the researcher's perspectival view [37] as central to ethnographic research and its epistemic contribution. Given this we ask: How might ethnographic researchers in HCI surface the meaning-making role of their subjectivities in research? We reflect on our prior ethnographic fieldwork on small-scale sustainable farms in Indianapolis, Indiana to bring the ethnographic "I" into focus by articulating our reflections as "impressionist tales" [64:101-124]. We ground this pursuit in sociologist Andrea Doucet's concept of "gossamer walls" to surface researcher's three reflexive relationships 1) with herself; 2) with participants; and 3) with her epistemic communities [34]. We build on and contribute to postmodern ethnography in HCI to clarify the epistemic virtues and methodological best practices of a more unapologetically subjective ethnographic practice in HCI.

CCS CONCEPTS

• **Human-centered computing** → Human computer interaction (HCI); HCI theory, concepts and models.

KEYWORDS

Ethnography, Subjectivity, Reflexivity, Gossamer Walls

1 INTRODUCTION

Ethnography, an anthropological practice, is widely used in HCI to understand contextual digital technology use. Initially introduced in HCI to understand workplace dynamics [4], ethnographic research practice today is key to learning about how technology is embedded in people's everyday lives and social worlds [36, 93]. Various research areas such as sustainability (e.g.: [19, 49, 71, 75]), social justice (e.g.: [13, 28, 33, 88]), embodied interaction (e.g.: [35, 50]) etc. all include the use of ethnography. Recent research encourages ethnographic researchers in HCI to reflexively write about the challenges, vulnerabilities, and failures during research (e.g.: [80, 83]).

This research highlights the role of the ethnographic researcher's subjectivity in shaping the *perspective* or the point of view, which in turn shapes methodological decisions and sense-making throughout the process. The present work extends these discussions by focusing on the researcher's subjectivity. We draw from anthropology [5:123,34, 70, 76] and HCI research [7, 8, 37, 38, 83] to describe the ethnographic researcher's subjectivity as the researcher's identity and perceptions formed through her life experiences, epistemic inclinations, and positionality, as they are manifest in ethnographic encounters. Prior work such as first-person design research methods (e.g.: [20, 31, 50]), autoethnography (e.g.: [6, 53, 78, 79]), duo- [44] and trio-ethnography [51], vulnerable ethnographic representations and reflexive writing [80], all put the *self* at the center of the research premise. Feminist reflexive research practice encourages researchers to express one's own experiences as part of the research process [9, 12, 82]. These methods and practices provide ethnographic researchers opportunities to foreground their subjective experiences. However, in the present work, we raise two concerns.

First, looking at one's own work and asking, "who is 'I'?" in it, involves the challenge of creating a distance from self and reflexively engaging with one's own subjectivity. It also requires one to solve the dilemma of talking about the "I" in one's own work, while also overcoming the anxiety of representing oneself in unfavorable light [61:18]. Balaam et al. [6], for example, observe that the initial notes they took did not have emotional elements to it – everyone played it safe. Second, doing so challenges what HCI researchers are often trained to produce - objective realist writings and implications for design [37, 79, 80, 83] while also championing

the voice of the participants (e.g.: [10–12, 22, 48]). These challenges inform the first objective of this work: To propose a methodology that can facilitate ethnographic researchers to engage with their subjectivity in such a way that they cultivate it and thereby improve their research practice. Second, we advocate for discursive conventions in the field to help researchers express the benefits of their subjective expertise in a language that the wider community can understand and build upon. Finally, we also envision and speculate the epistemological possibilities within HCI that embrace and support a more subjective ethnographic practice.

We focus on reflexivity to explore, express, and ultimately cultivate the subjectivity of the ethnographer. We present our reflexive engagement with our prior ethnographic fieldwork with small-scale sustainable farmers in and around the city of Indianapolis, Indiana in the Spring of 2020 [19]. We draw upon sociologist Andrea Doucet's framing of reflexivity as "*three gossamer walls through which researchers construct knowledge from within three sets of relationships, including relations with: oneself (and the ghosts that haunt us); with research participants; and with one's readers, audiences, and epistemological communities*" [34:5] to surface our subjective ethnographic experiences. On a more material level, this means that we engaged with the whole range of ethnographic writings, from field notes and jottings to paper outlines, early drafts, and essayistic accounts. The Findings – titled "retrospective impressions"- comprise three subjective first-person accounts presented as "impressionist tales" [64:101-124] that foreground the *doing* of fieldwork and "join the observer and observed" [64:xv]. Through the "impressionist tales" we demonstrate our approach to invite fellow ethnographic HCI researchers in HCI about similar experiences.

Our contributions are as follows. At a methodological level, 1) We introduce Doucet's conceptualization of reflexivity as an approach to support ethnographic HCI researchers to express their subjectivity as a constitutive dimension of their intellectual contributions. 2) We advocate for practical changes in writing and reading ethnographies to maximize the impacts of such reflexivity. 3), we conclude our essay by discussing the possibilities of an alternative epistemology of ethnographic research in HCI that could facilitate a celebration of ethnographer's subjectivity.

2 ETHNOGRAPHY AND REFLEXIVITY IN HCI

To situate our work on the ethnographer's research subjectivity, we summarize key concepts in ethnography in HCI and anthropology, summarize research on reflexivity in HCI, and introduce sociologist Doucet's reflexivity framework.

2.1 Ethnography – A Brief Context

Ethnography is anthropological practice that emerged in the early 20th century, primarily characterized by the researcher's immersion in the "field" [4, 18, 25]. The ethnographer conducts activities including "making anecdotal observations, doing discourse analysis, analyzing the use of space, conducting extended case studies, and other practices" [18] by participating in the culture under study for extended periods, and then reporting her research findings back to the research community. In anthropology, theoretical and methodological resources offer best practices while articulating norms of rigor in reporting, such as motivating the chosen data

collection methodology, including field notes and verbatim quotes, and using triangulation of the data to support claims (e.g., [18, 84]). Researchers, using these norms, must legitimize their findings and research outcomes to the epistemic community.

Yet, many published accounts of researcher's experiences [3, 15, 34, 65] indicate that building one's ethnographic research repertoire is often a personal endeavor, cultivated over time by actually doing fieldwork [68]. "There is a tradition in cultural anthropology that one cannot be told how to do fieldwork" writes Agar, [68:2] implying that the only way to learn to do fieldwork is to be "thrown" into a community and emerge on the other side as a (hopefully) successful ethnographer. While Agar is likely trying to be provocative, he brings attention to two concerns with regards to ethnographic practice. First, while books and best practices offer guidance, what happens in real time is guided by the ethnographer's personal and subjective way of conducting oneself in the field [68:2–4]. As a result, the ethnographer often must also have a degree of self- and social-awareness and develop it to improve their craft [84:8–13]. Second, because ethnographers are often a single point contact between the culture and the epistemic community, they also must overcome the skepticism with regards to the scientific legitimacy of their work through their reporting [14]. To obtain this scientific legitimacy, early ethnographic researchers often retrofitted their findings to the rigor expectations of traditional scientific paradigms, adopting a scientific, dispassionate, and authoritative voice [64].

However, ethnography today, while still committed to rigor in evidence gathering and analysis, is also recognized as subjective and interpretivist in nature [57, 64, 68]. By "interpretivist," ethnographers often stress that the work must offer an account of the emergent interactions among "1) the observed 2)[. . .] the observer 3) the representational style selected to join the observer and the observed 4) the role of the reader engaged in the active construction of the tale (the audience)" [64:xv] – a description that aligns with the ethnographic practice of the authors of the present work. In recent years, "confessional accounts" (e.g.: [1, 2, 15, 58, 65]) autobiographical monographs (e.g.: [15, 64, 68]) and experiential ethnographies that show-case first person researcher's experiences (e.g.: [3, 46]) has become an important ethnographic subgenre. The goals of such ethnographic writing are varied. One is to explicate what actually happens in the field, while acknowledging the partial perspective of the researcher providing the explication, thereby furthering the research in the domain [16, 34, 70, 76]. This researcher-focused genre also makes space for researchers to talk about their emotional labor, share their experience, and consequently contribute towards a repertoire of community practice. This epistemic culture in anthropology informs an aspirational goal for the present work: How might we contribute towards building such an epistemic culture?

HCI researchers originally adopted ethnographic methods to overcome the limitations of the earlier HCI methods to capture the context of the "end-user" [4]. A large body of work in HCI applies ethnographic methods as a part of research for design, notably including ethnomethodology, which is particularly well positioned to account for interactions at a level of granularity that has proven useful for informing concrete design decisions. Since the 1990s, HCI practitioners have expanded the concept of "user-context" from a "dialogue" between a single user and a system to factor in macrostructures such as socio-technical systems, polities,

cities, and related cultures [13, 21, 22, 40]. In these broader contexts ethnography is used to present an interpretivist understanding of the people, their cultures, and possibilities of technology use rather than specific design outcomes. Dourish [37] describes interpretivist view of ethnography as an act of interpretive theorization developed by the ethnographic researcher to understand *and* help others witness what the ethnographer experienced and witnessed during fieldwork. The objective is to expand our understanding of the design space rather than converge at specific design outcomes.

A salient feature of an interpretivist view of ethnography is the *perspectival* (i.e., subjective) nature of the practice – – "ethnography is always, inherently, a perspectival view, and that this perspectival quality is critical to what ethnography is" Dourish [37:544]. Consequently, researchers' subjective experience has become a central theme in some recent works. Some examples include somaesthetic interaction design [50, 56, 85], experience design [39, 60, 66, 91], humanistic HCI [7], sensory ethnography [75], and autoethnographic research (e.g., [20, 31, 79]). Collectively, these and similar works are helping to shape a research trend in which the interpretivist stance is foregrounded, though in many cases, implicitly rather than explicitly. This trend both provides foundations for the present work and opportunities to help advance them.

