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Navigating Boundaries: The Role of the Camera Operator in Shaping Space During Hatha Yoga Practice

Abstract: This article explores the role of the video camera operator during the recording of social events, with a specific focus on hatha yoga practice. Drawing from phenomenological and sociological theories, particularly the theory of spacing and synthesis and the concept of "finite provinces of meaning," the study investigates how the camera operator navigates the multiple "worlds" of yoga practice. Through self-reflection and visual ethnography, the article examines the operator's influence on the construction and perception of space, the emotional and cognitive challenges encountered, and the ethical considerations of balancing observation with participation. As a methodological tool, video recording not only captures social interactions but also actively shapes them. For this project, 822 minutes, or approximately 14 hours, of recordings were made. By analyzing both the technical and social dimensions of the camera operator's role, this study offers insights into how technology mediates social interactions and the construction of space in visual research.

Keywords: social interaction, video recording, embodied experience, hatha-yoga practice, visual methods, researcher reflexivity, phenomenology of space

Introduction

Hatha yoga, as a physical activity that emphasizes slow, deliberate movements, controlled breathing, and extended postures, presents a unique context for exploring the mind-body connection and bodily experience. Unlike conventional forms of exercise, hatha yoga integrates mindfulness and meditative focus, making it a rich field for studying the transformation of bodily experience into embodied knowledge (Parviainen, Aromaa 2017). This reflective process has been shown to reshape a person's perception of their self and the surrounding lifeworld (Allen-Collinson, Hockey 2001; 2005), and thus studying it yields valuable insights into how physical practice can serve as a tool for both mental and physical well-being.

My primary goal in this article is to describe and analyze the experience of being a camera operator and researcher. I particularly focus on the interaction between myself, the recording devices, and the observed situation. By reflecting on this experience, I aim to contribute to a broader understanding of the methodological implications of using video in social research and to offer insights for researchers undertaking visual analyses of recorded social situations (MacDougall 2006; Grimshaw 2001). I address the following research questions in the study:

1. How does the presence of the camera operator and the camera itself affect the behavior of participants during hatha yoga practice?
2. What are the emotions of the researcher, who is both a participant in the meeting and a camera operator (i.e., what are the feelings resulting from blending these roles during the study)?
3. How does the video camera participate in the construction of space and relationships during hatha yoga practice?

The analysis serves as a guide for practicing epoché, or the phenomenological suspension of biases, in field research. Epoché allows researchers to critically examine their own influence on the situations they study and to strive for greater objectivity in their conclusions (Merleau-Ponty 1962; Schutz 1982).

The role of the video camera operator during the recording of social events such as yoga practice is intricate and multifaceted. The operator not only assumes the technical responsibility for capturing footage but also becomes an active participant in the spatial and social dynamics of the event. This article forms part of a broader analysis conducted within the framework of a project that aims to comprehensively describe and reconstruct themes related to the experience of the body in hatha yoga practice. The project investigates various aspects of experience, including emotions, embodied learning, bodily movements (asanas), meditation, and the therapeutic potential of yoga. Central to this exploration is a phenomenological approach that delves into how yoga practitioners subjectively experience their practice, with particular attention to self-awareness and mindfulness (Merleau-Ponty 1962; Csordas 1990).

The use of video recordings became a crucial methodological tool in the project, revealing layers of interaction and experience that were not immediately noticeable through verbal reports or self-observations alone. By capturing the practice visually, the study allowed for the simultaneous observation of all the participants, their interactions with each other, and the broader environment (Pink 2007). This added a new dimension to understanding how yoga practice is experienced not just on an individual level but as a collective social phenomenon. The inclusion of visual data helped to highlight how the body, environment, and social interactions coalesce to form a holistic practice (MacDougall 1998).

Initially, video recording was introduced at a later stage of the study, becoming an essential element of the methodological approach. As the sole author and researcher, I began filming without fully anticipating the impact that recording devices would have on the observed environment. However, as the project progressed, it became evident that the presence of the camera—along with my own role as the operator—had become an additional element of influence within the practice, subtly affecting the interactions and behaviors of participants. Researchers thus need to consider how visual methodologies, including filming and photography, can alter the dynamics of the social reality they aim to capture (MacDougall 1998; Ruby 2000; Banks 2001). The impetus for this article arose from my own experiences and observations as a camera operator. My analysis here focuses on the intersection of the researcher's role and the use of video technology in the documentation of social practices; I examine how the process of recording influenced both my perception and the research environment itself. This examination is informed

by phenomenological theories of space and social interaction, particularly Martina Löw's theory of spacing and synthesis (2000) and Alfred Schutz's concept of "finite provinces of meaning" (Schutz 1982). These frameworks allow for an in-depth exploration of the camera operator's unique position, both as an observer and as an active participant in the construction of space.

Moreover, the broader methodological goals of the project, including the use of methodological triangulation (Denzin 2015; Carter et al. 2014; Noble & Heale 2019), underscored the importance of combining various research methods to gain a more comprehensive understanding of the bodily and social experiences involved in hatha yoga. Video recordings, in this context, offered a way to scrutinize participant behavior, interactions, and engagement with the environment in ways that might have been missed through more traditional observation methods (Pink 2011).

Theoretical Framework

Martina Löw's *Sociology of Space* (2000) provides a valuable theoretical lens for understanding how space is actively constructed and synthesized through social interactions. Löw introduces the concept of "spacing," which involves the arrangement and positioning of social elements within space, and of "synthesis," the process by which people and objects are perceived and integrated into a cohesive spatial experience. These processes are deeply intertwined with the role of the camera operator during the recording of events, as the act of filming itself contributes to the construction and redefinition of the space. The camera operator's decisions—what to include in or exclude from the frame—directly affect the spatial synthesis for both the participants and future viewers of the footage (Löw 2000: 155–160). This phenomenon highlights how technological mediation can shape not only the visual but also the social experience of space.

