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LEARNING TO SEE

Cristina Grasseni

Learning to see in the field

In my plot of over-seeded lettuce, in a Utrecht food allotment, I have made the mistake of sowing seeds too tightly, casting them single-handedly like I did with rucola, instead of seeding them one by one in thin rows, like chard. I turn to a senior gardener for advice, and the instruction is: pull up a clod at a time and thin out the individual seedlings, then replant them in the plot nearby. And weed them. As I try to do so, I notice how I can make out much better the pale green, slender leaf of a lettuce shoot, with its thin, short, fragile root, from the much thicker, dark green, rounded-leaved clover-type weed, which I wish to sieve out of my hopefully soon-to-be lettuce bed. Within a handful, weeds stand out. If instead I just look down on the uneven bed, spotted with choked lettuce in one area and thriving with greenery on the other, I find it difficult to tell where the lettuce finishes and the weeds start. I look, but I cannot see. It's a question of 'taking a fresh look.' But not just that. It's a question of following advice and procedure. Visual acuity will eventually develop if I manage to put in frame the right environment so as to be able to see: taking things in stages, not staring blankly at a whole plot, but sieving through a manageable handful. It's a question of aligning one's gaze with that of masters and peers.

For all anthropologists, fieldwork is a practice of participant observation that is trained and informed by methodological principles and techniques.¹ As ethnographers (working with or without recording instruments such as videocameras or microphones), our tools are first and foremost our eyes, our bodies, our senses. We observe while we participate. This means literally looking, seeing, noticing, while working also with our other senses: listening, moving around, doing things and adjusting our bodily posture and behaviour (with or without tools) to produce particular *points of view*. These are both literal and figurative. We can literally see different things whether we contemplate a flock of sheep from outside a fence or

from within the thick of corralling them. Similarly, we are more likely to appreciate the shepherd's point of view, in the broadest sense, if we align our observation to their daily activities and concerns. Anthropologists strive to understand and represent other people's points of view – usually people from different walks of life, provenance, everyday surroundings, routines, employment and convictions than our own. How is this even possible? Getting to *see* like other people (in this double literal and figurative sense) is a process of learning. In this sense, audiovisual and digital ethnography is not just about producing (audiovisual and digital) representations of sociocultural facts. It is firstly about *learning to see*.

We are situated, with all our senses, in social and cultural contexts in which we learn to *perceive in educated ways*. In this chapter we focus on seeing, firstly because seeing, in the literal and figurative sense outlined above, plays a paramount role in participant observation. Secondly, because vision and sound are the only senses that are literally included in the majority of (audiovisual) artefacts aimed at representing our understandings of the world. Thirdly, because appreciating the synesthetic ways in which we inhabit and comprehend the world should not impede or prohibit our analytical capacity to study how each of the senses is trained, interacts, reverberates and results in the literal and figurative 'points of view' mentioned above. I will return to this in the last section of this chapter, explaining how a sensory approach can be analytical, and how focusing on vision is not "oculocentric."

Participant observation is about appreciating imaginaries and ways of knowing other than our own. As members of a society, group or community of practice, we have learnt to frame the world in just one of the many possible ways. Sensory engagement in fieldwork helps us to think about how other people see the world. For example, anthropologist Sarah Pink states that visual ethnography is "a practice and way of knowing and learning" (2013a, 17). We can use the camera (or audiorecorder), but also simply our own body, as in the opening vignette, as a tool for analytic observation of sensory engagement. Adding to a long history of reflections and practice of visual anthropology, scholars and practitioners have increasingly taken into consideration the role of soundscapes, proprioception and field collaborations in the construction of ethnographic knowledge. Innovative fieldwork techniques include walking with, eating with or drawing with field participants.²

This chapter introduces the concept of "skilled vision" (Grasseni 2004) as the process and result of learning to see. Scholarship and ethnographic examples will show that vision is a situated practice, and that we learn to see in socially and materially situated ways and contexts. Learning to see happens together with training in the use of certain techniques and working routines (such as shepherding or gardening) or perhaps together with learning a new language, a specific jargon or dialect, etc. It can, but it does not necessarily, entail learning to see with a camera. Participant observation is a practice that begins with acknowledging the limits of the anthropologist's perspective, firstly in terms of their culturally situated point of view; and secondly, because of their actual, physical point of view (for example, is the anthropologist working with people who follow different physical routines in

their work and everyday lives?). Thirdly, the duration of the fieldworker's presence in the field determines its pace and rhythm, allowing (or not) the ethnographer to begin to share some of these routines.

Anthropologies of vision

The first examples of an *anthropology of looking* came from studying professional contexts. In his influential article "Professional Vision" (1994), Charles Goodwin employed a number of analytic audiovisual methods to describe in detail the ways of looking of different types of skilled practitioners. Goodwin explains in detail the function of "coding," "highlighting" and the use of "visual grids" to direct visual attention to certain details and not to others, using two disparate examples: field apprenticeship in archaeology (during which a student learns to detect a change in pattern in an excavated section of the ground to chart it correctly), and the infamous Rodney King trial in early 1990s Los Angeles (during which a popular jury was instructed by a police coach to interpret visual evidence of the notorious beating of an apprehended black man as an example of professional conduct by police). In his vast analytical work as a linguistic anthropologist, Goodwin investigated the many ways in which people negotiate or are disciplined into selecting the relevant features of their environment, upon which they need to act in interactions with each other. This is true of "professional vision," namely the kind of vision people develop in specific professions, but not only that. Simply pointing, for example during a conversation, either at objects in one's surroundings, or to each other, or to other artificial or natural features outside the immediate environment of the interaction, structures the field of interpretation of what is actually being said (Goodwin 2003). Furthermore, nuancing and describing in words what one is pointing at influences the shared interpretation of what should be taken to have in fact been seen (Goodwin 1997).³

The work of Charles Goodwin falls within a broader style of investigation that studies situated human communication in an analytical manner, including (but not only) studying in detail frame-by-frame recordings and transcriptions of time-coded footage. Special attention has been given to the use of technology and communication across teams of collaborators in high-tech contexts, for instance in the works of Edwin Hutchins (1995), Lucy Suchman (1987) and the research of The Laboratory for Comparative Human Cognition. For example, Edwin Hutchins' classic study of "distributed cognition" in ship navigation considers the "team as a flexible organic tissue that keeps the information moving across the tools of the task" (1995, 224). In other words, information flows in a social and material environment, including the use of their senses, and is retained and stored across interpersonal and person-artefact relations. Hutchins is interested in studying cognition as a computational process, a flow of information within which people are "special media that can provide coordination among many structured media – some internal, some external, some embodied in artefacts, some in ideas and some in social relationships" (Hutchins 1995, 336).