2.2 Reflexivity in HCI

Early ethnographic projects involved the study and documentation of remote, inaccessible cultures such as tribes in remote villages, places in global south, and other locations that were outside of, and not understood by, Western researchers [74]. The ethnographic researcher became the single authoritative source able to represent these cultures, often by essentializing them. Subsequent social science research has critiqued early ethnography as a power-imbalanced, *othering* practice situated within a colonized, western, and privileged undertaking [16, 26, 41, 52, 55, 70, 74]. Reflexive ethnographic research practice provides ways to diffuse cultural essentialization and humanize the otherwise authoritative "god voice" [47] behind dispassionately written objective-seeming ethnographies [64, 83]. By encouraging ethnographers to examine their role and impact on the research and participants, reflexivity involves turning the lens on oneself and including that positionality and perspective as part of the contents of ethnography. With its roots in feminist and emancipatory philosophies, reflexive research practice entails recognizing and disclosing one's subjectivity and its influence on our research [16, 76].

Within HCI, the rise of reflexive ethnographic research is relatively recent, though reflexivity can be found in related areas. Feminist HCI encourages interaction designers to take responsibility of their agenda-setting role so as to develop designs that embody social justice and emancipation [9, 12, 82], participatory design includes a reflexive, participant driven emancipatory practice [11, 22, 48, 86]. Some recent works explicitly leverage reflexivity to study the researcher-self, such as autoethnographic design projects that have the self as the participant and object of study [20, 31, 78, 79]. Similarly Garcia and Cifor [44:190:6] reflexively show that "individual and collective feelings, experiences, or perspectives as a vital component of the research process" in their duo

ethnography, and Howell et al. [51] extend that to a trioethnography. Balaam et al. [6] center the qualitative researcher's emotional labor through stories of personal experiences of researchers. Devendrof et al. [32], raise a methodological challenge that highlights the struggles of collecting emotional data and sharing these emotional experiences while also maintaining the *researcher* role.

This research foregrounds the ethnographer's subjectivity and explicates the methodologies they used - writing notes privately and sharing with each other, engaging in a dialogical understanding of each other and themselves [6, 32, 43, 51]. However, at an individual researcher level, the concept of *self* and how it was arrived at individually, the challenges a researcher faces internally in doing so and how she overcomes that, remain largely tacit. Garrett et al. [45:1] contribute towards this issue by foregrounding the investigation of the *self* through "the felt self, inter corporeal self, socio-cultural and political self, and entangled self" as a method to aid researchers in developing their ethical sensibility.

The present work is thus situated within reflexive ethnographic research in HCI that foregrounds the "I" in the ethnographic accounts. We propose an approach that empowers ethnographic practitioners in HCI to learn about and cultivate their subjective ethnographic "I", by using Doucet's notion of *Gossamer Walls*.

2.3 Gossamer Walls and Ethnographer's Subjectivity

We draw upon sociologist Andrea Doucet's conceptualization of relational ways of knowing to frame our reflections and reflexive process. In talking about the use of her metaphor "gossamer walls" she writes:

> *The metaphor of gossamer walls, combining the sheerness of gossamer and the solidity of walls, provides for creative ways of conceptualizing reflexivity in temporal and spatial terms as well as to consider the constantly shifting degrees of transparency and obscurity, connection and separation that recur in the multiple relations that constitute reflexive research and knowing* [69]

Borrowing from Anne Michael's novel *Fugitive Pieces*, Doucet further claims that gossamer walls mediate mediates three different sets of relationships:

- The author's relation with her past and present self
- The author's relationship with the participants
- The author's relationship with her epistemic communities.

"Gossamer Walls" is oxymoronic – combining transparent visibility and solid obscurity. It thus offers a creative representation of one's relationship with one's own subjectivity: An embodied and tacit way of knowing, which is often made visible through *feelings, emotions* and *lived experiences,* and thus harder to learn about and even harder to write and showcase. The three overlapping relationships provide a vocabulary to support analysis of three crucial aspects of ethnographic research subjectivity: the experiences and values that constitute one's own life, the influence of participants, and the influence of our epistemic community. We discuss each of these in detail in our findings (Introspective reflections). But for now, we turn to the methodology we used to arrive at those reflections.

3 METHODOLOGY AND CONTEXT

Here, we first provide the context of the fieldwork we base this paper on and review our reflexive methodological approach. We close this section with an autobiographical portrayal of the first author, to introduce the "I", behind the impressionist tales.

3.1 Interpretive Reflexive Approach and Impressionist Writing

In this section, we first present the broader research context within which the present work is situated and explain our research methodology. We follow that with a detailed review of how we reflexively engaged with our fieldwork experience. We also explicate our use of Van Maanen's "impressionist tales" – ethnographies that are written as stories that show the readers the researcher's experience and allow us to "jointly examine" the culture which we are studying and the ethnographer's ways of knowing – as our narration style [64:101-124]

3.2 Research Context and Data

The present study is part of a broader ongoing collaborative research program that focuses on bottom-up innovation in small-scale urban farmer's practices in the context of sustainable food production. It draws upon our ethnographic fieldwork in small-scale urban and peri-urban farmers around Indianapolis, Indiana at the beginning of 2020 and during the pandemic. Our ethnographic practice is predominantly based in observation, which includes going to a field site to observe practices first-hand and in person; using walking probes [29]; interviewing participants; producing ethnographic jottings in real-time; creating diverse visual representations including photographs, sketches, and diagrams; and so forth. These methodologically follow [84:47-82] in structure and process. In the field, the lead author made jottings and mental notes [84:50], and then subsequently wrote them up as full-field notes [84:50–54].

Subsequent analysis is interpretivist in nature. Interpretivist analysis has been characterized as an "effort after meaning," which is to say that significances reveal themselves over time through a kind of labor [23]. That labor is primarily constituted by an iterative back-and-forth movement between concrete particulars within the ethnographic experience and our representations of it (i.e., in jottings, sketches, transcripts, etc.), and more holistic themes and design-related issues of focus. This motion is back-and-forth, because both the concrete particulars within our evidence and broader themes direct the analyst's attention back to the other, in an iterative and mutually informing way, as their meanings gradually come into awareness. We have previously published empirical findings from that research [19].

Here, we focus specifically on three farm visits from that ethnographic undertaking to stage a reflexive dialogue between ourselves and our fieldwork. We conducted research during the later part of 2021 and early 2022 as a retrospective analysis of our research practice. We seek to develop an *explicit self-awareness* as part of both the study design and the analysis of the ethnographic experience. To develop this explicit self-awareness, we use Doucet's three-part relationship we describe section 2.3: with herself, her research participants, and her epistemic community. To foreground these relationships and understand how they shaped the subjectivity and

thus the research practice of the first author, we iteratively did the following.

First, the first author developed reflexive notes emphasizing her personal experience. She re-engaged with the material outcomes of the 2020 field visits in the form of transcripts and voice recordings, images, field-notes and initial interpretations and analyses done in the past. Reengaging with these materials enabled the first author to re-familiarize herself with her in-the-field experiences and the perspective from which she had interacted with the farmers. She then used *"confessional tales"* [64:73-100] as a medium to express her subjectivity. *Confessional tales* showcase the researcher's point of view with as much naturalness/veracity as possible in describing how the research work came to be [64:73-100]. This makes it a suitable methodological writing tool to surface one's experiences by forcing one to put oneself at the front and center of the conversation. As the name suggests, these are *confessions;* thus, they also require the intentionality of searching for and exposing one's personal thoughts and experiences and are not just performative writings.

Informed by humanistic interpretation [7], we then tasked ourselves with identifying connections between the first author's reflexive notes and fieldnotes from the past. Specifically, we leveraged *explication de texte* [72] or close reading, from the humanities. Close reading leverages the hermeneutic aspects of interpretation and facilitates subjective engagement with the materials. Our interpretive process was theoretically informed by Doucet's reflexivity framework and John Van Maanen's concept of impressionist tales [64:119]. By iteratively going through this process, we connected the first author's subjectivity – her perspectival view - to her 2020 interpretation of the data, specifically identifying and demarking "data" closely associated as an outcome of the three ethnographic relationships Doucet proposes.

We then iteratively discussed and refined these connections to formulate them as impressionist tales by leveraging the structural conventions presented in Maanen's work [64:101-124]. These structural conventions include playing attention to the textual identity, narrative, novelistic event-by-event fragmented style, dramatic undertones and characterized portrayals of the actors (researchers, participants, etc.) [64:103-105]. The stylistic goal of impressionist tales is to be able to present the "doing of fieldwork."

> *The story itself, the impressionist's tale, is a representational means of cracking open the culture and the fieldworker's way of knowing it so that both can be jointly examined."* Consequently *"the epistemological aim is then to braid the knower with the known* [64:102]

We thus used impressionistically written ethnographies to craft narratives that allowed us to showcase the "doing of the fieldwork" not just through the first author's tangible actions, but rather through her feelings, emotions, and aesthetic experiences.

3.3 Who is "I"?

We now present an autobiographical essay – "a retrospective confession" by the first author, with the hopes that the readers can witness, in part, the making of the subjectivity of the "I" behind the reflexive accounts in section four.

> My early career training was in Informatics Engineering, which upholds values of scientific rigor, precision,

accuracy, generalizability, mathematics etc to produce accurate and reproducible program codes. Yet, I find humanistic interpretation closer to my disposition than the logical flow of writing a code. I often coded intuitively, resulting in definite functional outcomes but really messy programs. In programs, messiness is undesirable, and yet the messiness of my field notes often surprises me at my own tacit sensitivity to social, communicative, and embodied phenomena. There is a messiness to this process that my engineering training taught me to reject, and yet when it happens, it makes me feel alive as a researcher. How could I reject as lacking rigor the epistemic conditions that were most fruitful to my research?

Embracing this apparent "messiness" as a postmodern ethnographer, I posit that my research offers one perspective on research participants and their context and cultures. Philosopher Robert Pool [77] shows that the key idea behind being a postmodernist researcher means acknowledging that "reality" is not an unmediated, objective phenomenon, but rather a partial perspective. His view entails ongoing self-directed doubt about how we see the world and define "knowledge". My subjectivity thus has evolved from pursuing "The Truth" worldview of scientific engineering, to acknowledging the perspectival nature of ethnographic accounts.