Alfred Schutz's concept of "finite provinces of meaning" (Schutz 1982) adds another layer to this analysis by explaining how different experiential worlds are structured by distinct boundaries and purposes. In the context of yoga practice, participants engage in a focused, introspective activity that constitutes a distinct "province of meaning," separate from everyday concerns and the external environment. As the camera operator, however, I was required to navigate between multiple provinces—balancing my awareness of the internal world of yoga practice, the external environment of the park, and the technical requirements of framing the scene. Schutz's framework is particularly useful for analyzing the dual role of the camera operator in observing and interacting with these different experiential worlds, as this role requires constant negotiation of boundaries (Schutz 1982: 230–235).

Considerations about space and the experience of space can also be found in the work of Victor Turner (1986). The concept of "liminality" (a term derived from "limen," meaning "threshold") appears in the context of theater, a state of "between" and "beyond." In rites of passage, it is a temporal zone where previous rules are suspended, which allows for the transformation of participants. Turner writes that it

> Is a no-man's-land betwixt and between the structural past and the structural future as anticipated by the society's normative control of biological development. It is ritualized in many ways, but very often symbols expressive of ambiguous identity are found cross culturally: androgynes, riomorphic figures, monstrous combinations of elements drawn from nature and culture, with some symbols such as caverns, representing both birth and death, womb and tomb (Turner 1986: 41).

Since the practice of yoga can be characterized by a certain ritualism, concentration and tranquility must be maintained during the practice, and a specific kind of separation of the practitioners' space from the space beyond, the environment of everyday life, can be perceived.

Sarah Pink's (2007) work on sensory ethnography, particularly her exploration of video technology in ethnographic research, is also relevant to understanding the role of the camera operator. Pink argues that video use introduces a unique sensory experience for the researcher, as the camera becomes an extension of the observer's body and sensory field (Pink 2007: 96–100). In filming the yoga practice, I experienced this extension of my sensory awareness through the camera lens, where I had to balance my role as both an observer and an active shaper of the visual narrative. Pink's discussion of how technology influences social interactions and the behavior of participants is central to understanding how the camera's presence can alter the dynamics of the recorded event (Pink 2007: 110–115).

Other scholars have also examined the impact of recording on social events, offering further theoretical insights into the interaction between the observer, participants, and technology. Anna Grimshaw (2001) explores the role of the camera in anthropological fieldwork, emphasizing how the act of recording transforms both the observer's engagement and the behavior of the participants. She notes that the camera creates a distinct "field of vision" that influences not only what is seen but also how social relations and spatial dynamics are experienced (Grimshaw 2001: 56–60). Grimshaw's observations resonate with my own experience as a camera operator, where the framing of the yoga session mediated my perception of the space and my interaction with the participants.

Similarly, Karl G. Heider (1995) discusses the ethical and practical implications of using video technology in ethnographic research. His work highlights the responsibility of the camera operator in mediating the boundaries between observer and participant. The author emphasizes that the presence of the camera inevitably shapes the behavior of those being filmed, and this fact must be carefully considered in both the recording process and the subsequent analysis of the footage (Heider 1995: 110–113). Heider's views align with my own reflections on how the participants in the yoga session became more self-conscious and occasionally adjusted their actions in response to the presence of the camera. They thus demonstrated the influence of video technology on the social environment.

Finally, Banks (2001) provides a comprehensive overview of visual methods in social research, including the role of the camera in capturing and constructing social reality. Banks underscores the importance of recognizing the camera's influence on the research setting, noting that the act of recording is not neutral but actively shapes the space, interactions, and events being observed (Banks 2001: 87–90). Thus, as a camera operator, I was not simply documenting the yoga practice but also playing a significant role in shaping how the space and interactions were experienced and constructed.

Methodology

In this study, video recording played a supplementary yet vital role, enriching the empirical materials with unique visual data that complemented other methods, such as participant observation and self-reports. The video materials provided insights that were difficult to capture through verbal descriptions alone, offering a rich context that included non-verbal communication, interactions, and environmental influences. As Kress and van Leeuwen (2006) and Rose (2007) have noted, interpreting visual data requires significant time and interpretive skills, as images carry layers of meaning and emotion that are not easily reduced to words.

During the project, we collected audio and textual materials through targeted, free-form interviews with students and teachers practicing hatha yoga, self-observation reports, and recordings of class observations in yoga schools. Additionally, we captured video recordings: 465.5 minutes (approximately 8 hours) in 2021 and 357 minutes (approximately 6 hours) in 2022, totaling 822 minutes (approximately 14 hours). The video recordings served as a complementary component of the project, enriching the empirical data already collected, including interviews, observations, self-observations, and contemplative and theoretical notes.

The video documentation of the yoga practice was conducted during the second year of the project, in various phases: May–June 2021 (practice with students in a park), July 2021 (sessions during a research trip), and April–June 2022. All the participants provided their written consent for being recorded and photographed, the subsequent analysis, and the publication of their images.

The research participants were hatha yoga practitioners who volunteered for the study. They were mainly from Lodz, Poland (12 practitioners). Some of them also practiced in hatha yoga schools. The majority of the participants were women and beginners. All the participants had at least a bachelor's degree and could be considered to belong to the middle class.

