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SOCIETY, ENVIRONMENT, AND METABOLIC JUSTICE IN RURAL SARDINIA

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To my kin  
And the reader of this work

When we die, they may bury us or collect our ashes, but remember this: from baby teeth to skin cells and everything in between, most of the matter that has worn your name is already spread throughout the world. We bury our remains in the soil of our lifetimes.

Can you feel it? So many of the cells that have formed the community of your body have returned to nature. Most of the water that has fueled your life has returned to the sea. The substance of your form is not fixed. It flows like a river to and from the wilderness.

Moss doesn't think about being alive and mountains don't consider themselves to be dead. Death has no place in the vocabulary of nature. To worry about death is to forget that we, the moss, and the mountains are all part of an undiminished whole that isn't measured in breaths  
(Anderson 2020).



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*Chini non at cantau una ninnia  
non podit sperai in d'unu attittiau.*

*The one who never sang a lullaby  
can never hope for a dirge.  
Sardinian proverb*



# Introduction

When I first arrived in Sardinia in 2020, I was already interested in environmental anthropology: I aimed at preparing a PhD project focusing on the clashes between institutional and local practices of animal care in the context of a once widespread diffusion of the African Swine Fever Virus (ASFV). As soon as I drove my car out of the ship that led me from Naples to Cagliari (the provincial capital of southern Sardinia), I reached the first bar I could find to have breakfast. While munching my croissant, I was scrolling the news on social media, and that was when I saw it: a newspaper article communicating that ASFV had been eradicated from most of Sardinia. The reader can imagine the swear I mumbled. I was kind of prepared for it though: apparently, this is a fairly common experience among ethnographers. As soon as one arrives in the field, their original research object, for one reason or another, often simply slips through their fingers. So, I shrugged, finished my croissant, lit a cigarette, and started driving towards Funtanalba<sup>1</sup>, a small village resting on the winding road that slithers across the Campidano plains (the zone around Cagliari), and through the hills and mountains of Barbagia, Sardinia's innermost region.

I was introduced to this small village where I ended up residing in for my twelve-month fieldwork, by some distant family friends from my hometown in mainland Italy. They were originally from Funtanabla, and some of their relatives still live there today, albeit the village has a population of well below nine-hundred official residents. However, if one counts only those actually living in the village, excluding young people who move to Cagliari for university or work, the number is even smaller. The village sits at the southern boundary between Barbagia and coastal Sardinia, in the subregion of Barbagia di Seulo (Seulo is one of the biggest

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<sup>1</sup> If one grabbed a map of Sardinia, they would find no such village: this is because this is a fictional name, and comprises all the neighbouring small towns I visited during my twelve-months fieldwork research. This choice has precedents in anthropological literature of Barbagia (cf. as ex. Meloni 1984), and has been taken for anonymity reasons: given that rural shepherding practices often sit on a fine line between legality and illegality, and that rural villages here host an extremely limited number of people, simply granting anonymity through pseudonyms would not truly protect my fieldwork friends.

villages of this area). Barbagia is a Sardinian subregion located in the mountainous centre of the island. The term itself derives from the Latin “*barbaria*”, used to describe both a population of non-Latin nor Greek-speakers, and a place suited for “barbarians”, associated with “barbaric” and “wild” lifeways. This myth, although profoundly transformed, has survived into the present Italian imaginaries about Sardinia. More recent phenomena, such as banditry and kidnappings have reinforced this stereotype—one that Sardinians may either strongly reject or strategically employ.