I started the research project on innovative practices of small-scale farmers in the Spring of 2020. I have never done any sort of garden work, farming, or even lived close to a farm. I am an Indian and I grew up in the city of Pune, and all I ever knew was traffic, noisy streets, and pollution. When we as a team visited farms, I was enraptured by how content I felt as I listened to the participants share their stories, as I pet chickens, ate beef stew and that feeling often reiterated the question I asked above: Who am I here but an outsider witnessing a life I know nothing about? An imposter almost.

This feeling is not helped by the endless hours I have spent trying to make sense of all the data I have captured during the 2020 field visits. My field notes sometimes shock and surprise me but also make me wonder "Why did I care about that strange thing?". I might have spent 100s of hours making sense of my own mind through application of theory, coding, and rigorous analysis over the last two years, only to decide that maybe I want to scrap the idea of writing up that fieldwork. It was on this precipice of giving up that I stumbled across Doucet's work and felt the same excitement I feel when I find interesting connections in my field notes. By familiarizing myself with different ways of writing ethnographies, I can finally begin to pacify the imposter and embrace different ways of knowing. The present work is me following

that intuition and cherishing the messiness of the process. In this work, I want to explore the boundaries of subjectivity in ethnographic fieldwork in HCI, maybe attempt to push them a bit. In that process, I hope to learn as much about the people I research as I do about myself and ethnographic research practice within my epistemic community.

With this autobiographical essay, we set the background for our presentation of our impressions as findings.

4 RETROSPECTIVE IMPRESSIONS

Throughout this work, we have highlighted that examining and articulating one's own subjectivity is a challenging pursuit due to personal and social expectations that potentially get challenged when we do so. Doucet's metaphor of *gossamer walls* illustrates this challenge by emphasizing the simultaneously transparent and obscure nature of knowing in reflexive research. Positioning reflexivity as relational knowing, Doucet describes three relationships, each mediated through a gossamer wall.

> *[the three gossamer walls] illustrate the thin and tenuous lines that exist in research relationships [which] include relations between: researcher and self (including the ghosts that haunt us), researcher and respondents, and researchers and their readers/audiences.* [34:73]

In what follows, we present three impressionist ethnographies written in first person from the point of view of the first author. Each emphasizes one reflexive relationship Doucet mentions above: 1) Researcher and self, 2) researcher and respondents, and 3) researchers and their readers/audiences. All names used are anonymized.

4.1 The Researcher's Relationship with Herself

The researcher's relationship with herself represents different versions of herself, spatially and temporally located across her lifespan and experiences. Doucet thus describes the first gossamer wall - her relationship with herself as "ghosts" across time and space:

> *on the other side of a first gossamer wall are relations with our many selves as well as with 'ghosts,' deeply buried across time and space, that may come back to haunt us when we are physically and emotionally invested in our research* [34:73]

Doucet implies that, while doing research, we recall fragments of those past selves "that come back to haunt us." Personal and emotional investment accentuates the sheerness of the gossamer, enabling a dialogical conversation with these past versions and see how they have shaped us, and our research practice.

The first author experienced the "sheerness" more than a year later, and after iteratively going over the transcripts and fieldnotes for an extended period. The moments of failures, the frustration of not being able to capture and unpack her understanding of the farms, and yet the personally motivated drive to explicate her perspective led her to find traces of her own self in the data that filled her field and analytic notes. Doucet's conceptualization of past "ghosts" empowered the first author to embrace vague childhood memories and experiences and set up a dialogue between herself

and these past versions. Thus, here, we present an impressionist tale, titled "Abandoning the researcher."

4.1.1 Impressionist Tale: Abandoning the Researcher. Ethnography in HCI and anthropology relies on jottings, field notes, interview transcripts, photographs, videos, etc. to capture and store research data. In addition, the researcher must maintain a regular dialogue with her research questions to observe and note anything that responds to them in interesting ways. That is, she must always maintain a boundary between herself as the "researcher" and herself as an individual. But as extensive research in social sciences has shown, a strict separation of the human-being and the researcher is virtually impossible. This impressionist tale thus narrates the difficulties of maintaining the separation between one's person and the role of the "researcher." It presents a situation, when at the spur of the moment, the researcher metaphorically "abandons" the researcher role and focuses on experiencing her surroundings and field visit.

This tale is about a field visit to Wilma's peri-urban farm [anonymized] around Indianapolis. She raises lambs for meat, chickens for eggs, and has a small vegetable garden. During the initial analysis phase in 2020, in the first author's imagination, Wilma's farm represented ideal pastoral living, away from technology and the city. This author even questioned why anyone might introduce technology into the seemingly "ideal" pastoral place and lifestyle of the small farm. Yet, when it came down to articulating and defining this "pastoral living", the first author could only describe how she *felt* and was convinced that that intangible feeling meant cozy pastoral living. For her, ideal pastoral living was not a clearly articulated construct, but rather a *feeling*. Staying with this feeling, the first author immersed herself in her field notes and listened to the audio recordings. The recordings didn't just replay what they talked about, but also the sounds of chicken and sheep and the biting cold February wind. This multi-sensorial (re-)immersion by the first author, writing, and rewriting reflexive confessional dialogues with herself, coupled with iterative discussions between the authors, helped us to *braid the knower with the known* as presented below.

> Raised as city girl, farms meant a school field trip where we drank frothy buffalo milk, petted calves, and enjoyed the fresh countryside air. It was also a place of escape, away from the city. These distant memories of school field trips did not resurface as distinct, quotable memories, ready to be documented in my researcher positionality. Instead, I felt them. Standing at the doorstep of Wilma's farm for the first time one cold February morning, the crispness of the peri-urban air in my lungs felt strangely nostalgic. I felt alive, and from that moment on I left the researcher outside in the car. Or did I?

> Wilma guided us through the hallway, and we placed our coats in a closet opposite to a cupboard with denim overalls, boots, and the works. We went straight to the kitchen – where she was making a beef stew for us for lunch. We seated ourselves at the kitchen table. As we discussed her farm's history, I was mesmerized by our surroundings. There was

> fresh bread waiting for us, plates, and bowls ready to be filled, and the rich aroma of steaming beef stew on the stove top. At noon, she urged us to help ourselves to stew, coleslaw, and a serving of bread with butter. The hot, thick beef stew was perfect for a cold winter lunch and the coleslaw crunch complemented and lightened up the rich, spicy flavors of the stew.

> We sat at the dining table, behind which there was a stack of eggs and egg cartons, ready to be packed and sold. The chickens could be seen around their pen, right outside the window near the dining table. All of this was in alignment with the *feeling* Wendell Berry - a farmer and writer [17] had made me feel through his writings on agrarian American agriculture - Wilma's farm became the infatuation I have today with the notion of pastoral living. Amidst all this, I could not exactly locate or find the researcher within me. I was just a person, escaping the fast and loud city life, enjoying the beef stew Wilma made for us. In a way, it felt like a school field trip. I pet the chickens, was smitten by the adorable sheep and consumed by the smell of hay and fodder in the barn. I felt content. I did not hold onto my notebook either and did not take any in-the field notes. I am so glad I did not, because then I could hold three eggs in my hand alongside Wilma as she showed us around.

> But in another sense, I did take notes. I took them in the palm of my hands as a permanent sensation of picking up and holding three eggs delicately. I will probably never forget the sense of pride and accomplishment I felt in placing the eggs safely in the collection basket. I took the notes on my fingertips as I felt the waxy, leathery feathers of a chicken I pet. I wrote them in the memories of the strange sounds the chickens made and in the silly expression the chickens had when they looked at us. These sensations resurfaced long-forgotten memories of school time farm visits. Of farm being about an escape from the city life and maybe, just maybe, the following analysis for Wilma's farm was associated with this *feeling* rather than anything that was precisely said or documented.

> *Wilma's farm was representative of the romanticized vision of farming city dwellers had come to imagine—a remote, cozy home surrounded by pastures and grazing animals, far removed from bustling city life. (First author's analytical notes during the interpretation phase between February 2020-Feb 2021).*

This single sentence interpretation, however, does not have "data" grounding in the traditional scientific sense of the word. Sure, photographs we took on the farm coupled with some choice quotes from Wilma might help us claim that the lifestyle was the most attractive aspect of Wilma's farm. However, we argue that the interpretation presented here is not a summative product of all the tangible information we collected. Instead, through the first author's account, we showcase *how* the first author's subjectivity, and latent, sensorial experiences, shaped her feelings during the

Figure 1: and 2 First Author petting chickens and beef stew

field visit and how that led to consequent interpretation of the farm. These feelings emerged on Wilma's farm because the experience intersected with the first author's lived experience and elusive "ghosts" from the past, and her leisurely reading of Wendell Berry's essays on American agriculture [17], amongst other things that might inform her subjectivity.

As others have before us, we found that that which can be merely factually observed has only potential meaning until it is actively noticed and interpreted by a sense-making ethnographer. For example, the first author noticed the layout of the house and the farm but *saw* it as a feeling and ambiance; as an experience that was unique to her. A layout map of the farm would accurately provide the location of different elements of the farm down to the last inch, but what would it tell us about Wilma's farm but as limited a perspective, much like the researchers initially had of the women's movement in the opening sequence of *Kitchen Stories* [92, 94, 95] 1*.

This notion of perspectival view, of theorizing and interpreting the data is central to the interpretivist reading of ethnography [30, 37] . However, in doing the above exercise, we also discovered that teasing out the subjective elements of how we interpret our field visits is a laborious task, on account of our naturally limited awareness of our internalized subjectivity. Doucet contends that she made these connections only when she entered "the stage of physical and emotional exhaustion" and when the words of her research participants "filled [her] waking and sleeping hours and rolled through [her] conscious and unconscious mind" [34:75]. In the case of the first author, it was over almost two years later, having

heard the recordings and read the jottings and written narratives uncountable times, before they started to "roll through" her mind. Both Doucet's theory and the first author's direct experiences concur in appreciating these connections as hard-won and oftentimes incomplete, especially in light of new experiences and repertoires – an appreciation that is always unfinalized [66:69]. Coupled with Van Maanen's confessional tales as a tool to write and express this dialogue, we could create the emotional immersion needed for this account—a tactic that we share in hopes of supporting fellow ethnographers in HCI.