The other group involved in the study consisted of international students from the Erasmus program at the University of Lodz (67 students, the summer semester of 2021 and the summer semester of 2022). Participation in the study had no impact on the students' grades. Informed consent was obtained from all the participants in the project.

Initially, the project aimed to involve external volunteers; however, the project supervisor, who was teaching classes related to phenomenology and contemplative studies, suggested to interested students that they participate in yoga practice. These sessions were held outside of regular university hours. Due to the Covid-19 pandemic, the yoga practice initially took place remotely, through communication platforms such as Skype, Teams, or Zoom. However, with the lifting of pandemic restrictions and the students' clearly expressed need to practice "in person" and move out of the buildings in which we had been confined for so long, we decided to hold sessions in one of the parks near the university and dormitory. Practicing yoga outdoors in the park had the added benefit of enhancing the experience with natural stimuli such as the sounds of nature, grounding, and the physical sensation of grass and earth. The participants themselves pointed out the positive aspects of practicing yoga outdoors in nature. They felt a sense of integration with the natural environment.

During the collective discussion of the yoga practice, which involved showing the participants recordings of the sessions, those who watched the videos noted down their observations. In the statements quoted below, the theme of unity with nature and a sense of harmonious coexistence with the surroundings emerges. The participants emphasized that practicing yoga in the park, beyond the confines of the university or dormitory, allowed them to fully experience natural stimuli such as the singing of birds or the feel of grass. Their comments also highlighted the enthusiasm they felt on returning to in-person contact and yoga practice after the period of pandemic restrictions. Live interactions and the sense of energy flow (especially during partner exercises) fostered a positive emotional well-being:

It was quite nice to realize then that when we do the yoga classes we mingle with nature; we become one. I was just watching the video and I see how we were like a decoration in all this world. (…) It was nice that after all this coronavirus stuff we could teach other. I was able to feel my partner's energy and I think that our energies were kind of the same. I felt nice and at ease (OI, auto-observation, June 15, 2021).

I think it is a video where we can see the energy transfer of our souls, which are integrated with nature, gathered in one body. An example of meditation by integrating in pairs. Then I see that this is an action that you can continue whenever you feel comfortable. Everyone was smiling. It was clear that they enjoyed their work (SO, auto-observation, June 15, 2021).

In the case of the external volunteer group, the yoga practice was conducted in Polish. For the Erasmus students, it was conducted in English. Language differences did not noticeably affect the practice itself. The only noticeable impact occurred during the auto-descriptions of the students, as they sometimes reported difficulties in finding the right words in English to describe bodily sensations and emotions. However, this issue also occurred with the Polish volunteers writing in their native language. These difficulties arose from a lack of prior experience in analyzing and expressing bodily sensations. As the sessions progressed and the students continued writing auto-observations, their ability to express these sensations improved. The age and gender of the practitioners were not significant variables in the study.

Photo 1

The venue of the practice and the camcorder recording the meeting

Photo by Aleksandra Płaczek 2021

Photo 2

Framing

Photo by Aleksandra Płaczek 2021

The analysis of the recorded video materials was conducted in accord with grounded theory principles (Glaser 2017; Konecki 2000), which allowed for a systematic exploration of the data without the use of predefined hypotheses. Data collection continued until theoretical saturation was achieved, that is, new insights ceased to emerge and previously identified categories began to repeat. This iterative process involved substantive coding, where open coding was used to assign meaning to the empirical material, followed by selective coding to focus on key categories. Theoretical coding was then employed to develop more profound conclusions, examining correlations, contexts, and the consequences of the studied phenomena. Video materials significantly contributed to this process, revealing new categories and reinforcing existing ones from other data sources.

Photographs and films obtained during the study were shared with the participants, following a collaborative approach akin to photo-elicitation methods. These visual materials enabled the participants to present their perspectives on the research, providing additional context and interpretations. Group sessions were organized where the recorded videos were viewed by the participants and their peers, who independently analyzed the footage and offered feedback. This approach is consistent with Pink's (2001) assertion that the targeted use of audiovisual materials can deepen the understanding of research phenomena and can foster learning and reflective engagement.

The students made observations regarding their own posture and positioning—specifically, whether they were executing the poses correctly or incorrectly. Viewing the visual materials enabled them to see themselves from a third-person perspective akin to that of an instructor. This allowed them to draw conclusions about the mistakes they had made and increased their awareness of their errors. The participation of the research subjects in analyzing the collected materials was a valuable supplement to the research techniques and methods applied and led to new insights or the reformulation of existing ones. As mentioned above, the practitioners involved in our study actively participated in the video analysis process.[1]

The respondents could be categorized into two groups based on their level of participation in the practice: those who appeared in the video recordings and those who did not. The respondents from these groups exhibited significant differences in their points of focus while watching the videos, as well as in the emotions they experienced during the viewing process.

The behavior of the first group, which consisted of participants in the recorded yoga practice, can be categorized into several types:

1. Nostalgic Type—reflects on the experience of the practice, focusing on recalling personal memories and sensations of the body and mind during the session;
2. Self-Aware Type—
   2.1. Self-Critical Type—concentrates on self-observation in the video, critiquing their own posture and execution of the exercises, and often comparing themself with other participants;

[1] In addition to the students, a regular participant in the research project was also involved in the analysis of the video material. During a single, several-hour session, this participant reviewed the video materials and the conclusions drawn regarding their behavior. This analytical session allowed their commentary to be obtained and, at the same time, clarified some of the researchers' assumptions about the observed behavior of the participant.

2.2. Analytical Type—focuses on self-observation but aims to draw conclusions that can be applied in future practice. For them, the recording serves an educational function;
3. Objectivizing Type—assumes the role of an external observer, describing only what is seen in the recording without expressing emotions. Their descriptions do not focus on themselves.