The subregion is further divided into areas named after the main villages of a given province: Barbagia of Seulo, Nuoro, Belvì, and so on. Villages are often poorly connected to each other, which results in relative isolation and linguistic variability. Barbagia also complicates the classical notion of centre vs. periphery. Usually, the centre is imagined as the place best served by infrastructures, markets, and institutions, with the periphery as its counterparts. In Sardinia, however, the opposite holds true: the coastal, “peripheric” subregions align more closely with national institutions, markets, and tourist circuits; while the centre still retains relative features of rurality, tradition, and exclusion from transnational streams of goods and people when compared to the coastal cities of Cagliari, Sassari, or even more the best served centres in the “continent”—the term Sardinians use to refer to the Italian peninsula. This category does not simply mark a geographic separation but it also signals difference in subjectivities and social class. As this thesis will demonstrate, the unequal distribution of wealth and services between mainland Italy and Sardinia, and between coastal Sardinia and Barbagia, reflects the «modernization without development» (Schneider *et al.* 1972) experienced by many regions of Southern Europe at the end of the twentieth century.

As a consequence, popular discourse in Sardinia tends to construct the island and its population as victims of colonial invasion by mainland Italy (cf. Pitzalis 2012): “*Sardinia no est Italia*” (Sardinia is not Italy) is a well-known motto, both within and beyond separatist parties, associations, and informal groups across the political spectrum. This idea is so ingrained in local discourses that, when I remarked that I was about to “return back to Italy”, people often cheered loudly, congratulating me for having readily understood “how things work”—that Sardinia is indeed distinct from Italy, a difference that must be enacted in both discourse and practice. Recently, critical decolonial perspectives have also

emerged in Sardinia, tracing the emergence of the Sardinian subject through history and literature (Cherchi, Pau 2024). Funtanalba represents a perfect research object precisely for this reason: positioned on a (imaginary, yet very real) boundary, its residents often described it as the “Wall of Barbagia” (like the Great Wall of China). Yet this metaphor, whether used to confirm one’s status as a (true) Sardinian or not, points less to separation than to porosity. The wall functions more like a sponge, filtering yet absorbing different values and practices – an effect heightened by touristic interest in Barbagia. During my fieldwork and the years leading up to it, the area saw an increasing number of tourists from Sardinia, mainland Italy and continental Europe, particularly during village *feste* (feasts)<sup>2</sup>. It also attracted new residents from across Europe.

Only a few days after arriving in Funtanalba, I began reflecting on a new research topic. I found myself in a shepherd’s basement, where he wanted to show me something. At first glance, it didn’t seem very remarkable, it was just some wheels of cheese in plastic crates. But on closer inspection, I could see small critters writhing on its rind. I was looking at *su casu martzu* (the rotten cheese), a traditional cheese that cheesemakers produce with the aid of *Piophilina Casei* flies, whose larvae transform the cheese and are then eaten alive with it. In that moment, although I knew nothing about this cheese, I was certain of one thing: the larvae themselves had much to say. After this initial multispecies encounter, I wrote a new PhD research project, which was later accepted by the University of Milan (Italy) and further enriched through two visiting periods and collaboration with the Centre for Rural Policy Research (University of Exeter, UK). My initial plan was to investigate local practices of food production, particularly meat and cheese, through a multispecies lens. I aimed to understand how this cheese could represent a form of more-than-human resistance to capitalist streams of food production, and how Sardinian shepherding and cheesemaking could reveal something about sustainability and ecological reproduction. However, during fieldwork I realized that those larvae pointed to something broader, a process at

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<sup>2</sup> The term *festa* (pl. *feste*) is hardly translatable in English, summing up aspects of “party”, “town festival”, and “feast” together. Thus, for example, one may have *feste di compleanno* (birthday parties) or *feste del patrono* (town festivals for the local saint). However, in Sardinian, *feste* are also intended as a (more or less) spontaneous gathering of people eating together not to celebrate a particular recurrence, but simply (?) to enjoy spending time together. Thus, in the course of this work, I chose to translate *festa* with feast to convey this regional meaning of the word.

the intersection of social decay, ecological unravelling, and the profound socioecological transformations brought about by capitalist markets.