This is the point of view of cultural psychology, focusing on the investigation of cognition in practice. In cultural anthropology, visual analysis was pioneered by, among others, Margaret Mead and Gregory Bateson as a methodology with much broader goals, using the film camera as a field tool and footage as field notes. In *Learning to Dance in Bali* (1978) and other short films produced in the 1950s, Margaret Mead comments in voiceover on the edited footage she collected with Gregory Bateson during their field expedition of 1936–1939. Mead and Bateson had the ambitious goal of accomplishing a visual analysis of the ways in which different cultures socially educate the body (a taster of which is Mead and Bateson's folio volume *Balinese Character: A Photographic Analysis* of 1942). Mead focuses in particular on cultural uses of the body, in this case on the inculcation of styles of dancing and relevant movements and postures from an early age, specifically on the relationship of mimicry between disciple and master dancer. For Mead, an ethnography of apprenticeship (in this case, of dance) consists of analysing, cataloguing, providing schemes and classifications, comparing traits and providing cultural explanations. She comments on the simple movements and postures of young learners caught in everyday life, the highly formalised dance lesson given by a traditional master, and the reciprocal bantering of master dancers from different styles and traditions, who pay their respects to each other by performing at their best and then 'jamming' together a fusion of styles, in reciprocal mimicry. From the most limited gesture to the complex choreography of master dancers accompanied by a full gamelan orchestra, Mead's editing choices, their didactic tempo and pedagogical assemblage, and especially the all-encompassing voiceover providing a narrative to what we actually see, influences our understanding of Balinese cultural uses of the body.

In broader terms, anthropologists and other social scientists have long been fascinated by how daily training results in the formation of specific aesthetic and ethic sensibilities. The same is valid for vision in a stricter sense: the schooling of the eye delivers shared ways of seeing. These are, however, much more difficult to pin down than in professional, highly structured settings of action. For example, do we all share the same ways of looking? When I first theorised "skilled visions" (Grasseni 2004), I emphasised the plurality and diversity of modes of visual attention among cattle breeders. I generalised from this, concluding that skilled visions (in the plural) would be dynamic, transient, apprenticeship-learned, context-dependent and evanescent – namely, difficult to detail in analytical terms. In other words, a cattle breeder might well see different things than a sheep or horse breeder when looking at the same animal. This goes against the assumption that images (especially images made by automated means such as cameras) provide knowledge of how other people see (or what they see) in and of themselves.⁴ By now, a broad multidisciplinary scholarship acknowledges that learning to see is a form of situated knowledge and a process of becoming skilled ("enskilment," to use an expression from Tim Ingold (1993, 221), as well as that this process happens in typically multisensorial contexts, where both technology (such as scientific instrumentations, digital control systems or 'simple' tools such as a rifle for hunting) and the body and its capacity to adapt

around these tools “mediate” cognition and perception (Grasseni and Gieser 2019). To mediate does not mean here simply to pass on but rather to give shape, to allow and constrain at the same time. It is important to underline that this scholarship does not necessarily make use of cameras or audiovisual technologies, and that these arguments are not specifically aimed at “mediation” in the sense of audiovisual production.

In what follows I focus on learning to see as *enskilment*, namely on how certain ways of looking depend on processes of learning. In other words, only once we have come to embody specific skills can we have certain types of interaction with other skilled practitioners (in the case of vision we can think of them as skilled ‘lookers’). Next, I show how this results in the inculcation and reproduction of aesthetic and ethic sensibilities that characterise specific social circles. In the final section I refer to both classic philosophical readings about the nature of visual perception, of learning and knowledge, and contemporary ethnographic research to highlight both the collaborative, social aspect and the inter-sensorial nuances of skilled sensing, drawing on specific field examples of perceptual acuity and learning, for example in the work of Götz Hoeppe on fishing (2011) and Tom Martin on maritime carpentry (2019, 2021). I conclude that learning to see how other people see – both in the literal and figurative sense explained above – is important because by doing so one can ‘put oneself in the shoes of’ other people, with different opinions, from other walks of life, or with apparently odd views. The point for this section is that to cultivate awareness of this process of skilled learning is an ethnographic skill of paramount importance, which an anthropologist should develop in the field.

Learning to see is “enskilment”

“Enskilment” is a neologism introduced by anthropologist Tim Ingold (1993, 221). I employed it during my doctoral research to account for the processual and social nature of the visual training of the dairy breeders I lived with in the Northern Italian Alps over several periods between 1996 and 1998. I described their “skilled vision” as a continuous process of learning, both individual and with peer and mentor supervision. I further located it as a dynamic and ambivalent process of negotiation between local knowledge (which is often tacit and grounded in values and preferences inspired by the terrain, climate and specific routine of the animal) and the global standards for progeny breeding dictated by national and international professional associations for “breed improvement” (Grasseni 2004). The latter involves genealogy book-keeping; the evaluation of distinctive traits that are considered functional to the husbandry of a particular breed (such as Alpine Brown cow or Frisian cow); and the widespread practices of artificial insemination, embryo-transfer and – at the frontier of technoscientific research and ethical deliberation – animal cloning.

Building on my participant observation of how breed inspectors would educate farmers to perceive the body of their animals in terms of ‘functional beauty,’ I elaborated on this ‘breeding aesthetics’ as one form of skilled vision among many

possible skilled visions. The accent is on the plurality of skilled visions one can acquire through forms of enculturation (namely, a social process of learning to become part of a community of practitioners). This is also a continuously dynamic, adaptive process. Just as we never cease to learn, we also never cease to learn to see in ways that depend on the functional, aesthetic, moral, social and practical engagements that each of us cultivates over life, never alone.