This discussion so far has helped start building a toolbox for our first objective – provide an actionable approach to unpacking one's own subjectivity. But we also must consider its possible contribution to the broader HCI ethnographic research field. We posit that, to fully leverage the potential of reflexive approaches such as the one we propose and others (e.g., [43, 51, 80, 83]) have advocated for, there needs to be an epistemic incentive to do so. But we save that for a later discussion and for now, we turn to how the researcher's relationship with the participants might play a role in how we do research.

4.2 The Researcher's Relationship with the Participants

The researcher's relationship with the participants examines intersubjective knowing, mediated through a dialogical interaction between the researcher and the participants.

Doucet writes of these relations:

> the multi-layered relations between researchers and research respondents, relationships that can involve oral, audible, physical, emotional, textual, embodied, as well as shifting theoretical and epistemological dimensions. [34:73]

1* From Prime video: "Director Bent Hamer's comedy drama is based on the real-life social experiments conducted in Sweden during the 1950s. This IFC Film is a retro gaze into the hearts and minds of both researchers and their subjects." [95]. The movie moves from highly mechanized, lab based experimental studies of women's movement in kitchen to a full immersion and growing friendship between the researcher and the participant.

This relational knowing is mediated through an ever-changing, elusive gossamer wall, which comprises our embodied understanding of emotions and body language, empathic understanding of one another and the respondents' and researcher's living personal histories and subjectivities. It showcases how both the researcher and the researched influence each other during an ethnographic encounter. This form of exchange contrasts with the idea of empirical, objective "data" because it violates the principle of minimizing "reactivity" – that is, minimizing the influence of the researcher and the participant on one another.

4.2.1 Impressionist Tale: Unavoidable Reactivity. In qualitative research, researcher reactivity is the "response of the researcher and the research participants to each other during the research process" [73]. Traditional scientific methods seek to minimize reactivity. However, we argue that reactivity is not just unavoidable, but that in interpretivist epistemologies, downplaying it undermines the research.

In the snippet that follows, the first author narrates the intersubjective experience of an on-site interview with Ava [anonymized]. Ava is an Ethiopian urban farmer in downtown Indianapolis. Her farm is a youth support farm meant to help disadvantaged youth learn values of labor, care, and ownership. In this impressionist tale, reactivity seeped and infiltrated the entire encounter. The first author entered the field-site with pre-judgements she had made about Ava and her farm while doing secondary research. As we shall see below, Ava's and the first author's subjectivities produced conflicting and confusing intersubjective knowledge for the first author.

> Ava's farm is in downtown Indianapolis and is surrounded by dilapidated and abandoned houses. It does not have the peri-urban crisp air, adorable sheep, or even brownish pastures. It is just an old house with a largish backyard converted to a farm with somewhat organized plantation beds. As we waited outside, the street felt eerie - a car with blacked out glasses drove past us, crawling, judging, and analyzing our presence there. The entire neighborhood felt deprived - like an old, abandoned post-apocalyptic town. It did not feel like a farm at all. I didn't analytically think of it as either. To me, it is a school-farm-youth-support-system-like thing.
>
> It was also freezing and windy and all together, I wanted to either get into the (possible) safety of the farmhouse or back to the car. So, when Ava opened the door and greeted us with a warm smile and hugged us, I was overwhelmed with a sense of safety, like hugging my mom after a bad day at school. I still sometimes wonder why hugging her feels so comforting.
>
> This initial experience of feeling safe in Ava's presence was quite different to my prejudgment of the entire farm's initiative formed by going through their website. I was confused how these youths with extremely deprived childhood were "taken-in", shown the path "towards better living". It reminded me of

my own experience of witnessing depravity in India and especially children from the movie *Slumdog Millionaire* who were "taken-in" and made to beg. What does "taking-in" and caring for such deprivation really mean? So, the safety I felt was confusing. If my pre-judgement of this place is skepticism, why do I feel so peaceful here? Considering these questions and confused by the conflicting inputs I got from my own instincts, I interviewed Ava with an almost compulsive need to see her as safe, comforting, protective woman - only to simultaneously employ skepticism and suspicion derived from my initial perception of the farm.

The skepticism was not put to rest solely by my bodily experience of safety primarily because the entire interview experience was a monologue of Ava narrating the story of her achievements so far; to her credit, she also spoke of her failures, but only to set the stage for the next achievement. So, on one hand, I wanted to believe in my sense of safety, and on the other hand, the farm's story felt like a bit of a performance, especially for a person who Ava had invited to sit in and take notes for a grant application for Ava.

Ava dominated the entire conversation. There were three of us fieldworkers and she was alone. We only interjected with around 4–5 questions. I say *we*, but I did not ask a single question. I sat diagonally to her, nodding, making eye contact, listening, and taking shabby notes, and holding the recorder. Maybe I too embodied fly on the wall, but it was not intentional, rather an outcome of my own, generally well-masked social anxiety. And of course, because the interaction was nearly a monologue.

I was overwhelmed by Ava's beautifully crafted account of how the farm came to be and what happens there. But I was also overcome by guilt for thinking of her that way when she *FELT* so safe. Sometime towards the end of the conversation, I got a text from my husband, sharing some bad news. I could feel my face heat up, tears forming at the back of my eyes as I discreetly tried to text back and pacify him and myself. During this, Ava and I made slightly longer eye contact, and in that miniscule non-verbal exchange, I felt naked - I felt that she saw right through me and knew for sure that I was distressed and not emotionally present from that point onward. But the feeling that she *saw* me also soothed me.

When I wrote my interpretive notes later, I realized that the notes were less about the farm and practice and more about Ava. They also read like I was narrating the story of an idealized person, almost as if she were a fictional character:

Ava is a natural storyteller, and her story went back and forth in time, at one moment going back to her childhood in Ethiopia and at the next moment narrating a child's most recent success story. She spoke as though she was

always ready, waiting to tell the story of the farm. (First author's full field notes, 2020)

Evident in this account of how it all started, her primary goal was to "make it better" for the kids she wanted to teach. (First author's full field notes, 2020)

As we learnt through our conversation was an understated way to express her deep-rooted drive to help the kids. Her frustration was not just about the kids not learning science. Rather, it was that she could not teach in the way it would be easier for them to learn. Thus, came about the urban garden (First author's full field notes, 2020)

Ava's fight is not so much about the soil, the environment or even opposing industrial agriculture. Rather, her fight is to make room for these kids who have very few betting on them (First author's full field notes, 2020)

The catch is, even today, I am certain she did come across all of this. What jarred me was the nagging need to talk about my confusion and skepticism. What I wrote was that Ava felt like the most trustworthy, inspiring person, aspiring to help severely disadvantaged youth get better chances in the world. But I also wanted to write the subtext that I am not sure if she was sharing her journey with us or telling us a narrative that best represents her vision and mission of the farm. I wanted to write that this skepticism comes from memories, movies I have seen, and prejudgments based on the farm website that nag me and make me uncomfortable that I don't really know. It makes me wonder, does my "reaction" to Ava, Ava's possible reaction to the "fly on the wall researcher", make the pages of full field notes, hours of analysis render useless because it's not a dispassionate, defamiliarized account of what happened? Our team's interpretation of this encounter is different from this. We focused in our prior publication on the admirable work she was doing for the disadvantaged youth through the garden and her philosophy of labor. I continue to stand by that interpretation as legitimate, relevant, and meaningful, based solidly on the "data" and many hours of interpretive analysis. But it was only through this retrospective impression that I could finally articulate the feeling of "something is missing."

The first author does not intend to discredit or mistrust Ava's intentions based on her positionality and pre-disposition. We also want to emphasize that we do not claim that the youth are taken advantage of. Instead by accounting for this internal conflict, we want to bring the reader's attention to the blurry lines between knowing the participant objectively, experientially, and the participant's own narration and presentation of their subjectivity. The confessional accounts in Balaam et al. [6] also show similar tensions, which we quote here.:

Once they had finished, I often tried to ask gentle questions to clarify parts that were muddled, but this

changed the way details were re-told. I started to question whether I was putting words in their mouths by asking them to do this [6:603:3].

After all the frustration and struggle that I had been through with the project, it was, for want of a better word, heart-warming to know that the children felt they should be friends with me on Facebook. Unfortunately, everything in my professional self-told me I could not accept these friendship requests [6:603:4].

These examples show that the confidence (or lack of it) in the knowledge produced through intersubjective interactions often rests on unstable, temporally shifting ground. The contrast between our perceived understanding of the participant's experience and their actual experience is not unique. Balaam et al.'s work [6], although aimed to foreground the researcher's emotional labor, implicitly highlights the shifting, dialogical intersubjectivity, hesitancy and self-doubt of the researcher. Doucet's Gossamer wall we argue, legitimizes such internal "confessional" experiences of ethnographic researchers. Doucet's conception of the researcher's relationship with the participants can thus help ethnographers normalize their experiences similar to those of the first author or the researchers in Balaam et al [6]. Doucet's description shows that the "truth" is spatially and temporally located in the frame of the said ethnographic encounter bounded by the finite subjectivities of the people involved. As subjectivities evolve and change over time, what is deemed as "true" also would do so. Thus, by conceptualizing the intersubjectivities of knowing the participants as an elusive, ever shifting gossamer wall, Doucet's gossamer wall can offer a methodological scaffold to ethnographic researchers struggling with self-doubt and confusion about the "truth".

In a broader sense, Doucet's reflexive approach forces us to look at the knowledge produced in ethnographic research practice from an ontological position. Based on what we have learnt up to this point, we can say that the ethnographic researcher does not have access to a perspective-free "truth" about the field site; what she does know, what she is a true expert of, is her own experience engaging in the *gossamer wall like* process of knowledge production that unfolds when an ethnographer engages in her work and interacts with her participants. In the above snippet, for the first author to legitimize what she learnt from this ethnographic encounter, it was necessary to embrace the idea that she didn't really know Ava beyond the ways that Ava presented herself. This framing raises an ontological concern about how the notion of "truth" or "reality" is understood in HCI research, which we address in the discussion. Here, we turn to the researcher's relationship with her epistemic communities.