To understand this process, I engaged with anthropologist Annemarie Mol's provocative questions: «What if we were to stop celebrating 'the human's' cognitive reflections about the world, and take our cues instead from human metabolic engagements with the world? [...] What if our theoretical repertoires were to take inspiration not from thinking but from eating?» (2021: 3). Through multispecies ethnography, I tried to get a glimpse into how more-than-human communities locally compose each other. Following Mol, I was less interested in thinking metabolically than in metabolism as thinking (*ibidem*). Influenced by Eduardo Kohn's (2013) analysis of nonhuman semiotic processes, in which animals and trees produce meaning, I took that a step further, reading Elizabeth Povinelli's (2016) critique on the dichotomy between life and non-life. I tried to depict humans, nonhumans, and abiotic factors as elements of a much broader process – a metabolic process that creates and is created by such entities. This epistemological stance led me to frame an irredeemably relational world in which ethics precedes individual lives (Rose 2022: 65). One in which the embodied biogeological processes constantly masticate individual bodies into existence are always and inevitably soaked in ethics. By adding non-living entities to Deborah Bird Rose's concept of double death, which involves a man-made amassing of death that halts life itself, I will show the profound links between such ecological multispecies ethics and the broader sociopolitical environment. Extractivism (of both live and non-live entities) will be shown as fundamentally opposed to environmental reproduction.

This research ended up showing the contemporary declinations of a process other scholars described in great detail (cf. as ex. Polanyi 1944; Collier 1997; Scott 1998; Federici 2019; Weiss 2022): the profound modification endured by European peasants, which drastically changed their environment, social fabric, and subjectivity—indeed, to the point of turning peasants into citizens. This process fundamentally eroded the ability of local populations to sustain their land. My contribution is to add a new dimension: using the heuristic tools provided by environmental anthropology and multispecies ethnography, I observe this process within the whole more-than-human community of a Sardinian rural village, linking political ecology with the contemporary multispecies turn in the

humanities. In this way, I aim to reveal the echoing, mutually reinforcing effects that transformed both people and landscapes, both beliefs and organisms.

To pursue this analysis, I adopted the concept of metabolic justice. First developed by Sophie Chao (2023) the concept emerged from her work on hunger among the Marind people of West Papua. Chao examined how transnational powers, materialised in oil palm plantations, disrupted the capacity of more-than-human<sup>3</sup> communities to sustain themselves through emplaced practices of eating and being eaten. For this reason, my research started to observe the mutual, multispecies nourishment that takes place in shepherding assemblages, and to examine how these processes have been disrupted by the deployment of market economies in rural Sardinia. Fieldwork revealed that this mutual nourishment was inextricably bound with food sovereignty, ecological unravelling, and the withering of the social fabric in Funtanalba. This led me to explore how the local society reproduces its collective capacities (Whyte 2018) of socioecological restoration. To put it simply, what I came to realize was that if I wanted to understand the multispecies and sociopolitical intricacies of *su casu martzu*, I had to understand the socioecology of Funtanalba as a whole, and the cosmology (cf. Herzfeld 2018) of my fieldwork friends—their symbolic and material way of ordering and understanding the world. While the definition of food sovereignty has evolved alongside the concept of food security, it has consistently aimed to safeguard communities’ “capacity to produce their basic foods while respecting cultural and productive diversity” (Via Campesina 1996; cf. Patel 2009: 665). Here, I extend this idea with a more-than-human perspective, arguing that food sovereignty can only be achieved if all participants in nourishment—humans and nonhumans alike—retain their own modes of feeding. Lions and humans, birds and cats, emus and flies: all take part in a shared exchange of flesh, an exchange that collapses as biodiversity and interspecies connectivity decline.