I emphasise ‘never alone’ because the ecological approach to the anthropology of vision does not posit an individual viewer who interprets stimuli and representations from an external world (Ronzon 2008). Building on the legacy of Gregory Bateson (1979), an ecological approach underlines the continuity between “mind and nature,” inside and outside, observer and observed, which were posited in Cartesian philosophy (and throughout its legacy in Western thought) as two separate substances. Furthermore, this continuity is *social* because, as anyone observing a child learning to speak can tell, one does not speak from silence. In other words, one does not look neutrally upon the world, and then develop an engagement with it. One speaks because one is spoken to. One sees because one looks: one looks for something, one makes out relevant faces and contours in one’s environment. One learns to repeat the same action in the same way to find, with relief, that who or what was there still is there. One quickly scans new environments to pinpoint one’s orientation to new features in the landscape, new faces in the room. We hold and develop, as a matter of fact and from the beginning, an active engagement with our environment, not a contemplative view. Perception, in other words, is an aspect of our inhabiting the world, a “dwelling” perspective, to borrow another expression from Tim Ingold (2000), which was inspired by psychologist James Gibson’s extensive investigation into visual perception (1979).

Gibson underlined how one sees not just with eyeballs but “with the eyes-in-the-head-on-the-body-resting-on-the-ground” (1979, 205). Through “direct perception” one explores the world to obtain relevant information: “looking around, getting around and looking at things” (1979, 147). As a psychologist, Gibson insists on the optical array that we pick up through an active process of action-oriented information. The “optical package” related to any specific object changes, accrues and becomes more nuanced as we move around it and capture multiple sightings as a way of active exploration. According to the type of activity for which we are probing, we will be attuned to detecting one or another type of “affordance” – namely, the functionality of objects, arrays of objects and complex environments to the type of activity we need to deploy. Among what one looks at, importantly, are others – both experts and novices. They often provide valuable information and the means to interpret it, as regards what goes on around us and how we should act upon this knowledge. As one develops a skill to read this “whole perceptual system,” including the directions, gestures and (sometimes, but not always) verbal instructions of others, one acquires an “education of attention” as Gibson called it (1979, 254). Social actors not only learn to detect affordances, they also share them (Gibson 1979, 412).

According to Tim Ingold, who devoted several essays to the nature of skill and skill-learning, “the foundation of skill lies in the irreducible condition of the

practitioner's embeddedness in the environment" (2000, 353). What is meant here by "embeddedness?" It has to do with the dwelling perspective outlined above: in other words, with 'being' in the world in an engaged way. Ingold emphasises the practitioner's embeddedness in the environment, and in order to illustrate it he makes specific reference to resonance and relationality with animals, natural features, and our own senses and those of others as we, for example, learn to use a tool. His rendition of embeddedness is akin to Gibson's affordance theory as outlined above, in the sense that it is focused on one's immediate environment and much less on socio-historical context and conditioning. In the following sections, we will also discuss the socially constructed nature of (visual) evidence. Before we do, though, let's consider which implications these points have for the ethnographer's practice. In order to appreciate it, let's exercise our learning to see, with simple practical exercises.

BOX 2.1 EXERCISES

Work in Pairs:

Step 1. Notice similarity. Make a compilation of about ten items that you would consider similar (for example ten different types of teaspoon), or comparable actions that differ in degree (for example walking, fast walking and running), similar uses of the same object (for example, how one holds a pen while writing, or a fork while eating), or body postures (for example sitting, squatting, or sitting cross-legged). Show your sequence to your partner.

Step 2. Detect change over time. Make a sequence of 10 to 15 still photographs capturing a process: for example, making coffee, cooking, executing a Tai-Chi sequence. Make sure your sequence captures the beginning, development and closure of the process. Show your sequence to your partner.

Discuss and articulate:

Step 3. What did you detect and notice? Did your partner notice the same differences and similarities as you?

Step 4. Does your partner find the sequence meaningful? How did you select your subject and format for your photo sequence? What was in your mind's eye ... and what did you *actually* represent? Think, for example, about focus, framing and depth of field: they can tell the audience where to direct their attention. Have you brought the relevant part of the items or scenes into focus?

Additional complication: Does drawing (beforehand or after taking a photo) help you think about whether you were on target? Draw what you expect to photograph or show, and compare what you have drawn with what you actually get to see on your photographs.

This exercise will have raised more questions than can be answered at this point. There's no right or wrong manner of executing it. It is aimed at activating the reader's reflection on how we notice difference, how we detect change and how we represent a state of things. Note, for example, the situational context in which you made your observations: time of day, season, outdoors/indoors, conditions of illumination, conditions of heating/cooling, geographical location and situations (urban/rural, etc.). How does this influence the process and your perception? How would a variation of this environment influence the nature, speed or quality of the process? How would it influence your perception?

When it came to presenting your sequence to each other, did you consider *how* you were going to show each item: side by side, arranged in slides, etc.? In other words, which criteria are (perhaps tacitly) guiding your selection, presentation and sequencing, in order to render your sequence expressive? We will return to this idea of looking as an active engagement, an investigation of reality rather than a mere mirroring of it. First, though, we also need to take into consideration the social aspect of this engagement.

Learning to see is a social activity

The exercises focused on the step-by-step acquisition of visual acuity in our interaction with a complex environment – for example, focusing on how we notice similarity or change. Additionally, this forces us to think about how making representations of the reality we observe helps (or does not help) our visual learning. Does photographing our own visual field *reproduce* it, or does it introduce added layers? Does it mediate (namely shape, constrain, while at the same time enabling, focusing, honing in on) our perception? We will continue to ask these questions throughout this book. For the moment, however, we need to introduce an additional question. How does the exercise change because of the fact that we work in pairs? What kind of communication does it enable, and how does it shape our perception?

More broadly, how does our anthropological understanding of skilled vision change if we take into consideration the social dimension of skilled practice? A recent ethnographic example of how to investigate this question comes from the work of anthropologist Götz Hoeppe (2011), on the perceptual skills of artisanal marine fishermen in Kerala (in south India). He stresses the importance of their “organisation of visual skill” while “working in teams in an environment that includes competitors” (2011, 1). Because pelagic fish may travel widely in a marine terrain that is virtually impossible to trace down to landmarks (with the exception of fishing in near-coastal waters) “the cognitive task of finding fish is not faced by individuals but by teams,” and visual skills may be crucial to the fishermen’s “active

knowledge-making” of the shoals’ whereabouts (2011, 2). How does our ethnographic focus on skill change when we take into consideration the “internal social organisation,” as Hoeppe puts it, of operating

units involving perceptual skills not of individual men, but of men organised in teams which operate in an external environment that consists of elements that are invariant (such as the shoreline and the depth-structure of the sea) and those that are variable (such as other boats and ships which may attempt to catch the same species)?