4.3 The Researcher's Relationship with Her Epistemic Communities

The researcher's relationship with her epistemic communities represents how epistemic affiliations and training interact with the researcher's subjectivity. This relationship, the *third gossamer wall* Doucet writes about is to "*recognize the theoretical and epistemological, or epistemic communities that influence our work in subtle and explicit ways.*" [34:73]. This relationship reframes how we understand the process of producing knowledge. Doucet writes

that when we recognize the influence of our training and epistemic commitments, we can see that *"producing knowledge is less a matter of face-to-face confrontation with the data than of negotiation within an epistemic community"* [34:81]. This negotiation is an implicit and sometimes even explicit activity we engage in when we collect data or analyze it, when we write up our research to a certain audience and so forth. Consequently, the researcher's relationship with her epistemic community enables, limits, and shapes what it is possible for us to think or see.

In the following impressionist tale, the not-so subtle pressures of the first author's epistemic commitment to sustainable HCI research manifested as an expectation for the farmers she met to demonstrate exemplary commitment to nature, earth, and soil (e.g.: [59, 62, 71]). This expectation was also shaped by imageries of the caring, living-off-the-land, frugal farmer for sustainable agriculture from Wendell Berry's essays on American agriculture [17]. Thus, when faced with an ethnographic encounter that shook this understanding of sustainable farming, the first author, as we shall see, struggled to reconcile her epistemic position and what "data" was saying.

4.3.1 Impressionist Tale: Epistemic Interference. As HCI ethnographers studying sustainable agriculture, we were situated as researchers in one epistemic community, and we hoped to contribute to it by embedding ourselves in a separate epistemic community, that of sustainable agriculturalists. Mediating the latter were preconceived beliefs and expectations about sustainable agriculturalists; for example, we believed going in that they would express skepticism towards and even activist practices against capitalism. Yet, the visit to Amelia's [anonymized] - a for-profit market garden farmer - challenged the first author's assumptions about small-scale sustainable farmers' anti-capitalism sentiment. Amelia's views on sustainable food production were neither entirely aligned with the other farmers we had met, nor did they resonate with the first author's epistemic repertoire. Ideally, this could have been an exciting opportunity to modify and enrich our own understanding of who does, or what counts as, sustainable agriculture. However, instead of being an immediately exciting, generative opportunity for the first author, this resulted in a host of negative reactions.

> Amelia and four co-farmers own a small, for-profit urban farm, located at the heart of Indianapolis. Their goal is to provide Indianapolis locally produced, organic food, primarily salad and other greens. The farm is one acre, limited in size due to competing land demand and high land prices in the city. Located in the heart of the city, the farm is on a semi-residential street downtown. The location, surrounded by traffic and buildings was not in any way pastoral and my mind had been for some reason intent on chasing the satisfying feeling of Wilma's farm. Of course, I don't have the expertise to define what *is* a legitimate sustainable farm, rather, I was chasing the *feeling* that would help me believe that this was indeed a sustainable farm. I was especially at the time taken by Wendell Berry's essays [17] and agrarian philosophy. I was convinced that I wanted to search for that feeling he so succinctly describes in the essays, a mix of nostalgia, of frugality and simplicity of old agriculture.

However, the farm tour was guided and scheduled as a group tour for a very specific audience - budding farmers, students like us, learning about farming, potential buyers of their in-house tools and so on and so forth. It felt like watching "how it's made" episode on the Discovery Channel.

Notwithstanding this factory-like feeling brought on by the farm's appearance and the tour guide structure, the language used by Amelia and our tour guide was also quite surprising. Having grounded my research work in sustainable HCI, I was looking forward to observe a sense of community [63, 71], farmer's embodied knowledge[87], symbiotic relationships on the farm [59], aspirations of pleasure derived from the labor of working on the farm [44], etc. And yet, this small-scale sustainable farm was all about efficiency, productivity, and maximization - ideologies commonly associated with industrial agriculture, consistently made the "bad guy" by sustainability scholars in agricultural economy and HCI alike. Yet, Amelia's urban farm focused on profit, productivity, and sustainability; it was nothing like the feeling I was searching for. Even as I write this excerpt, nothing in my experience of the farm was evocative of the romanticized "farm" I envisioned. My lens was cold, calculative objectivity. (Of course, objectivity is a myth because *I am* biased)

I also have no visceral memories like I have of Wilma's or even Ava's farm. While I can provide an account of Wilma's and Ava's farm visit even if you wake me up from sleep or probably even 10 years from now, for Amelia, I need to refer to my notes and diagrams and tangible "data". I became an engineer, metaphorically shutting down the experiential captures and focusing on "data". I wrote "This is how they do things. This is their step-by-step process. They use this tool to make planting faster and neater". She made a little joke about aerobic exercise when using the broad fork, but in the same breath spoke of efficient tools and said "We got to get the most out of the soil. That is why soil health is important". I was confused - *got to get most out of the soil?* That does not sound right! What about the farmer who loves the earth and land and nature? At this point of time, the sensing, feeling, and thinking ethnographer shut down in me, and all I could think of is that this farm, this certified organic, sustainable farm is not the farm I thought a "farm" is. I did not want to engage in the sense I did for Ava or Wilma. Rather, I just became a note taker, impersonally documenting what I saw, rather than the postmodern ethnographer that felt, captured, and connected with her surroundings. As such, at this point of time, I failed to be a good ethnographer in the field, because I let my preconceived notions of what a sustainable farm should be influence how I saw and read my in-the-field experience.

> Thus, the most striking aspect of Amelia's farm to me was the paradox of sustainability and productivity being a part of their language. My struggles in learning about Amelia's farm were an apparent contradiction between what existing research had taught me about small-scale sustainable farmers, my own lofty ideals of a "sustainable farm" formulated through various texts I had read, and what Amelia did on the farm. One can argue that this itself is a finding - which is true. However, I wonder, what if I had not read Wendell Berry's essays, or the nuanced articulation of the symbiotic encounters? How would my research experience have been? Or what if I had visited Amelia's farm before I had visited Wilma's and Ava's? Would that have made a difference to how I saw the farm?

In the above impressionist tale, the first author experienced emotions that were primarily negative. Shock, confusion, distaste even, and loss of interest. These initial reactions and the resultant emotional shut-down by the first author were an outcome of her beliefs shaped by the epistemic values she believed in. From Wendell Berry's essays [17] and Wilma's farm we saw in 4.1, to Sustainable HCI research that positioned small-scale farming as an antidote to the problems caused by large-scale industrial farming, all shaped her vision of a "sustainable farm". Retrospectively, we can argue that her feelings shined the spotlight on her epistemic beliefs. If she had recognized this connection earlier on – during the actual fieldwork period - at the very least, the first author could have been more cognizant of the implicitly biased eyes she looked at Amelia's with. For example, a statement like "we got to get the most out of the soil, that is why soil health is important" handled with a more reflexive real-time approach could have made the first author question what symbiotic encounters [59] mean when a capitalist, productivity oriented mindset is coupled with a deep need to maintain soil health.

Going into the field with an ethnographic mindset involves keeping an open mind to "surprises" and outliers. In theory, the first author was aware of this and that she did not *have* to stay close to sustainable HCI framings and the direction of her research inquiry. But what Doucet's third gossamer wall highlights is that having the *intention* to go into the field with an open mind and including flexible research questions in the study design does not necessarily subvert the implicit pressures that inform the ways in which we *see* the field-site and do research. It did not come to the first author's conscious perception that that she could "talk-back" to the research articles in HCI– because it was not in her conscious perception that her epistemic readings shaped what she saw. Here, this relational knowing was solidly locked behind a wall.

This is where we argue that leveraging Doucet's third gossamer wall can help. First, it can help ethnographic researchers recognize how what they read, engage with and are a part of can inform their perspective. Second, and more importantly perhaps, Doucet does not portray this epistemic interference as an *error* or a bad research practice, but rather an intrinsic reality of being human. This framing can empower ethnographic researchers to practice reflexivity with openness and curiosity. If the first author had learnt that her so-called bias and confusion was merely human, and that

it did not make her a "bad" researcher, she could have curiously questioned herself. Perhaps this would have in turn empowered her to challenge the definitions of the sustainable farmer construct in HCI, thereby expanding the design space for sustainable farming research in HCI.

Doucet's metaphor of *gossamer walls* emphasizes both the spatio-temporal locatedness of knowing and that the three relationships between the research and herself, her participants, and her epistemic affiliations–are not formulaic. Rather, the metaphor lays bare the tumultuous, uncertain, confusing, and sometimes messy nature of subjective knowing. In doing so, Doucet's reflexivity approach empowered us to normalize our experience – deeply felt uncertainties, confusing and conflicting ethnographic encounters, insecurities about our work and so on – and thus freely write and talk about them as a constitutive part of our knowledge production. We hope that fellow ethnographers in HCI who face similar internal struggles (e.g., [6, 32, 78]) might also benefit from this approach. But a challenge for HCI remains the need to better facilitate interpretivist ethnography, and epistemic motivation for investing the resources – during doctoral training, and throughout research practice – in its most potent, and underappreciated, feature: the ethnographer as *expert subject* [7:36,41, 68-72].

5 FROM GRUDGING ACCEPTANCE TO CELEBRATION OF THE ETHNOGRAPHER'S SUBJECTIVITY

Doucet's reflexivity approach empowered us to present the role our subjectivity played in our ethnographic fieldwork because it helped us ground and concretize our struggles in unpacking our subjectivity. It opened the possibility that reflexively engaging with the self can also help us to intentionally *cultivate* the very subjectivity that enriches our individual ethnographic practice. The emergence of this self also influences self-other relations, including practices of sharing and obscuring information, expressing, and controlling reactions, projecting identities and being vulnerable, of felt experiences and "facts" [8:580,66, 67]. Additionally, the "saturation point" [24] itself, according to Braun and Clarke [24] is subjective, which itself raises a set of issues of how one positions oneself to make such judgments. Finally, we learned that the subtle pressures of our own epistemic community to practice otherwise can itself lead to a sort of Heideggerian breakdown in practice [90], which forces one to view the practice as such, that is, to theorize it.