The second group, composed of students who did not participate in the recorded yoga practice, can be categorized as follows:

1. Nostalgic Type—imagines the practice situation and mentally transports themselves into the observed scenario;
2. Empathetic Type—describes the progress of the practitioners and expresses feelings of pride and admiration;
3. Noticing Type—this analytical, external observer does not describe their own emotions but instead focuses on the relationships and patterns observed in the video footage.

The reflections of the practice participants while watching the video recordings enriched the material related to bodily and mental sensations during the hatha yoga practice. Additionally, these reflections contributed valuable data on the transfer of knowledge and practice within the group—highlighting the collective nature of the practice and the shared experience of practice and emotional energy (Collins 2011).

In addition to video recordings, the research project also employed self-observation and participant observation. Self-observation allowed the participants to document their immediate physical and emotional sensations after each yoga session. This contemplative technique, while offering authentic insights, posed challenges in terms of variability in content and form, as the participants' accounts were influenced by their subjective experiences (Ellis & Bochner 2000; Ronai 1995). These self-reports were invaluable in capturing the lived experience of yoga practice from the perspective of the participants, providing a direct link to their bodily and emotional states during the sessions. Participant observation, meanwhile, offered a deeper understanding of the social and environmental dynamics of the yoga practice. As Spradley (1980) and Bernard (2018) argue, this method allows the researcher to engage directly with the group being studied and to observe behaviors, values, and interactions in their natural setting. However, it also posed challenges, such as the risk of researcher bias and the extensive time commitment required. As Babbie (2004) and Konecki (2000) emphasize, scientific observation requires deliberate awareness and reflection to avoid the errors inherent in casual observation.

Throughout the study, I wrote contemplative notes. These notes facilitated my reflection on my experiences and emotions, and helped me to interpret and contextualize the observations and video analysis within the broader research framework. The notes also provided insights into the relationships between the researchers and participants and the dynamics of hierarchy and collaboration within the research team (Konecki 2021). This reflexive practice was crucial for maintaining my objectivity while acknowledging the researcher's influence on the research process.

Virginia Braun and Victoria Clarke (2022) point to two orientations in research practice: "small q" (a post-positivist approach), in which the researcher strives to minimize their influence on the research process and seeks relative objectivity, and "Big Q"

(a fully qualitative approach), where embracing and valuing the researcher's subjectivity in shaping conclusions becomes the cornerstone of qualitative research practices. In this latter approach, the researcher consciously enters the field of study, fully aware that their presence, views, and social context affect both interpretation of the data and the data itself. Rather than concealing this phenomenon, the researcher describes and analyzes it. Braun and Clarke emphasize the importance of keeping a reflexive journal or disclosing one's perspective (which I aim to achieve through this article). These actions strengthen the credibility of analyses and help clarify the limitations arising from the researcher's position. Braun and Clarke also underscore the ethical dimension of this stance: recognizing power relations and potential biases allows for a more responsible treatment of research participants and a more accurate representation of their voices (Braun, Clarke 2022).

The combination of video recordings, participant observation, and self-reports provided a comprehensive understanding of the embodied experience of hatha yoga. Video materials in particular enriched the study by offering a visual dimension that supported and extended the findings derived from other methods and ultimately contributed to a more holistic analysis of the physical, emotional, and social aspects of yoga practice.

The Camera Operator as a Mediator Between Worlds

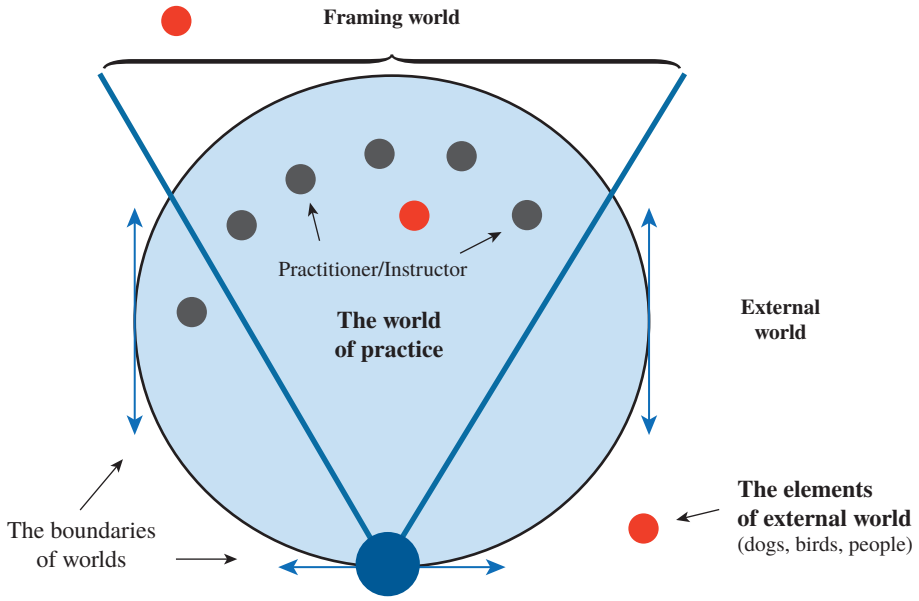
As a participant in the situation, the role of the video camera operator was multifaceted. During the video recording of the yoga practice, I encountered a blend of roles resulting from existing at the boundary of two worlds—the "finite province of meaning" or the *world of practice* (1) (Schutz 1982; Whitaker 1980; Sebald 2011) and the external world, including the space surrounding the practitioners. Additionally, as a camera/video operator, I was also responsible for a third world—*the framing world* (2), which primarily consisted of the practice world but also encompassed elements of *the external world* (3) (passersby, distant parts of the park, sounds of animals such as dogs or birds) (Figure 1).