(2011, 2)

In this particular example, relevant knowledge is about fish-spotting in the sea. In general, we are interested in how knowledge is acquired by individuals in a team under the watchful supervision of the others, within a layered social hierarchy, and how it is communicated and built upon. Hoeppe is interested in how fishermen spot the presence of fish shoals in marine waters, building on their capacity to perceive and observe such waters in relevant ways and making educated inferences, working in teams that compete with each other. As Hoeppe concludes, “knowledge about fish and their behavior is inferential, being mostly derived from the practice of fishing and inspecting the catch” (2011, 18). This means that only the fine-grained analysis of what exactly is being inferred, and how this inference is informed by a complex accumulation of previous and ongoing knowledge about the environment and the co-participants in it, can tell us something about the nature of learning to see.

The medical anthropologist Barry Saunders (2008), in his ethnography of apprenticeship in American medical schools, proposes that learning to make educated inferences (specifically, about the diagnostic interpretation of CT scans) is not a question of deduction (inferring a particular unknown fact from a known general fact) nor of induction (inferring an unknown general fact from a number of known particular facts), but rather a process of abduction (inferring a particular from a number of other particulars which are connected in ways that are hitherto unclear) following the theory of semiotician Charles Sanders Pearce. In other words, there is a degree of uncertainty about abduction, which is why being able to draw the right conclusion is regarded with reverence by novices. It is an educated guess, which can only be verified at a later stage. This process requires dexterity, experience and exposure to the greatest number of known particulars possible regarding the phenomenon one is inferring about, as it is never a question of mechanical syllogism.

What does this mean in terms of our ethnographic toolkit for field practice? Fieldwork is never (entirely) solitary, despite what the hagiography of the Malinowskian tradition has habituated us to think. Fieldwork is always conducted in conversation, collaboration, sometimes cohabitation, not only with field participants (so-called informants, interviewees or people we learn to ‘observe’ while we ‘participate’ with them in doing something). There are often co-fieldworkers, peer students, other researchers and scholars, research-activists and/or research participants who are also scholars or activists in their own right. There are supervisors, co-supervisors,

reviewers, friends, partners, flat-mates, course colleagues and passers-by. As things progress and become more specialised, there are also advisors, film-editors, sound technicians, journalists, policy-makers, etc. Through fieldwork, we learn to make educated guesses, never alone but rather under the influence or following the lead of other people's remarks, hints and opinions.

In fact, the Polish microbiologist Ludwik Fleck, in his seminal ethnography of laboratory practice, insisted that scientific knowledge is the result of a "thought collective" (1979, 38–51). He also drew a difference between looking and seeing: scientists gazing at minuscule preparations through a microscope have "first to learn to look in order to see that which forms the basis of the given discipline" (1986a, 60). He also insisted that – once acquired – this skill becomes tacit, incorporated and "cannot be replaced with mental formulae." Fleck pioneered subsequent studies of professional and scientific contexts, which underlie the prolonged and highly structured training consistent with the learning dynamics of what Jean Lave and Etienne Wenger (1991) have identified as "communities of practice." These are collectives of varying degrees of formalisation (from artisanal workshops to financial business to traditional and indigenous practices) of which one can only become member through a process of apprenticeship or "legitimate peripheral participation." This is a step-by-step advance from the "peripheral participation" of beginners, who are gradually admitted to witness the practice and to take part at its fringes, making their way towards the core business of skilled practitioners. Fleck suggests that the process of learning to see eventually grants belonging to "a thought collective," – namely, a shared style of perception, inference and action that defines a group of peers (in this case, peer laboratory scientists).

The similarity to ethnography is evident in the way in which budding ethnographers learn to go to the field, sometimes in pairs or on field schools, often following research protocols that are aimed at orienting their attention and analytical skills at specific activities, contexts or topics. Under the supervision of experienced ethnographers, (graduate) students carry out their field projects in close collaboration with peers and seniors who show them how to model their own tactics and strategies on esteemed examples. Finally, they build on this apprenticeship to develop their own research projects as young scholars who have become accepted members of an academic community. Beyond the fine-grained analysis of how the individual skilled practitioner may achieve visual perspicuity, ethnographers such as Hoeppe and Saunders rightly point out that presumably, then, in order to deliberate what are relevant and what are inessential features, novices need to debate among themselves and with supervisors about what they ought to see (in the microscope while taking turns at gazing through it, but also 'in the wild'):

When experts and novices have access to the visual field of interest simultaneously, the latter's instruction is aided by pointing, a means for organising as visible, public, interactive phenomena the specific embodied practices that constitute the work of a profession.

(Hoeppe 2011, 7)

Barry Saunders dwells on these aspects of socialisation and formalisation of the process of learning to see in the case of medical interns training to become radiologists. Interpreting CT scans is not a solitary endeavour, but a collective exercise which is guided and scaffolded by social hierarchies and appropriate rituals. In the lesson, the ‘hot seat’ is reserved for the disciple whose turn it is to attempt a diagnosis in front of the class, for the benefit of everyone – whether they get it right (because their argument will be supported by relevant evidence, which will be pointed out within the relevant image) or not (because also in this case, the possible mistakes anyone else could make will be reviewed and corrected communally, pointing to the relevant deceptive feature that attracted the attention of the neophyte). Saunders also highlights the different social infrastructure that the transition from film to digital has induced. While one single black photographic film, the classic CT slide, could be hung against a backlit board and then discussed in a group – with various observers pointing out and highlighting relevant features to the others, thus engaging in a heuristic conversation – nowadays most CT scans are supported digitally, as a file that can be opened on any desktop or laptop and thus not only infinitely reproduced but also – for that reason – individually scrutinised. Many of the socialising features that the photographic artefact afforded and, in a sense, imposed, are thus disappearing, and hence some of the casual and spontaneous assemblage of observers – resulting not only in *observation* but also in *conversation* – are lacking for the medical student.