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<sup>3</sup> More-than-human, nonhuman, other-than-human, etc. are all terms sparked by the recent rise of multispecies and environmental studies, and, while being admittedly limited and still more or less rooted in a dualism (humans/nonhumans), they seek to problematize the speciesism ingrained in both language and conceptual thinking. However, and maybe for the best, these terms do not enjoy a precise categorization in our field. Hence, in the course of this work, I will employ the term “nonhuman” to address specifically nonhuman animals, and the adjective more-than-human to refer instead to communities comprising a multitude of species. Living beings in general, following the anthropologist Deborah Bird Rose’s (2013a; 2022: 13) phrasing, are instead referred to as creatures – not to refer to a prior act of “creation” but, to the contrary, to underline their ongoing participation in a life-creating process always coming forth.

Food sovereignty has often been defined as “the right of people to determine their own food and agricultural policies” (Schiavoni 2009: 682), restoring control over food systems from corporations and international institutions to local communities (cf. Via Campesina 1996; Ishii-Eiteman 2009). My approach widens this framework to include nonhuman metabolic and reproductive labour (cf. Barua 2018), underscoring that food sovereignty cannot be achieved without recognising it as a profoundly ecological—not merely sociopolitical—issue

This thesis shows how the modes of capitalist modes of food production and distribution have profoundly affected society, the environment, and the very bodies of the creatures entangled in these processes. In doing so, it highlights the inescapable entanglement of nature and society, matter and history, ecology and politics. Most importantly, it discusses mutual nourishment as a fundamental metabolic process binding socioecologies together and, helping us to understand one root cause of the so-called Anthropocene, it sets to imagine ways to counteract it. I adopt the term Capitalocene (cf. Moore 2016a) rather than Anthropocene, aligning with scholars who prefer alternatives such as the Plantatiocene (Haraway *et. al.* 2016) or Wasteocene (Armiero 2021). These terms are not in competition but emphasise different facets of ecological unravelling, offering more precision than Anthropocene. While the Anthropocene concept implies that “humanity” as a whole scarred Earth’s systems (Crutzen & Stoermer 2002), this notion is misleading. While this assumption had a key role in raising awareness around the ecological disasters to come, it is simply false. The Anthropos implied in such concept «is an abstraction based on a white, male and heterosexual historical subject in possession of reason [...] and the means of production, by which tools it is entitled to extract labour and value from what it defines as the Other» (Barca 2020: 5). The Other, here, are women, nonhumans, and the racialized subjects that were “made to work” in service of capital accumulation. As such, the Anthropos we are talking about is «not a species [...] but a power system» (*ibid.*), and thus a precise economic and sociopolitical structure. So, the question that is raised from this is: why not address such a structure directly?

Of course, to talk about “Capital” as the root cause of the ecological unravelling we are witnessing today would also be incorrect. Slave trade, plantation economies, and colonialism, for example, existed well before capitalism

*per se*, and they are historically fundamental for diffused ecological unravelling and the later emergence of the steam engine, industries, and capitalism. However, as Moore argues, the “capital” in Capitalocene «does not stand for capitalism as an economic and social system [...]. Rather, the Capitalocene signifies capitalism as a way of organizing nature—as a multispecies, situated, capitalist world-ecology» (2016b: 6). If we reflect in terms of “systems of organizing nature”, extreme forms of control on more-than-human communities, profound inequalities, and vast-scale ecocide (albeit broadly intended) are hallmarks of all the sociopolitical configurations listed above, from slavery to neoliberalism<sup>4</sup>. Conversely, employing the term “Anthropos” means to erase the central issue of such partiality: it naturalizes the problem, shrugging it away by just assuming the “human” as a homogenous category. As if the ecological devastation we are witnessing was simply the natural development of our species, and not the result of precise naturalcultural formations. In a sense, to reproduce this notion neutralizes anthropology’s critical potential by passively accepting a homogenized notion of humanity that we so fiercely fought in the past. Once we accept this, it becomes easy to fall prey to technoscientific dreams of geo-engineering and the like, and accept them as the only solution to our current predicament (cf. Moore 2016b). This reflects an eco-capitalist realism, almost inevitably premised on «shifting environmental costs towards [...] ‘developing countries’ and the world’s extractive frontiers» (Barca 2020: 11), thereby further entrenching the extractive redundancy of our socioeconomic system. What my fieldwork friends showed me instead is that at the heart of our current ecological unravelling lies a problem of justice—both environmental and political.