The framing world created by the camera encompassed both the practice and elements of the surrounding environment. The boundary between these worlds was constantly shifting as I adjusted the camera to capture the most relevant elements and expanded or narrowed the visual scope depending on what was happening within the yoga practice.

In this sense, the act of filming gave rise to a liminal space (Turner 1986), an in-between zone where the camera operator and the practitioners moved between the focused context of the yoga session and the broader environment of the park. In liminal states, according to Victor Turner, boundaries are blurred and participants experience a temporary suspension of ordinary social norms. This phenomenon was evident in how I positioned and repositioned myself and the camera. The constant negotiation of boundaries created a state of flux, which blended the roles of observer, participant, and environment. In this way, I became an active participant in shaping the space of the practice. As Löw (2000) suggests, space is not static; it is constructed through the actions and interactions of people and objects within it. By setting up the camera, guiding the positioning of participants, and continually adjusting my location and the camera's frame, I influenced how the space was experienced by both the practitioners and any potential viewers of the video. This highlights

Figure 1

The worlds of recorded practice



Source: Made by the author on the basis of an analysis of the materials collected.

the dynamic nature of space, where boundaries are fluid and constantly renegotiated based on interactions, movement, and the presence of external elements.

The Shaping and Synthesis of Space in Yoga Practice

As the camera operator, my actions—that is, setting up equipment, positioning participants, and adjusting the frame—directly impacted how the participants and I experienced space. This sense of control over space was further reinforced by the participants, as they continually redefined boundaries by shifting positions, engaging in exercises, or arriving late to the session.

The concept of synthesis is particularly relevant to understanding how the participants experienced space during the practice. Synthesis involves the integration of social elements into a unified spatial experience (Löw, 2000: 165). Such a synthesis was evident in the participants' descriptions of energy flow and unity, particularly during paired exercises. However, my own experience as the camera operator was marked by a sense of detachment and distance. While the participants were immersed in the practice, I was focused on managing the technical aspects of the recording. As Pink (2007) notes, the camera creates a distinct sensory experience for the operator, acting as an extension of their body while simultaneously reinforcing a separation between the observer and the observed.

This duality of involvement and detachment was a constant theme throughout the recording process. While I felt connected to the event through my role as a recorder, I was also isolated by the demands of handling the camera. This distance shaped my emotional and cognitive engagement with the practice. It influenced how I perceived the unfolding events and how I navigated my role as both a participant and an outsider.

At times, the presence of the camera made me feel out of place, especially when interacting with the group. As I reflected in a contemplative note:

> When all the students and the professor came, I felt kind of weird. I was wondering if the students had been previously informed about the recording, because I had the impression they were a bit surprised and confused.[2] I was uncomfortable facing them with the camcorder. I had the feeling that they were constantly glancing at me, checking where (at whom) the lens was pointing. The professor asked me to come closer to them. I did it right away because I didn't want to look like someone who distances themself (a passage from a contemplative note).

This quote reflects the tension I experienced when I was physically present in the session and yet felt emotionally and socially distanced. My task as a recorder placed me outside the group dynamic, even as I worked within the same space. The feeling of discomfort when participants subtly reacted to the camera heightened my sense of being an outsider, while their occasional glances reinforced the idea that my presence was a disruption to the natural flow of the session. This interaction between my role and the participants' awareness of being recorded shaped the spatial dynamics and social atmosphere of the practice.

Emotional and Cognitive Dimensions of the Camera Operator's Role

Throughout the recording process, my emotional and cognitive experiences were shaped by the technical challenges of operating the camera and the social dynamics of the yoga practice. I frequently experienced stress and anxiety, particularly during the early stages of recording, where my concerns about equipment malfunction, weather conditions, and the logistics of setting up the camera heightened my sense of responsibility. As the camera operator, I was very aware that I had to ensure the quality of the recording while also maintaining the flow of the session. This responsibility extended to the safety and well-being of the participants, especially in instances where external elements, such as passersby or animals, interacted with the practice space.

The feelings I had of alienation and discomfort were also central to my experience. Yoga, with its focus on mindfulness and bodily awareness, creates an intimate atmosphere that can heighten the sense of being an outsider. The physical and technical separation created by the camera amplified this sense of isolation, as I was constantly aware of my role as an observer rather than a participant. When the participants glanced at the camera, as they did occasionally, it made me acutely aware of my own presence and reinforced my feeling of detachment.

This emotional and cognitive complexity was further intensified by unexpected events during the recording. For example:

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[2] The students were asked in advance by the project supervisor about the possibility of recording them. The participants consented to both the recording and the subsequent use of the images during analysis and publication. However, their gestures and facial expressions made me concerned about whether they had fully understood the situation.

During the practice, there were two events that directly affected, to some extent, its course and the participants' behavior. The first was the appearance of a dog within our space. It ran toward each and every participant (including me) and sniffed us. All the participants detached themselves from the practice and commented on its presence, laughed, and stroked it. On the one hand, I participated in this situation in the same way they did—I smiled, I laughed. On the other hand, I felt like a reporter who has to record an unexpected event that affects a movie. So I took a close-up to show the practitioners' reactions. I felt tension and pressure. I wanted not to miss anything, for everything to be visible (a passage from a contemplative note).