Similarly, but in the very different, highly informal and marginal social spaces of nightclub performances, Francesco Ronzon (2007), in his ethnography of beauty discourse among drag performers in Verona, underlines how the ‘queen’s style,’ grace or appropriateness is continuously scrutinised and negotiated in peer review. Pointing at a performer, animatingly discussing her stage costume or revisiting it from memory, and looking at it alongside others provide new catalysts of attention and aligns one’s “skilled vision” with that of the other competent onlookers. Mutual gazes and expressions of agreement and disagreement, both gestural and articulated in language (polemic, gossipy, bantering or cheerful), make up the “ecology of culture” from which one distils and arrives at a shared understanding and a relational and collective appreciation of what beauty consists in, there and then, under those circumstances of performance and consistent with the paraphernalia of drag artistry that those in the know can appreciate as more or less nuanced, more or less standard, more or less original and distinctive of the character at hand. In any case, there is no one simple aesthetic rule: these are very local criteria for beauty, highly negotiated and always actively (re)negotiable by the engaged audience. Learning to see ‘drag beauty’ is both a form of social apprenticeship into the specific culture of this particular community and a form of individual enskilment. The following in-depth case study shows this process as it develops in low-tech craft learning: the ethnographer uses participant observation and traditional fieldwork methods to study the enskilment of carpenters from a phenomenological point of view.

The phenomenology of enskilment in maritime carpentry

Learning to see, we have said so far, is a necessary step to gain insight into a specific culture. It consists of acquiring specific skills, and this learning process is shared with others. With the following ethnographic example, we can now appreciate how this has important practical implications for the ways in which we carry out anthropological fieldwork. Social scientist Tom Martin studied craft learning in maritime carpentry workshops. He paid particular attention to the process of apprenticeship, and to the subtle perceptual transformation that accompanies the progress of becoming skilled. Inspired by the German philosopher Martin Heidegger and by scholarship on collective learning, notably Jane Lave and Etienne Wenger's work on "communities of practice" (mentioned above), during his doctoral research in pedagogy he studied ethnographically how the skilled practitioners engaged in the restoration of antique and contemporary wooden vessels "get the feel" for their tools and materials through the development of forms of "practical understanding."

What he means by this is that understandings are individual, but some individuals can "align" their skilled practice with each other more than with others because they have learnt to do so. In fact, skilled woodworkers understand each other across multiple naval carpentry workshops, more so than they would understand sailors on the very ship they have restored. In other words, their craft learning has included and developed the education of their perception and the capacity to understand and assess each other's learning *as carpenters*. Martin argues that this results in "realising" specific tools and materials within their phenomenal world, with which they interact in certain ways: learning to see is experienced as "the constitution of new meaningful objects" (Martin 2019, 29). Noticing and attributing meaning to minute details in craft can only happen through what he, following Heidegger, calls "circumspection" – namely, "the gradual accumulation of layers of meaning," which results in a form of "perceptual transformation of the learner's phenomenal world" (Martin 2019, 73). In fact the 'founding fathers' of phenomenology, philosophers Maurice Merleau-Ponty (1958) and Martin Heidegger (1962b), underlined how not only is the object of perception the result of a process, but also the perceiving subject comes into being relationally, by "being-in-the-world."⁵ Heidegger's concept of the "we-world" (2019, 13) is thus deployed by Martin to account for the "shared understanding that extends across workshops" (55).

From a methodological point of view, phenomenology calls for an "experiential, first-person perspective on the nature of objects ... as it arises from participation in collaborative work" (Martin 2019, 56). Tom Martin's observations are based on three months of participation at one boat-building site, followed by six weeks at another two workshops. On the basis of this fieldwork, accompanied by meticulous annotations, camera recordings and field notes, Martin articulates a specific methodology for participant observation and auto-ethnography of the lived experience of craftwork learning. Encompassing planning, reflecting, revisiting notes, honing specific questions and looking for answers with follow-up visits, this methodology allows one to analyse in detail the process of vocational

learning as a dynamic investigation on “the constitutive effects of perception – by which we are able to see things as certain things” (Martin 2019, 9). In her *Doing Visual Ethnography*, anthropologist Sarah Pink explains this “phenomenological” approach by contrasting it with a “semiotic” approach (Pink 2013b, 47). Following Tim Ingold, she defines the former as the endeavour “to understand how people perceive the world around them, and how and why these perceptions differ” (Ingold 2011, quoted in Pink 2013b, 23), whereas in a “semiotic” approach culture is imagined as a “text,” a set of “symbols” that need interpreting.

Learning to see ‘evidence’

Ethnographers of skill such as Tom Martin deliver fine-grained analysis of typically low-tech workshops, focusing on the sensorial experience of learning. What analytical approaches to fieldwork share across low-tech and high-tech contexts, without being necessarily inspired by the same epistemological premises, is the use of detailed observation techniques (and sometimes audiovisual recordings) to ethnographically investigate perception, observation and action (in these particular cases, *learning to see* in highly structured contexts, such as laboratory practice). Sociologist Harold Garfinkel had a seminal role in developing methods for analytical observation applied to both complex scientific practices and everyday social interactions in the late 1960s, thereby founding ethnomethodology. In a fundamental article for the development of Science and Technology Studies, Harold Garfinkel, Michael Lynch and Eric Livingston (1981) argued how the act of *seeing* a certain physical entity (in this case a pulsar, namely a type of small magnetic star that had already been detected through radio waves but never optically pinpointed until 1969) depends on how one coordinates with colleagues and instruments to (co)create knowledge. According to these authors, seeing is a complex epistemic action which literally brings about the object of seeing, since this cannot by definition present itself – it had not so far been visible. The authors call this a “performative” work, through which the complex interaction of observers and technological apparatus results in a succession of data recording, interpretation and observation of their graphic inscriptions. These phases are analytically observed, step by step, based on recordings of the night of observation during which the optical pulsar was spotted. Obviously, the astronomers do not ‘see’ with the naked eye but have to interpret their multiple displays, which present data of diverse natures: mathematical and astronomical. Image quality control, repeated readings of the data (such as luminosity, signal strength, frequency of the wavelength and positioning in the astronomical charts) and tentative interpretations of what appears on screen and in print progressively constitute the pulsar as a perceived object. This does not mean that the pulsar would not exist outside of the cognitive work of the scientists (Garfinkel et al. 1981, 141). However, the scientists’ talk and action is conducive to their seeing certain things in a certain way because their interaction is needed in order to confirm with one another that they are indeed seeing the same thing.

Ethnomethodology is thus interested not so much in individual cognition – nor in the issue of whether we could speak of a ‘real’ world out there without

our perception of it – but rather in how human interaction works and what it brings about for us.⁶ Conversation analysis shows in detail, step by step, how the exchange of specific observations in specific ways in a specific context validate and expand on (or, vice versa, challenge or deny) the further perceptions, actions and thoughts of the participants. The senses, our actions and our interaction with our environment (which includes other people and materials, both artificial and natural) coordinate among each other in a recursive way. That is why most of our linguistic interactions are not about expressing meaning, but about (re)confirming with each other some action or some presence in the world – in this case, the presence of a pulsar and the actions these scientists need to take in order to make it visible in their artefacts.