5.1 Who is "I"? In Pursuit of Cultivating the Ethnographer's Subjectivity

Throughout this paper, we use *empowerment* to describe our experience of coming to terms with our subjectivity. Our methodology - Doucet's reflexivity approach (i.e., Gossamer Walls) coupled with Van Maanen's confessional and impressionist tales is empowering as a discursive mode because it normalizes the emotional, ever-shifting human experience of being an ethnographic researcher. Extending reflexive ethnographic research in HCI (e.g.,[43, 51, 80, 81, 83]) thus, we contribute an actionable approach that provides ethnographic researchers resources to unapologetically engage with and express their subjectivity as a constitutive dimension of their intellectual contributions. Doing so helps to

address some of the conflicts raised in HCI already discussed in this paper [6, 32]. We argue that ethnographic researchers in HCI must often negotiate with their own aesthetic and emotional experience to write ethnographies that are acceptable and legitimized. This negotiation can be internal, potentially resulting in a truncated or sometimes even discarded datapoints or project. Or it can be external – by providing extensive justification for the perspective presented using inadequate epistemological tools to accommodate it. Consequently, researchers struggle in knowing their subjectivity, presenting it, truncating it, or sitting with the insecurities and questions it raises.

The present work addresses these struggles as follows. First, by presenting detailed ethnographic accounts that "expose" the first author's experiences being an ethnographic researcher, we hope to emphasize the similarities across experiences such as those of Balaam et al. [6], Devendrof et al. [32] and ours. Second, Doucet's reflexivity approach granularizes *reflexivity* down to the lived experiences of being human. That is, being a reflexive, self-aware practitioner is not an exclusively a deliberate cognitive act, but also involves elusive, sometimes surprising and at other times frustrating dialogical and multi-sensorial process of self-discovery. "Gossamer walls" as an oxymoronic metaphor and the three-part relationship of the researcher with herself, the research participants, and the epistemic communities helps one visualize and unpack this dialogical process. More importantly perhaps the metaphor shows that completely separating the "I" from the outcomes of ethnographic undertakings to represent "the objective truth" is impossible. Finally, Van Maanen's stylistic descriptions of confessional and impressionist tales provide the necessary rhetorical tools for rigor to write and present ethnographic experiences without fitting into notions of *"objective truth".* Putting all this together, we hope to encourage ethnographic researchers in HCI to be curious about, rather than suspicious of, their own relationships to the external world and their sense-making of it.

This approach also has implications for how the work should be used—both in peer reviewing and especially once it is published. We have talked about the role of the ethnographer in all of this, but all this also suggests what the configuration of the ideal reader of such ethnographic work might do, that is, to reimagine how reflexive, candid ethnographies can be read.

5.2 What Does "I" tell us? Legitimizing Perspectival Writing and Partial Knowledge

I say 'we,' but I did not ask a single question. I sat diagonally to her, nodding, making eye contact, listening, and taking shabby notes, and holding the recorder. Maybe I embodied the proverbial fly on the wall, but it was not intentional, rather an outcome of my own, generally well-masked social anxiety. – First author's impressionist account of meeting Ava, section 4.1

The "I" in this account is self-conscious, and hesitant in accepting the legitimacy of her perspective. The "I" is also curious about how she might look like, from outside, as a non-judgmental self-reflexive observation. What does this "I" tell us about the ethnographic encounter itself? Or the "data" that might follow such a statement? One thought, reflecting contemporary post-positivist empiricism,

is that the data that follows is not reliable. Yet, an ontological position that draws from idealism and/or relativism posits that reality is mediated through perception and interpretation by the human mind, and through co-constructed social meanings might facilitate a different reading of this. The "nodding, making eye contact, listening, and taking shabby notes" might hint towards the speed and length at which the speaker might have spoken. Depending on how one looks at it, such nuanced and raw presentation of oneself might make the "I" an unreliable narrator, or might induce feelings of sympathy, and trust on account of the vulnerability shared. Interpretivist, reflexive, ethnographic research posits that the "I" who writes vulnerably is in fact a more reliable narrator than the one who only claims "Ava dominated the whole conversation" as though this were an unmediated fact, rather than a social perception. Foregrounding the "I" that witnessed Ava dominate the conversation adds *precision* to what is reported as research findings.

The present work provides an approach that can empower ethnographic researchers to engage with and express their subjectivity, thereby foregrounding the vulnerable "I" in their research findings. However, for ethnographic researchers in HCI to undertake an intensive reflexive practice such as this, there is limited epistemic incentive. For example, [83] and more recently [6, 80] suggest that HCI as a field favors the *realist* – objectively, authoritatively written ethnographies; that is the *implicit expectation* of the *reader* due to post-positivist roots of HCI. Thus, we argue that if we are to empower ethnographic researchers to discover and cultivate their subjective ethnographic perspective and practice, the role of the *reader* in engaging with interpretivist ethnographic writings must also be re-examined. Dourish [37] suggests that ethnographic writings can be read as the *theorization* of what the researcher gathered during the ethnographic work, rather than just empirical findings [37]. The readerly goal is to help open the design space and to facilitate alternative ways of imagining technology for different socio-cultural contexts. Another, similar, approach is to read them as "humanistic essays" [7:69]. Humanistic essays provide the space to express critical thinking by focusing on the notion of "expert subject" that crafts arguments and investigates the subject under study. [7] argue that the structure of such writing is crafted to "reflect doubts, dialogism, dead ends, and other signs of 'enacting the struggle for truth.'" The purpose of reading an essay then is to "sit alongside [the researcher] and ponder the truth with [the researcher]" [7:69].

Both these forms of reading emphasize the active role of the readers of ethnographic writings in this form of epistemology [42, 64:xv]. For example, another HCI researcher, reading our doubts and reservations about Ava, could have been inspired to investigate social justice oriented HCI's role in unpacking the dynamics at youth support groups. Amelia's farm – exemplifying the tensions between idealistic sustainable farming and financial profit could spark a debate on the construct "sustainable farming" in HCI. In short, reading ethnographies as dialogues could reproduce salient features of other modes of intellectual debate, including seminars, brainstorming sessions, and so on.

For this dialogical relationship to flourish as a part of knowledge production a larger epistemic concern also benefits from ongoing reexamination. We posit that the post-positivist scientific ideals of *perspective-free* truth often show up as "ghosts" from the past in

how research rigor is defined, produced and published in HCI, other times as expectations of implications for design [37]. That is, the "subtle epistemic pressures" also shape and define our epistemology. For example, in the case of Ava, a skeptical question we might ask is "Can we *know more* and be more *certain* of our research findings if the first author had shared her findings with her participants, making them an object of focus and discussion, generating new data and insights collaboratively?" While COVID limited our ability to do so, one might also question the implicit understanding that "saturation and triangulation" arrive at perspective free truth. In the work of Balaam et al. [6] for example, the ethnographic researcher was hesitant, despite of using the best practice of verifying and clarifying with the participants: "*Once they had finished, I often tried to ask gentle questions to clarify parts that were muddled, but this changed the way details were re-told. I started to question whether I was putting words in their mouths.*" What Doucet's relational knowing highlights is that "saturation" i.e., knowing the whole truth is also often formulated by the researcher's situated judgement. Braun and Clarke [24] similarly highlight the subjectivity of "saturation". By thus recognizing interpretivist ethnography as a subjective practice, we challenge the idea that methodological "proofs" *alone* can unequivocally *prove* that we have presented is the "objective truth." We argue that in many ways, the pursuit of objective truth to "prove" the validity of data and reach "saturation point" legitimizes the authoritative and omnipotent "God voice" [47], thereby essentializing the participants we study. While HCI has done extensive work to emphasize emancipation of the underserved and subversion of power dynamics between designers and "users" [9, 22], there needs to be more work to cultivate epistemological openness to partiality of knowledge.

Becker, in his article on epistemology of qualitative research critiques the discipline of epistemology: "Epistemology has been [. . .] a negative discipline, mostly devoted to saying what you shouldn't do if you want your activity to merit the title of science, and to keeping unworthy pretenders from successfully appropriating it" [14:2] – a sort of a gatekeeper. We argue that when faced with balancing the tensions between post positivist epistemological "should" and the perspectival nature of interpretivist ethnography, epistemology does act a negative, because it portrays the decision as a black and white choice. One way forward would be then is to find alternative epistemologies that might facilitate a collaboration between design-oriented goals and interpretivist ethnographies. Khovanskaya et al. [54] for example show that by maintaining and even accentuating the gap between design and ethnography, generative outcomes can be produced. Their work implicitly highlights how epistemological underpinnings define our perspective and how we see research sites and it is in-fact generative rather than limiting to knowledge production. Their work exemplifies a situation where the reflexive methodology and ethnographic writings we propose in the present work might further advance design research.

The approach we propose thus further extends issues raised by [37, 80, 83, 89] by advocating for explicit articulation of the ontological and epistemic background of interpretivist ethnographic practice. Certainly, there is room for other responses to this than our own, but we do believe that ethnographic accounts that include the doubts, hesitant assertions about the participants and member meanings, and yet offer evidence of people and practices associated with computing and interaction, can contribute towards scientific knowledge of and design-oriented interventions in the real world.

ACKNOWLEDGMENTS

REFERENCES

[1] Crystal Abidin and Gabriele De Seta. 2020. Private messages from the field: Confessions on digital ethnography and its discomforts.

[2] Chloe Ahmann, Ali Feser, Alix Johnson, Erin McFee, and Amy Leia McLachlan. 2023. Fieldwork confessionals. American Anthropologist 125, 3: 623–628.

[3] Nikhil Anand. 2017. Hydraulic city: Water and the infrastructures of citizenship in Mumbai. Duke University Press.

[4] R.J. Anderson. 1994. Representations and Requirements: The Value of Ethnography in System Design. Human–Computer Interaction 9, 2: 151–182. https://doi.org/10.1207/s15327051hci0902_1

[5] Babette Babich. 2017. Hermeneutic Philosophies of Social Science. Walter de Gruyter GmbH, Berlin/Boston, UNITED STATES. Retrieved September 12, 2022 from http://ebookcentral.proquest.com/lib/pensu/detail.action?docID$=$5157002

[6] Madeline Balaam, Rob Comber, Rachel E. Clarke, Charles Windlin, Anna Ståhl, Kristina Höök, and Geraldine Fitzpatrick. 2019. Emotion work in experience-centered design. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 1–12.