This quote illustrates a moment when the practice was disrupted from outside the space. While the dog's presence momentarily broke the flow of the session, it also presented a challenge for me as the recorder. I felt a dual responsibility: to capture the spontaneous event and to ensure that nothing significant was missed. This tension between participating in the moment and fulfilling my role as an observer revealed the complexity of my role, highlighting the emotional and technical demands of managing the camera during such events.

During the collective viewing and discussion of the park-practice video recordings, the students also noted the potential discomfort arising from the overlap of the outdoor environment and the practice space. One participant wrote that "(…) there can be a feeling that someone is watching," a sense of being observed both by the camera and by elements of the surroundings:

Unfortunately, I was not in the practice that day. But it seems to me that some discomfort is still present. The guys are doing yoga in an open space, people can walk around, the camera is filming, there might be a feeling that someone is watching (AP, auto-observation, June 15, 2021).

Navigating Unexpected Situations

One of the most significant challenges I faced during the recording was managing disruptions from the external environment. Two notable incidents occurred: the appearance of a dog, which briefly interrupted the session, and disruptive comments from passersby during a meditation exercise. These events highlighted the camera operator's role as a mediator between the yoga-structured space of the hatha yoga practice and the external world's unpredictability. In the case of the dog, I had to balance my role as an observer with my responsibility to capture the unfolding event. My immediate reaction was to adjust the camera's frame to include the dog and the practitioners' reactions while ensuring that the practice could continue uninterrupted. This situation blurred the boundaries between the practice and the external environment, illustrating how the operator becomes an active participant in shaping the experience.

The second incident, involving comments from passersby, presented a more significant emotional challenge. As I documented in my notes:

The second situation happened during a meditation in motion. Then, shortly after the meditation had begun, some men, about 30 years old, passed through the clearing. I didn't see them at first; I just heard them. They were shouting comments to the meditators, claiming that they were coming into contact with space, with aliens, and that they were aliens themselves. That was what I heard. Later they kept commenting, but I don't remember what exactly they said. When I heard their shouting, I got scared. I immediately looked at the trainer and the practitioners. I was expecting some kind of eye contact to [make me] feel safer, to feel more secure in that situation. Hubert was the only one who looked at me, and we exchanged glances. This calmed me down a bit, because I saw that I was not the only one aware of the situation (a passage from a contemplative note).

This passage reveals the heightened sense of responsibility I felt as the only person not fully engaged in the practice. While the participants were focused on their meditation, I remained vigilant, aware of the external threat posed by the passersby. The exchange of glances with one of the participants provided some reassurance, but I still felt an acute responsibility for both the safety of the group and the continuation of the recording. This situation underscores the dual role of the camera operator, not only as a documenter of the event but also as a guardian of the space, responsible for navigating potential disruptions from the outside world.

The Influence of the Camera and Camera Operator on the Practitioners

The camera is a fundamental tool used for recording video footage and analyzing visual materials. In our research project, the camera was used in two different ways. The first method involved setting up the camera in a fixed position and leaving it unattended in front of practitioners during a hatha yoga session. The second method required the researcher to operate the camera throughout the entire session. As the person recording the session, I actively adjusted the camera settings during the recording process to ensure that all the participants were within the frame or that those engaged in interactions were adequately captured. As the camera operator, I was positioned opposite the practitioners, and thus I was within the field of vision of all participants, especially the students. The instructor, for most of the sessions, was positioned to the side in relation to both the camera and the researcher.

During the analysis of the visual materials, no instances were observed where the participants interacted with or looked directly at the camera when it was left unattended. However, when the camera was operated manually, the participants notably reacted, including through glances toward the camera, changes in facial expression, adjustments of body posture, verbal reactions, and even greetings. I made regular frame adjustments, primarily zooming in and out, as well as slow camera movements to capture all the participants.[3]

Operation of the camera produced specific sounds, such as clicks, which may have drawn the attention of the practitioners. Another factor contributing to their increased awareness was the close proximity of the participants to the camera operator—only a few meters of separation. Thus the participants easily noticed changes in the direction of the camera and recognized when the lens was focused on them.

On multiple occasions, when the frame was narrowed, those participants who found themselves within it altered their behavior after glancing at the camera. One such instance can be illustrated by a sequence of frames from the recording (photos 3, 4, and 5).

Initially, a female participant was looking in the opposite direction from the camera; she was focused on a fellow practitioner next to her during an exercise. Her facial expression suggested a slight smile. However, when the frame was zoomed in, and the lens focused on her and two other practitioners, she looked directly at the camera. After this moment, the

[3] In analyzing the material and coding the frames, I noticed a certain tendency in the recording—the camera followed the instructor. It was he who, by his presence in a given place, determined the direction of the recording and thus made the practice visible—the practice was where the instructor was; that was the main scene. Thus, he was the actor playing the primary role, while the participants were in the background (including in terms of their positioning in relation to the camera).

Table 1

Interactions Between the Camera, Camera Operator, Practitioners, and Instructor

1a. Camera	**1b. Camera and camera operator***			
No interactions between the practice participants and the camera were observed in the recorded videos (no eye contact with the lens).	Changes in frame settings	Narrowing the frame	When the frame is directed toward a group of participants or an individual participant, the people captured in the frame tend to look toward the camera or the person recording. A change in expression occurs on the face of the recorded person—the corners of their mouth lower, and their behavior shifts—they avert their gaze or adjust their body position.	
		Widening the frame	The participants stop observing the camera and instead look at the instructor or other focal points in front of them.	
		Moving the camera (shifting the frame to the left or to the right)	The practitioners observe the camera's position and follow the moving lens with their gaze.	
		No camera movements	No interaction with the camera/no eye contact.	
	Interactions between the camera operator and the participants	Interactions with participants	Intervention by the practitioner	Once verbal contact is made with one of the practitioners, attention is drawn to the other participants in the meeting. In addition to eye contact, a smile appears.
			Intervention of the instructor	After the practitioners make eye contact with the person recording the meeting and after verbal or non-verbal communication, the practitioners' attention is drawn—they direct their gaze toward the recorder
			No intervention	Observable changes in the behavior of the participants occur when the camera settings are changed.