The investigations on learning to see reviewed so far can broadly be considered as falling under social constructivism – namely, the current in epistemology and philosophy of science which considers knowledge as the result of norms and practices, which are determined and have meaning within a specific social and historical context. This means, for example, that there is cultural and historical variation on fundamental notions such as ‘knowledge’ and ‘perception’ or, as we can see more mundanely, for instance, in the diversity of ‘fashion’ conventions (namely, on what is appreciated and perceived as beautiful, aesthetically pleasing or appropriate). The historical succession of “paradigms” (Kuhn 1962) for what is generally accepted as valid knowledge, for example, in the history of the Western world, applies to the authority of sacred texts and their commentators, then the authority of foundational philosophers and their commentators, transitioning to the notion of an empirically constructed repeatable experiment, its measurements and interpretations thereof. Thomas Kuhn (1962) showcases the “scientific revolution” which happened when the theories of Copernicus and Kepler ushering the idea of a sun-centred solar system became more authoritative than the ones of Ptolemy and his commentators. This shift in authority is perceived and narrated as a (belated) recognition of scientific evidence, while it is in fact a cultural and historical process.

Evidence is the result of a process of social construction, not in the anthropocentric sense that only human-made evidence can be recognised (thus disregarding the actual agency of non-humans such as the sun, the moon and the planets), but in the sense that what we accept as evidence changes over time, together with social and cultural circumstances. The historian of visual technologies Jonathan Crary, commenting on their role and effects on nineteenth-century society, insists that “the possibilities of an observing subject” are intrinsic to how this observer is “the product and the site of certain practices, techniques, institutions, and procedures” (1990, 5). Crary follows the influential French philosopher Michel Foucault in using the language of “subjectification” to underline the importance of societal institutions and mentality, showing how they are inscribed in routines, procedures and practices to guide and scaffold the capacity of people to think, act and sense. What interests us here is not a specific theory of knowledge nor a critique of social conditioning, but realising the constructive, processual nature of (visual) evidence. It is often a commonsensical assumption to take evidence as something

which by definition imposes itself on us, and thus as something not constructed. The scholarship reviewed so far instead underlines that to perceive visual evidence is the result of trained, educated, incremental learning.

Learning to see is situated sensing

From a very simple initial exercise to the review of scholarship conducted both in low-tech and in high-tech environments, ethnographic fieldwork has emerged as a methodology through which we notice and cultivate the way in which ‘evidence’ impresses itself upon us. The scholars reviewed so far have explored the dynamics of interaction, learning and apprenticeship in a given environment, showing how attention and evidence is the result of learning and of educated improvisation in situated practice. In particular, with regard to *learning to see*, everything we have reviewed so far points to the fact that, to put it in Rudolf Arnheim’s words, “the object we see, either in our immediate range of perception or through the medium of photography, is dependent upon who we are and what we recognise from past experience” (1969, 278).

It is worth pointing out that *vision* is not an act of representation but of looking, and that looking is not necessarily one-sided or anthropocentric. For example, in the Hindu ritual tradition of *darśan*, which literally means beholding, the contemplation of deities or sacred objects (at religious festivals and processions, for example, during which they are exposed to people’s sight outside temples), is a two-way process in the experience of the faithful. Anthropologist Diana Eck underlines how “the deity is present in its image, the visual apprehension of the image is charged with religious meaning. Beholding the image is an act of worship, and through the eyes one gains the blessings of the divine” (Eck 1988, 3). Thanks to the powerful gaze of the gods, in fact, it is believed that “the contact between devotee and deity is exchanged through the eyes [...] even in a time before actual images of the gods were crafted” (1988, 7). Also notable is the fact that this gaze is not only about vision: “[I]n the Indian context, seeing is a kind of touching” (1988, 9) and is considered as an immediate form of knowing, in the way in which we would consider ‘insight’ to be an intuitive way of getting at the core of people and state of things. The ‘seer’ is, also for that reason, someone with wisdom, namely with proper and deep ‘insight’ and knowledge.

What does this tell us about the interplay between the effect and affect of vision, and in particular about how this might be the result of learning and of skilling? The effect of seeing would be to be able to gaze upon or discern a certain object or contour (beholding the divine). The affect of it would be to experience in the same breath the appropriate memories and aesthetic or moral reactions that have been inculcated from past experience (being blessed). In this case, it is difficult to keep affect and effect of the senses – and of seeing in particular – apart from each other, and it would not make sense to do so. What the processes of apprenticeship studied above show is that one aspect cannot exist without the other. Moreover, following Rudolf Arnheim, Eck reminds us that seeing is “an eminently active

occupation” (Arnheim 1969, 19), namely an occupation which engages the senses to produce meaningful, relevant processes of thought and understanding:

[I]n looking at an object we reach out for it. With an invisible finger we move through the space around us, go out to the distant places where things are found, touch them, catch them, scan their surfaces, trace their borders, explore their texture.

(Arnheim 1969, 19)

Compare this description with our exercise in the second section. Similarly to Rudolf Arnheim, Ludwik Fleck rehearses some themes of *Gestalt* psychology when he concludes that “‘To see’ means: to recreate a picture, at a suitable moment created by the mental collective to which one belongs” (1986a, 78). Further, this picture needs outlining on the basis of relevance:

[O]ne must be able to distinguish the background from the image; one must know to what category does the object belong. Otherwise we look but do not see, we look intently at too many details without grasping the observed form as a definite entirety.

(Fleck 1986b, 130)

Could we do this without eyes (for example, if we were blind)? Could we follow cues and clues so as not to get lost in a sea of stimuli and information? Yes. We would have to learn how to.⁷ This does not imply that we do not have to learn how to do so when using our eyes. On the contrary. Apply to the seer the same laborious, seemingly miraculous way in which the blind learn to navigate the world using the other senses. Add what you know about other sensory-impaired people learning to successfully navigate the world with what they’ve got. Now think back, and appreciate how laboriously we have *learnt* to see what we see, and how what we notice is intrinsically ingrained with what we have learnt to detect and value. The past in the present, the effect of repetition and routine, expectations and projections ... Rudolf Arnheim’s description conjures up in detail what this means: a thinking-sentient being, who engages with the world, from even before coming to light, striving to make sense of it all, until the moment of final darkness.