[7] Jeffrey Bardzell and Shaowen Bardzell. 2015. Humanistic HCI. Synthesis Lectures on Human-Centered Informatics 8, 4: 1–185. https://doi.org/10.2200/S00664ED1V01Y201508HCI031

[8] Jeffrey Bardzell, Shaowen Bardzell, and Mark Blythe. 2018. Critical theory and interaction design. MIT Press.

[9] Shaowen Bardzell. 2010. Feminist HCI: taking stock and outlining an agenda for design. In Proceedings of the SIGCHI conference on human factors in computing systems, 1301–1310.

[10] Shaowen Bardzell. 2010. Feminist HCI: Taking Stock and Outlining an Agenda for Design.

[11] Shaowen Bardzell. 2014. Utopias of participation: design, criticality, and emancipation. In Proceedings of the 13th Participatory Design Conference: Short Papers, Industry Cases, Workshop Descriptions, Doctoral Consortium papers, and Keynote abstracts-Volume 2, 189–190.

[12] Shaowen Bardzell. 2018. Utopias of participation: Feminism, design, and the futures. ACM Transactions on Computer-Human Interaction (TOCHI) 25, 1: 1–24.

[13] Shaowen Bardzell and Jeffrey Bardzell. 2011. Towards a feminist HCI methodology: Social science, feminism, and HCI. In Conference on Human Factors in Computing Systems - Proceedings. https://doi.org/10.1145/1978942.1979041

[14] Howard S. Becker. 1996. The epistemology of qualitative research. Ethnography and human development: Context and meaning in social inquiry 27: 53–71.

[15] Ruth Behar. 1997. The vulnerable observer: Anthropology that breaks your heart. Beacon Press.

[16] Roni Berger. 2015. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. Qualitative research 15, 2: 219–234.

[17] Wendell Berry. 2009. The Gift of Good Land: Further Essays Cultural and Agricultural. Counterpoint, Berkeley, Calif.

[18] Joost Beuving and G. C. de Vries. 2015. Doing qualitative research: the craft of naturalistic inquiry. Amsterdam University Press, Amsterdam.

[19] Heidi Biggs, Tejaswini Joshi, Ries Murphy, Jeffrey Bardzell, and Shaowen Bardzell. 2021. Alternatives to agrilogistics: designing for ecological thinking. Proceedings of the ACM on Human-Computer Interaction 5, CSCW2: 1–31.

[20] Heidi R. Biggs and Audrey Desjardins. 2020. High Water Pants: Designing Embodied Environmental Speculation. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20), 1–13. https://doi.org/10.1145/3313831.3376429

[21] Susanne Bødker. 2006. When second wave HCI meets third wave challenges. In Proceedings of the 4th Nordic conference on Human-computer interaction: changing roles (NordiCHI '06), 1–8. https://doi.org/10.1145/1182475.1182476

[22] Susanne Bødker. 2015. Third-wave HCI, 10 years later—participation and sharing. Interactions 22, 5: 24–31. https://doi.org/10.1145/2804405

[23] David Bordwell. 1991. Making meaning: Inference and rhetoric in the interpretation of cinema. Harvard University Press. Retrieved December 11, 2023 from https://books.google.com/books?hl$=$en&lr$=$

$&id$=$cIJs1s8xkTUC&oi$=$fnd&pg$=$PR11&dq$=$Making+Meaning:
+Inference+and+Rhetoric+in+the+Interpretation+of+Cinema&ots$=
$dXmY64D5mx&sig$=$smK1d04OY9dAa_pzYAkPEAcr41U

[24] Virginia Braun and Victoria Clarke. 2021. To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. Qualitative Research in Sport, Exercise and Health 13, 2: 201–216. https://doi.org/10.1080/2159676X.2019.1704846

[25] Svend Brinkmann, Michael Hviid Jacobsen, and Søren Kristiansen. 2014. Historical Overview of Qualitative Research in the Social Sciences. The Oxford Handbook of Qualitative Research. https://doi.org/10.1093/oxfordhb/9780199811755.013.017

[26] Leslie Allison Brown and Susan Strega. 2015. Research as resistance, 2e: Revisiting critical, indigenous, and anti-oppressive approaches. Canadian Scholars' Press. Retrieved February 18, 2024 from https://books.google.com/books?hl$=$en&lr$=$&id$=$4UNVCgAAQBAJ&oi$=$fnd&pg$=$PP1&dq$=$Research+as+Resistance&ots$=$WOxfRvcRmH&sig$=$fgFMEq_1GbOTulhNQI_PVk7kv60

[27] Sara Heitlinger City, Bryan-Kinns Nick, Janis Kay, and Jefferies Goldsmiths. 2013. Sustainable HCI for grassroots urban food-growing communities Sonic and Inclusive Tangibles for Children with Autism View project Mutual Engagement View project. dl.acm.org: 255–264. https://doi.org/10.1145/2541016.2541023

[28] Eric Corbett and Yanni Loukissas. 2019. Engaging Gentrification as a Social Justice Issue in HCI. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems, 1–16. https://doi.org/10.1145/3290605.3300510

[29] Jason Patrick De Leon and Jeffrey H. Cohen. 2005. Object and Walking Probes in Ethnographic Interviewing. Field Methods 17, 2: 200–204. https://doi.org/10.1177/1525822X05274733

[30] Norman K. Denzin. 1997. Interpretive ethnography: Ethnographic practices for the 21st century. Sage.

[31] Audrey Desjardins and Aubree Ball. 2018. Revealing Tensions in Autobiographical Design in HCI. In Proceedings of the 2018 Designing Interactive Systems Conference (DIS '18), 753–764. https://doi.org/10.1145/3196709.3196781

[32] Laura Devendorf, Kristina Andersen, and Aisling Kelliher. 2020. The Fundamental Uncertainties of Mothering: Finding Ways to Honor Endurance, Struggle, and Contradiction. ACM Transactions on Computer-Human Interaction 27, 4: 26:1-26:24. https://doi.org/10.1145/3397177

[33] Lynn Dombrowski, Ellie Harmon, and Sarah Fox. 2016. Social Justice-Oriented Interaction Design: Outlining Key Design Strategies and Commitments. In Proceedings of the 2016 ACM Conference on Designing Interactive Systems, 656–671. https://doi.org/10.1145/2901790.2901861

[34] Andrea Doucet. 2008. "From Her Side of the Gossamer Wall(s)": Reflexivity and Relational Knowing. Qualitative Sociology 31, 1: 73–87. https://doi.org/10.1007/s11133-007-9090-9

[35] Paul Dourish. 2001. Where the action is: the foundations of embodied interaction. MIT press.

[36] Paul Dourish. 2004. What we talk about when we talk about context. Personal and Ubiquitous Computing 8, 1: 19–30. https://doi.org/10.1007/s00779-003-0253-8

[37] Paul Dourish. 2006. Implications for design. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '06), 541–550. https://doi.org/10.1145/1124772.1124855

[38] Paul Dourish. 2007. Responsibilities and implications: further thoughts on ethnography and design. In Proceedings of the 2007 conference on Designing for User eXperiences, 2–16.

[39] Paul Dourish and Genevieve Bell. 2007. The infrastructure of experience and the experience of infrastructure: Meaning and structure in everyday encounters with space. Environment and Planning B: Planning and Design. https://doi.org/10.1068/b32035t

[40] Johanne Mose Entwistle, Mia Kruse Rasmussen, Nervo Verdezoto, Robert S. Brewer, and Mads Schaarup Andersen. 2015. Beyond the individual: The contextual wheel of practice as a research framework for sustainable HCI. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems, 1125–1134.

[41] Arturo Escobar. 2018. Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds. Duke University Press. Retrieved February 18, 2024 from https://books.google.com/books?hl$=$en&lr$=$&id$=$M0NRDwAAQBAJ&oi$=$fnd&pg$=$PT7&dq$=$Design+for+the+pluriverse&ots$=$NBD_5zFBmq&sig$=$J49rB1ZVaOuP7H9hF0dtIWeqYXA

[42] Didier Fassin. 2015. The public afterlife of ethnography. American Ethnologist 42, 4: 592–609. https://doi.org/10.1111/amet.12158

[43] Patricia Garcia and Marika Cifor. 2019. Expanding our reflexive toolbox: Collaborative possibilities for examining socio-technical systems using duoethnography. Proceedings of the ACM on Human-Computer Interaction 3, CSCW: 1–23.

[44] Patricia Garcia and Marika Cifor. 2019. Expanding Our Reflexive Toolbox: Collaborative Possibilities for Examining Socio-Technical Systems Using Duoethnography. Proceedings of the ACM on Human-Computer Interaction 3, CSCW: 190:1-190:23. https://doi.org/10.1145/3359292

[45] Rachael Garrett, Kristina Popova, Claudia Núñez-Pacheco, Thorhildur Asgeirsdottir, Airi Lampinen, and Kristina Höök. 2023. Felt Ethics: Cultivating Ethical Sensibility in Design Practice. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), 1–15. https://doi.org/10.1145/3544548.3580875

[46] Alice Goffman. 2015. On the Run: Fugitive Life in an American City. University of Chicago Press, Chicago, IL. Retrieved September 11, 2023 from https://press.uchicago.edu/ucp/books/book/chicago/O/bo18039324.html

[47] Donna Haraway. 1988. Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. Feminist Studies 14, 3: 575–599. https://doi.org/10.2307/3178066

[48] Christina Harrington, Sheena Erete, and Anne Marie Piper. 2019. Deconstructing community-based collaborative design: Towards more equitable participatory design engagements. Proceedings of the ACM on Human-Computer Interaction 3, CSCW: 1–25.

[49] Sara Heitlinger, Nick Bryan-Kinns, and Janis Jefferies. 2013. Sustainable HCI for grassroots urban food-growing communities. In Proceedings of the 25th Australian Computer-Human Interaction Conference: Augmentation, Application, Innovation, Collaboration, 255–264.

[50] Kristina Hook. 2018. Designing with the body: Somaesthetic interaction design. MIt Press.