Source: Own elaboration based on a visual analysis of yoga-practice videos.

All the recordings were analyzed. Interactions involving the recorder and participants were observed in recordings on May 26, 2021 (recording I: 0:50–1:00, 2:15–2:24, 2:37, 3:30), June 2, 2021 (recording I: 3:16, 12:06, 17:43, recording III: 3:08, 4:13), June 9, 2021 (recording I: 4:14; recording II: 6:45, 7:11; recording III: 10:10), and June 16, 2021 (recording I: 7:00).

Photo 3, 4, 5

The meeting of the participant's eyes with the camera lens

Source: Frames from a recording on May 26, 2021 (recording I: 0:50–1:00).

corners of her mouth dropped, and her facial expression changed noticeably. After a few seconds, I, as the camera operator, decided to stop filming her, widened the frame, and shifted the camera to focus on other participants.

This situation was recorded in a contemplative note that I wrote immediately after the session:

> At one point, I zoomed in on a female participant. The frame included her and a few neighboring individuals. After narrowing the frame, I noticed that the participants exchanged glances, which prompted me to keep the shot on them, as I found it intriguing for later analysis. At one moment, the girl observed by the camera (and by me) looked directly into the lens. Seeing her gaze in the camera preview felt as if she was looking straight into my eyes. The corners of her mouth lowered, and her expression became somber, almost as if she were upset. I felt uncomfortable, as though I had invaded her intimate space. I became embarrassed. I then widened the frame and shifted the camera away to film other participants, signaling to the girl that I was no longer recording her, that she was no longer in the center of the shot (a passage from a contemplative note).

The moment of eye contact with the participant in the frame increased our tension and discomfort. I experienced feelings of embarrassment and unease. I sensed that I had crossed an invisible boundary between myself and the participant despite the physical distance of several meters.

In other situations, widening the frame or moving the camera away typically led practitioners to stop looking at the camera or the operator and instead to refocus on the instructor, fellow participants, or their surroundings. Conversely, when the camera remained stationary and untouched, the participants did not establish eye contact with either the lens or the operator.

During the recording of the yoga sessions, there were several instances where the participants and I exchanged glances and occasional smiles. However, all nonverbal communication during the session itself was limited to interactions between two individuals—the instructor and one particular practitioner (the only participant with whom I was acquainted before the recording sessions). One example of eye contact with the participants involved this acquaintance. While the instructor was explaining the next exercise, the man looked in my direction and waved. His action caught the attention of the other participants, who also turned to look at me. Some of them smiled. I probably smiled back at that moment as well. However, I perceived the incident as a disruption of the established situational and interactional order.

This order was based on the assumption that I, as a researcher recording the practice, remained external to it, maintaining an invisible boundary between myself and the practitioners. The wave from my acquaintance disrupted this interactional order and challenged the definition of the situation as a research setting, where the researcher or camera operator functions as an external observer.

In the following observations, which the participants wrote during a group viewing of the recordings in the park, we can clearly see people's range of emotional reactions to watching themselves during the practice. Their observations reveal elements of self-criticism and discomfort:

> Seeing myself now on film makes me cringe, and I question every move. Why did I do that? Why was my hair like that? Why couldn't I just stay still in the second pose, etc.? I don't like myself so much in this moment after seeing the video (BEA, auto-observation, June 15, 2021)

> I'm a bit embarrassed to see myself in videos and photos because I always want to do more, but sometimes I fail. At the same time, it was funny; it's a good memory. I felt that I was comfortable in that situation (ES, auto-observation, June 15, 2021).

The students' comments indicate a tendency to analyze their own appearance, movements, or the correctness of their poses. These observations suggest that coming face-to-face with one's recorded image—and thus the very act of being filmed—can spark an internal drive for perfectionism and lead to feelings of shame or embarrassment. On the other hand, some participants point to the motivational and nostalgic aspect of watching the recordings, as well as of looking at the photos the instructor took during the exercises:

> The pictures our teacher took when we succeeded were an indication that we did a good job. In this way, I was more encouraged and I was trying to do better. Even seeing the video made me feel like I was right there. Because it was very soothing (MK, auto-observation, June 15, 2021).

> Again, the teacher started the video, but in fast motion; in this video I felt nostalgic because I would have liked to be there, but at the same time, I felt happy to see my classmates concentrating in the park; they were happy and if they are happy, I am happy too (PDM, auto-observation, June 15, 2021).

Confronting one's own image while watching recordings of a hatha yoga practice can elicit multifaceted reactions ranging from self-critical thoughts and a desire for improvement, to satisfaction and appreciation for the effort put into the practice. Recording the yoga sessions, taking photos of the practitioners, and later reviewing these materials can foster increased self-awareness and mindful work on oneself, including self-acceptance in the process of both physical and emotional development (in the context of hatha yoga practice as well).

Conclusions

The role of the video camera operator in recording social events such as yoga practice is complex and multifaceted, involving both technical and social dimensions. Throughout the process, I navigated between multiple "worlds"—the focused realm of the yoga practice, the external environment, and the mediated framing world of the camera. This required my constant renegotiation of my boundaries and responsibilities, which influenced the participants' experiences and my own emotional and cognitive responses as an observer.