Yet this occupation does *not* deliver a mechanical, reproducible, objective representation. None of these four words (mechanical, reproducible, objective and representation) pertains to the act, the process, the affect or the effect of looking: “[W]e find instead that direct observation, far from being a mere ragpicker, is an exploration of the form-seeking, form-imposing mind, which needs to understand but cannot until it casts what it sees into manageable models” (Arnheim 1969, 278). For Arnheim (who had trained as a *Gestalt* psychologist) seeing is an endeavour of the mind. The ‘mind’ needs to orient itself in the world by detecting the comparative relevance of a myriad of inputs, shocks, stimuli, information, data ... We look around and follow cues and clues, so as not to get lost. Let’s address this apparently

problematic reference to ‘the mind,’ noting here simply that this is not a Cartesian, disembodied mind. The philosophy of John Dewey reminds us of what philosophers and psychologists of the late nineteenth- and early twentieth-century meant when they referred to ‘the mind.’

The American philosopher John Dewey is renowned for his study of learning and his pedagogical theories, as well as his theory that “aesthetic experience” (namely, the appreciation of beauty as provoked, for example, by works of art) is in fact experience, namely “processual feeling” (Dewey 1994).⁸ Besides his theory of art, his emphasis on “experience,” “process” and “feeling” as important aspects of perception and of thought are important to the argument that learning to see is indeed a process – a process of learning by which the senses, step by step, become educated, as experience becomes guided by previous experience.⁹ The language of John Dewey is refreshing for contemporary readers because it is studiously non-deterministic. In other words, it does not take for granted, as many folk psychology models of the twenty-first century do, that sensory inputs are mere data for a computational mind, or that cognition is a predefined programme (sitting somewhere in the brain). As he puts it: “[T]hinking goes on in trains of ideas, but the *ideas*” [...] “*are phases, emotionally and practically distinguished, of a developing underlying quality; they are moving variations, not separate and independent [...] but subtle shadings of a pervading and developing hue*” (1994, 206–207, my emphases). In other words, the mind is not some kind of machinery or predetermined ‘code’ which computes punctual and distinct sensory inputs.

For Dewey, “*Mind* [...] is the *body of organised meanings* by means of which events of the present have significance for us” (Dewey 1994, 218, my emphases). Here, “mind” does not mean a place in the brain, or a function of the brain, and also it does not denote a solipsistic entity. It is the constant process through which we make sense of experience, past and present, in a way that makes us who we are. For the mind, experience is relevant, meaningful, or not:

The undefined pervasive quality of an experience is that which binds together all the defined elements, the objects of which we are focally aware, making them a whole. The best evidence that such is the case is our constant sense of things as belonging or not belonging, of *relevancy*, a sense which is immediate.
(Dewey 1994, 213, my emphases)

Substituting Dewey’s “train of ideas” in the quote above with the successive acts of meaning-full and context-oriented perception that orient our daily and professional lives, one obtains a vivid image of skilled experience – for example, that of the naval carpenter described earlier by Martin. Dewey’s language strikes us as contemporary readers because it is holistic. It strives to talk about experience as a meaningful whole rather than saying “A causes B which triggers C,” overcoming the pervasive contemporary influence of positivism over scientific description.

So far, learning to see has been defined as a process of enskilment, which is key to participant observation and fieldwork. It is, moreover, a social endeavour

and an act of situated sensing, which is relevant to how we come to perceive evidence as imposing itself on us. Learning to see could be a natural topic for sensory ethnography (Pink and Howes 2010). However, this depends on how we define sensory ethnography. David Howes, in his review essay *The Expanding Field of Sensory Studies* (2013), explains how the cultural analysis of the senses straddles the history and anthropology of the senses, as well as many other disciplines in the humanities and the social sciences encompassed under “sensory studies.”¹⁰ To explain the difference between sensory studies and sensory ethnography, Howes indicates that “sensory ethnography experiments with multiple media for the registration and communication of cultural facts and theories” (Howes 2013). This is what learning to see, in my opinion, is not.

As shown through the case studies reviewed herein, particularly the examples from phenomenology and ethnomethodology, learning to see is not about *registering* facts (or theories). It is not about *communicating* facts or (theories). It is about culture, yes. But it is not about recording or representing culture. It is about learning to notice (and thus analyse and investigate) how we use our senses in profoundly cultural ways. By ‘cultural’ here I mean educated, learnt, apprehended, inculcated, passed on, trained, etc. – namely, individually and collectively coached, supervised, judged and overviewed. And, last but not least, shared and relationally rehearsed in social settings. In fact, learning to see could well match precisely what David Howes defines as the project of sensory *studies*, namely “foregrounding the sociality of sensation” in “a cultural approach to the study of the senses and a sensory approach to the study of culture” (Howes 2013).

By using the simple phrase “learning to see,” I wish to emphasise the methodological stance of ethnography as a process of learning – namely, a necessary step that *any* ethnographer undertakes, implicitly or self-consciously, as part of fieldwork. Why ‘only’ seeing, then? It is not only seeing, of course, as outlined above. However, seeing is as legitimate an object of ethnographic attention as the other senses. Even more so, because as a matter of fact it plays an important role in many professions, scientific practices and cultural understandings of perception. This is not ‘oculocentrism’ but the simple statement that it is worth investigating learning to see as a widespread and diverse ability to perceive, which is related to specific sensibilities, skills and values in so many aspects and walks of life of several cultures.

As Howes himself underlines, “sensory anthropology does not entail shutting one’s eyes, though it typically requires focusing them differently” (Howes 2013). Learning to see (in both the literal and figurative sense explained in the first section) is precisely about this rigorous exercise of (re)focusing on how we learn how to look, how we come to *see for ourselves* something that is evident to the members of a certain community of practice. To “think sensually” (Howes 2015) means to engage rigorously and ethnographically with the processes by which cognition and sensing intertwine in skilled experience. Precisely the fact that “skilled visions” (Grasseni 2007) are by definition learnt, shared, thus collective, hence social, therefore public, means that they can be neither psychologised nor simply ‘sensed,’ but rather investigated in their actual occurrence and cultural significance. In fact, this chapter

has argued that “the multiplicity of the body’s modalities of perception” (Howes 2015, xii), specifically vision in this chapter and hearing in the next, cannot be studied anthropologically without a rigorous analysis of the work of enskilment. Consequently, in Chapter 3 Andrew Littlejohn explains “sonic ethnography” as a means to model ways of listening that constitute collective worlds through soundscapes.