[51] Noura Howell, Audrey Desjardins, and Sarah Fox. 2021. Cracks in the Success Narrative: Rethinking Failure in Design Research through a Retrospective Trioethnography. ACM Transactions on Computer-Human Interaction 28, 6: 1–31. https://doi.org/10.1145/3462447

[52] Valerie J. Janesick. 2016. Contemplative qualitative inquiry: Practicing the Zen of research. Routledge. Retrieved February 18, 2024 from https://books.google.com/books?hl$=$en&lr$=$&id$=$j22TDAAAQBAJ&oi$=$fnd&pg$=$PP1&dq$=$Contemplative+Qualitative+Inquiry&ots$=$ix5g8FL06e&sig$=$iVcDna6IG2QGNfuGyFfsDF5XJ8w

[53] Tejaswini Joshi, Jeffrey Bardzell, and Shaowen Bardzell. 2021. The Flaky Accretions of Infrastructure: Sociotechnical Systems, Citizenship, and the Water Supply. Proceedings of the ACM on Human-Computer Interaction 5, CSCW2: 1–27.

[54] Vera Khovanskaya, Phoebe Sengers, Melissa Mazmanian, and Charles Darrah. 2017. Reworking the Gaps between Design and Ethnography. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 5373–5385. https://doi.org/10.1145/3025453.3026051

[55] John Law. 2004. After method: Mess in social science research. Psychology Press. Retrieved February 18, 2024 from https://books.google.com/books?hl$=$en&lr$=$&id$=$E20X7N0nBfQC&oi$=$fnd&pg$=$PP11&dq$=$After+Methods:+Mess+in+Social+Science+Research&ots$=$su9IPE9LOm&sig$=$egiyq7xtacPuZLKtKT7lVuV3k00

[56] Wonjun Lee, Youn-kyung Lim, and Richard Shusterman. 2014. Practicing somaesthetics: exploring its impact on interactive product design ideation. In Proceedings of the 2014 conference on Designing interactive systems (DIS '14), 1055–1064. https://doi.org/10.1145/2598510.2598561

[57] Gayle Letherby, John Scott, and Malcolm Williams. 2012. Objectivity and Subjectivity in Social Research. SAGE.

[58] Anqi Liu. ENTANGLED SELF-REFERENTIALITY: HA JIN AND CONFESSIONAL ETHNOGRAPHY. University of Georgia.

[59] Szu Yu Liu, Shaowen Bardzell, and Jeffrey Bardzell. 2019. Symbiotic encounters: HCI and sustainable agriculture. In Conference on Human Factors in Computing Systems - Proceedings. https://doi.org/10.1145/3290605.3300547

[60] Szu-Yu (Cyn) Liu, Justin Cranshaw, and Asta Roseway. 2020. Making Air Quality Data Meaningful: Coupling Objective Measurement with Subjective Experience through Narration. In Proceedings of the 2020 ACM Designing Interactive Systems Conference. Association for Computing Machinery, New York, NY, USA, 1313–1326. Retrieved July 21, 2021 from https://doi.org/10.1145/3357236.3395517

[61] Phillip Lopate. 2013. To show and to tell: The craft of literary nonfiction. Simon and Schuster.

[62] Peter Lyle, Jaz Hee Jeong Choi, and Marcus Foth. 2014. Designing for grassroots food production: An event-based urban agriculture community. In Proceedings of the 26th Australian Computer-Human Interaction Conference, OzCHI 2014. https://doi.org/10.1145/2686612.2686666

[63] Peter Lyle, Jaz Hee Jeong Choi, and Marcus Foth. 2015. Growing food in the city: Design ideations for urban residential gardeners. In ACM International Conference Proceeding Series. https://doi.org/10.1145/2768545.2768549

[64] John Van Maanen. 2011. Tales of the Field: On Writing Ethnography, Second Edition. University of Chicago Press.

[65] Elizabeth Mamali. 2019. Researcher's guilt: Confessions from the darker side of ethnographic consumer research. Consumption Markets & Culture 22, 3: 241–255.

[66] John McCarthy and Peter Wright. 2004. Technology as experience. interactions 11, 5: 42–43.

[67] John McCarthy and Peter Wright. 2005. Putting 'felt-life' at the centre of human–computer interaction (HCI). Cognition, Technology & Work 7, 4: 262–271. https://doi.org/10.1007/s10111-005-0011-y

[68] H. Michael. 1980. Agar, The Professional Stranger: An Informal Introduction to Ethnography.

[69] Anne Michaels. 1997. Fugitive Pieces. Thorndike Press.

[70] Katja Mruck and Günter Mey. 2019. Grounded Theory Methodology and Self-Reflexivity in the Qualitative Research Process. In The SAGE Handbook of Current Developments in Grounded Theory. SAGE Publications Ltd, 1 Oliver's Yard, 55 City Road London EC1Y 1SP, 470–496. https://doi.org/10.4135/9781526485656.n25

[71] Juliet Norton, Birgit Penzenstadler, and Bill Tomlinson. 2019. Implications of grassroots sustainable agriculture community values on the design of information systems. Proceedings of the ACM on Human-Computer Interaction. https://doi.org/10.1145/3359136

[72] Charles Kay Ogden and Ivor Armstrong Richards. 1925. The Meaning of Meaning: A Study of the Influence of Language upon Thought and of the Science of Symbolism. Harcourt, Brace.

[73] Barbara L. Paterson. 1994. A Framework to Identify Reactivity in Qualitative Research. Western Journal of Nursing Research 16, 3: 301–316. https://doi.org/10.1177/019394599401600306

[74] Peter Pels and Oscar Salemink. 1994. Introduction: Five theses on ethnography as colonial practice. History and Anthropology 8, 1–4: 1–34. https://doi.org/10.1080/02757206.1994.9960856

[75] Sarah Pink, Kerstin Leder Mackley, Val Mitchell, Marcus Hanratty, Carolina Escobar-Tello, Tracy Bhamra, and Roxana Morosanu. 2013. Applying the lens of sensory ethnography to sustainable HCI. ACM Transactions on Computer-Human Interaction (TOCHI) 20, 4: 1–18.

[76] Andrea Ploder and Johanna Stadlbauer. 2016. Strong Reflexivity and Its Critics: Responses to Autoethnography in the German-Speaking Cultural and Social Sciences. Qualitative Inquiry 22, 9: 753–765. https://doi.org/10.1177/1077800416658067

[77] Robert Pool. 1991. Postmodern Ethnography? Critique of Anthropology 11, 4: 309–331. https://doi.org/10.1177/0308275X9101100402

[78] Heidi R. Biggs, Jeffrey Bardzell, and Shaowen Bardzell. 2021. Watching Myself Watching Birds. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, 1–16. https://doi.org/10.1145/3411764.3445329

[79] Amon Rapp. 2018. Autoethnography in Human-Computer Interaction: Theory and Practice. In New Directions in Third Wave Human-Computer Interaction: Volume 2 - Methodologies, Michael Filimowicz and Veronika Tzankova (eds.). Springer International Publishing, Cham, 25–42. https://doi.org/10.1007/978-3-319-73374-6_3

[80] Amon Rapp. 2018. Reflexive Ethnographies in Human-Computer Interaction: Theory and Practice. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18), 1–4. https://doi.org/10.1145/3170427.3170646

[81] Amon Rapp. 2021. In Search for Design Elements: A New Perspective for Employing Ethnography in Human-Computer Interaction Design Research. International Journal of Human–Computer Interaction 37, 8: 783–802. https://doi.org/10.1080/10447318.2020.1843296

[82] Jennifer A. Rode. 2011. A theoretical agenda for feminist HCI. Interacting with Computers 23, 5: 393–400.

[83] Jennifer A. Rode. 2011. Reflexivity in digital anthropology. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '11), 123–132. https://doi.org/10.1145/1978942.1978961

[84] Jean J. Schensul and Margaret D. LeCompte. 2012. Essential ethnographic methods: A mixed methods approach. Rowman Altamira.

[85] Richard Shusterman. 1999. Somaesthetics: A disciplinary proposal. The journal of aesthetics and art criticism 57, 3: 299–313.

[86] Jesper Simonsen and Toni Robertson. 2012. Routledge International Handbook of Participatory Design. Routledge.

[87] Rosemary Steup, Lynn Dombrowski, and Norman Makoto Su. 2019. Feeding the world with data: Visions of data-driven farming. In DIS 2019 - Proceedings of the 2019 ACM Designing Interactive Systems Conference. https://doi.org/10.1145/3322276.3322382

[88] Angelika Strohmayer, Mary Laing, and Rob Comber. 2017. Technologies and Social Justice Outcomes in Sex Work Charities: Fighting Stigma, Saving Lives. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 3352–3364. https://doi.org/10.1145/3025453.3025615

[89] Norman Makoto Su. 2020. Threats of the Rural: Writing and Designing with Affect. In HCI Outdoors: Theory, Design, Methods and Applications, D. Scott McCrickard, Michael Jones and Timothy L. Stelter (eds.). Springer International Publishing, Cham, 51–79. https://doi.org/10.1007/978-3-030-45289-6_3

[90] Terry Winograd and Fernando Flores. 1986. Understanding computers and cognition: A new foundation for design. Intellect Books.

[91] Peter Wright, Jayne Wallace, and John McCarthy. 2008. Aesthetics and experience-centered design. ACM Transactions on Computer-Human Interaction (TOCHI) 15, 4: 1–21.

[92] Dan Wulff, Sally St George, Sandy Harper-Jaques, and Lorne Jaques. 2012. Kitchen Stories: A Review. The Qualitative Report 17, 44: 1–10.

[93] Ethnography and human-computer interaction | The social and interactional dimensions of human-computer interfaces. Retrieved May 3, 2021 from https://dl.acm.org/doi/10.5555/214811.214814

[94] Salmer fra kjøkkenet (2003) - IMDb. Retrieved September 11, 2023 from https://www.imdb.com/title/tt0323872/

[95] Watch Kitchen Stories (English Subtitled) | Prime Video. Retrieved September 11, 2023 from https://www.amazon.com/Kitchen-Stories-English-Subtitled-Calmeyer/dp/B004GWURQA