As Sarah Pink (2007) notes, the camera acts as an extension of the body, heightening the observer's sensory awareness and creating a measure of distance. MacDougall (1998) similarly emphasizes that the camera mediates sensory engagement, fostering a duality in which the operator is both immersed in and detached from the filmed event. In this sense, filming shapes spatial dynamics, influencing how space is conceived. Martina Löw's (2000) theory explains space as continuously constructed through social interactions and the positioning of people and objects. Anna Grimshaw (2001) shows that filming can reconfigure these spatial boundaries by steering people's attention in response to technical and social cues. Grimshaw emphasizes the role of the camera operator as a mediator, and this view is consistent with research highlighting how video technology actively shapes both the research setting and the experiences of the participants. The presence of camera and photographic equipment is also seen in other studies as an external factor that can create physical and psychological distance; it can alter the behavior and sense of space of the participants and affect how people perceive themselves and their environment.

Further, Alfred Schutz's (1982) concept of "finite provinces of meaning" illuminates how camera operators navigate distinct experiential worlds, such as the one of yoga practice versus the broader environment. Victor Turner (1986) describes a similar liminal space in rituals and performances, where observer and participant roles begin to overlap. Cristina Grasseni (2011) likewise argues that a camera shapes social interactions rather than merely documenting them. Additionally, Karl Heider (1995) stresses the ethical obligation to protect participants from discomfort, noting how unanticipated events necessitate balancing technical precision with the well-being of the participants (e.g., in our case, a dog that ran through the space or bystanders who made comments).

The present study reveals that in a hatha yoga setting the camera operator's navigation between multiple "worlds"—the focused space of the yoga practice, the external environment, and the framing world of the camera—requires a continual renegotiation of boundaries. This influences the experience of the participants and the emotional and cognitive responses of the operator. Self-observation and visual data analysis identify how ambiguities in these boundaries can lead the operator to feel responsibility—and even guilt or discomfort—in regard to how the participants behave in front of the camera.

During my study of hatha yoga practice sessions, I used a camera in two different configurations—a stationary, unattended setup, and active operation—and observed that the filming method had a significant impact on the behaviors and feelings of the participants. When the camera was placed in a fixed position, and I did not intervene in the framing, the participants made no eye contact and showed no concern about being recorded. The situation changed markedly when I operated the camera in real time, adjusting the frame and pointing the lens toward selected individuals. I recorded numerous instances in which changes in the camera settings, particularly narrowing the frame or shifting the lens, triggered noticeable reactions among the participants. Some altered their facial expression, stopped smiling, or froze in a less natural posture, as though suddenly taken out of the flow of their exercise. There were also cases where participants, realizing that the camera was focused on them, avoided eye contact or seemed to "adapt" to my presence behind the camera. During a few hatha yoga sessions, direct eye contact occurred between me and the person practicing, and this caused discomfort for both sides due to a sense of an invisible boundary having been crossed. There are no clear guidelines for when and how to observe someone in an intimate setting such as yoga practice.

Analysis of the footage and my reflective notes also revealed the influence of the personal relationships between me and the participants. In one case, an individual I knew before the project waved at me during the session, which immediately drew the attention of the other practitioners. Their smiles and glances in my direction made me feel that the customary boundary between "researcher" and "subject" had been breached, and a more social tone had been lent to the situation. Such events led me to reflect on how much I can and should maintain the stance of an "invisible" observer in the research process and to what extent I am a natural part of the group.

Another key aspect involved the experiences of the participants when viewing the recordings at a later time. On the one hand, the participants made critical assessments of their own appearance, their movements, and the correctness of their poses; these assessments were sometimes accompanied by discomfort or even embarrassment. For some

participants, confronting their recorded image triggered a drive toward perfectionism—they tried to figure out why their posture looked different from what they had imagined and why they had not done "better." On the other hand, some participants viewed the recordings as a source of motivation, seeing them as a confirmation of their own progress. The footage served as a keepsake, evoking memories and strengthening their sense of belonging to others.

Observing these multifaceted phenomena, I concluded that both the camera operator's physical presence and the sounds of the camera in action (e.g., the noise of focus adjustments or zooming) significantly shaped how the yoga practitioners experienced their surroundings. Thus, the researcher needs to be careful when using camera technology in field research because it not only has value for documentation but also has a dynamic influence on the course of exercises and the relationships among participants.

Ultimately, despite evident interactions and behavioral modifications linked to the camera and its operator, the collected film material still reflects the natural character of the yoga practice to a large extent. By actively operating the camera, I captured both the group's overall dynamics and subtle changes in the participants' postures and facial expressions. From a research perspective, this proved especially valuable in analyzing nonverbal communication patterns and understanding the relationships among the participants during the practice. At the same time, this experience required continuous attentiveness to the ethical dimensions of observation and recording and the boundaries between the researcher and the research subjects—overstepping can blur the researcher's role and undermine the comfort of the individuals participating in the study.

By integrating direct empirical observations with theoretical insights from Löw, Schutz, Pink, and others, this study demonstrates how video technology mediates the construction of space in social settings. It emphasizes the importance of reflexivity and ethical awareness as the camera operator documents and shapes the event. Further research should expand on these findings by exploring additional contexts in which video technology influences the social environment. Such research would deepen our understanding of how filming negotiates (or redefines) physical, social, and emotional boundaries. This study confirms that, in addition to being a device for filming and observation, a camera can be an active participant in research, influencing behaviors, perceptions, and the generation of ethnographic knowledge.

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