Learning to see falls squarely in the recent anthropological tradition in which anthropologists “use their own bodies and senses as means of ethnographic analysis, and then write about their experience” (Howes 2013). In fact, as the following chapters reveal, many anthropologists learn to do more than just write about their “participant sensation” (Laplantine 2015, 80), and also draw, film, photograph, code, set up installations and more. These engagements reveal how anthropologists are set to (re)discover human, non-human, natural, social and virtual environments (as illustrated, for example, by Elliott and Culhane 2017). However, rather than being blinded by the capacity of media to show things in ways that words cannot, ethnographers of skilled vision and skilled listening seek to painstakingly investigate, through ethnographic attention, how it is that certain experiences speak to us in certain ways rather than others.

Conclusion

This chapter has argued that learning to see is a process of education of the senses which results from participant observation in a community of practice. This is true in general – whether in low-tech or high-tech environments – and of anthropological fieldwork in particular. Ethnographically answering the apparently impossible question “how can we see the world with someone else’s eyes?” means paying attention to the various ways in which we learn, in everyday and professional contexts, to make educated inferences from each other’s conduct and from our interactions with our structured environment. We can study each other’s ways of seeing as situated (and hence *social*) practices, including how they are learnt through apprenticeship in an embedded (and hence *sensory*) way.

Skilled vision is a form of tacit knowledge. So in ethnographic practice, we have to think creatively about how to make this form of knowledge emerge in such a way that we learn to pay attention to it, and in such way that we become able to articulate it and comment on it through diverse means of representation (which range from writing about it, to recreating the process of learning, to drawing and sketching so as to focus in more detail on the features we wish to notice and comment upon, to the use of footage and photography).

Increasingly, scholars underline how ethnography is a collaborative mode of knowledge, that it is co-production rather than production, and focus on relevant modes and forms of creative expression and social critique. Ethnography, “whether understood in terms of fieldwork practice or as a mode of dissemination and representation – is a particular type of performative and collaborative activity that can be used to research and represent the complexity and diversity of human experience”

(Elliott and Culhane 2017, 3),¹¹ hence the recent anthropological rekindling of interest in “auditory journeys” (Cox 2016; Karel 2016) and in “the question of the medium” (Meyer 2011).

I have analysed here the epistemological premises of this engagement with the senses and with media. This chapter, in other words, focusses on the enskilment processes that allow the anthropologist to develop and practice skilled visions and skilled senses in the first place – which in turns allows for collaborations in ethnographic practice. The kind of ethnographic examples and case studies reviewed here are not aimed at representing ‘cultures of the senses’ nor ‘cultures of vision,’ but rather at learning to see, as it happens in professional, everyday and fieldwork contexts. The enskilment of the senses – and of vision in particular – is crucial to ethnographic practice and anthropological understandings, to build on Sarah Pink’s invitation to “engage the senses” in ethnographic research (2013a).

The further focus of the following chapters will be on what I have elsewhere called “skilled mediation” (Grasseni and Gieser 2019) – namely, the articulation of sensing and making sense through the channels, devices, interfaces, pivots and anchors of our attention that educate already-always social senses in ways that are specific, relevant and apprenticed to particular communities of users, practitioners, co-seers, co-listeners and co-sensors. The result of this apprenticeship, as already noted, is skill. This skill is mediated – that is, there are specific technological and sensorial processes that are intrinsic to learning to sense (and to seeing in particular, as was the focus of this chapter). The idea is not to see the senses as functions of technology or of media; in fact, this and the following chapters are interested in what happens when anthropologists engage not *with*, but *through* media – namely, in how the senses and specific kind of media allow for ethnographic engagements.

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Notes

- 1 For an introduction to ethnographic methods, and particularly to fieldwork as a form of participant observation, consult, for example, Hammersley and Atkinson (1995, 104).
- 2 See, for example, Ingold and Vergunst (2016) and Ingold (2011). Drawing is one of the means through which to develop a higher awareness of the way we look around us, and consequently of what we expect to reproduce when we use ‘mechanical’ means such as cameras.
- 3 See also the work of Klaus Amann and Karin Knorr-Cetina in laboratory practice (1988).
- 4 This is precisely the point made by Rupert Cox, Andrew Irving and Christopher Wright when they write that “[W]e end up confusing the act of seeing with what the camera makes visible in ways that reduce our understanding of seeing to looking

at images. This is the position staked out by the anthropologist Tim Ingold, who, in a series of phenomenological and ecologically inspired writings about perception and the environment (1993, 2000), argues against a representational theory of knowledge about the senses (2011)” (Cox et al. 2016, 14).

- 5 Being-in-the-world (*Dasein*), or “being there,” is an expression that Heidegger employs in his work *Being and Time* [*Sein und Zeit*] of 1927 (1962a). It is a fundamental philosophical notion that links human existence with relationality. Hubert Dreyfus (1990) explains how Heidegger’s work is conducive to phenomenological analysis of experience. The recent film by Tao Ruspoli (2010) shows how it is fundamental to existentialism.
- 6 Similarly, the current work of Stefan Helmreich provides an analogous example of how gravitational wave sounds “emerge from semiotically and technologically specific articulations of humans with machines with nonhuman phenomena” (2016, 467).
- 7 For example, in her monograph *Blindness Through the Looking Glass*, Gili Hammer shows how “blindness, as well as sightedness, is constructed as social, cultural, and embodied experiences” (2019, 1).
- 8 “The actual work of art is what the product does with and in experience” (Dewey 1994, 204), namely “the human conditions under which it was brought into being” and “the human consequences it engenders in actual life-experience.”
- 9 “Art denotes a *process* of doing or making” (Dewey 1994, 207, my emphasis) and “the word ‘esthetic’ refers to experience as appreciative, perceiving, and enjoying. It denotes the consumer’s rather than the producer’s standpoint” (206).
- 10 Available open access on www.sensorystudies.org. This portal of the Centre for Sensory Studies at Concordia University in Montreal also offers extensive bibliographic references.
- 11 For a review of projects inspired by this edited volume, consult the portal of the Centre for Imaginative Ethnography: <http://imaginativeethnography.org/a-different-kind-of-ethnography/>.

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