Yet the notion of environmental justice is itself problematic, as it is rooted in anthropocentrism. Justice as a concept is tied to jurisprudence and (human) rights, and it assumes «a human subject who suffers for injustices perpetrated against them by other humans» (Gearty in Meloni 2021: 67). In this sense, the very notion of justice «hides an implicit parity between human subjects able to suffer in the same way and to perpetrate the same injustices on another human being» (*ibidem*), as well as a shared capacity to reclaim one’s rights. Within such a framework, it becomes difficult to imagine justice in more-than-human terms:

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<sup>4</sup> In particular, about ecocide as a necessary means of colonization, cf. as ex. Pugliese 2020; Dayan 2022.

animals are not thought capable of enacting structural violence against humans, nor of conceiving “rights” in ways that resemble human understandings (which, in any case, themselves vary widely across cultures). In current debates, environmental justice extends to include the suffering of non-human species with whom we co-inhabit spaces (*ibid.*: 79). It is less about individual redress and more about broader communities of living beings subject to structural violence and inequalities. Although grounded in western jurisprudence and individualism, it is employed to draw the attention towards those violent processes that undermine more-than-human local lifeways around the globe. While lifeways are not subjects, they can be hegemonic or subaltern. Thus, to exclude a notion of justice simply because “humanity destroys nature”, or because nature itself cannot be considered a “victim” (not being a subject able to cooperate or retaliate in search for justice) (*cf. ibid.*), is, at best, an exercise at missing the point. To avoid confusing the reader with the broader concept of environmental justice, I instead employ the term ecological justice—shifting the focus from justice between human communities to what some calls multispecies justice (*cf. Chao, Bolender, Kirksey 2022*)—and, later, to the concept of metabolic justice (*Chao 2023*).

Furthermore, if we are to confront the contemporary ecological unravelling and its causes, we must rethink both the ways we consume and the ways we are consumed by the world we inhabit. We also need better stories to express this (*cf. Haraway 2019*). For this reason, this work adopts a writing style that is closer to literature rather than to objective sciences. This endeavour represents a shedding of the discipline’s lingering pretence of objectivity: anthropology, if it aims to cultivate descriptive, explicative, and epistemological pretence, it must first delve into different thoughts and cosmologies, and deconstruct its own tools of investigation in the hopes of actually investigating something (*cf. Evans-Pritchard 1971; Fabietti 2018*). If we want to study, say, family, we must deconstruct our own naturalized assumptions of what family is, and then attempt to understand what the concept means to others- if it means anything at all (*cf. Fabietti 2018*). Only then, through tentative comparisons, can we begin to say something valid about family in the society under study, let alone what “family” should mean for humanity in general<sup>5</sup> (*cf. ibidem*). But most importantly, the writing style

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<sup>5</sup> Which, it must be stressed, is itself a cultural construction inside the Western system of thought: rarely human cultures have crafted ways to refer to “humanity” as a homogeneous category.

employed here follows the contemporary interdisciplinary call for new modes of knowing the world (cf. as ex. Haraway 1991, 2019; Houston 2013; Oppermann & Iovino 2016; Barca 2020) that environmental anthropology, ecofeminism, and multispecies ethnography have also often employed (cf. as ex. Rose 2011; Plumwood 2012; Tsing 2015; Tsing *et al.* 2017; García 2019; Chao 2022). As with anthropological investigation itself, if we do not change the tools through which we read reality, we risk reproducing our own, tested and true, biases and parallax errors. For this reason, it is worth stressing certain aspects of research ethics and methodology.

## 1. Ethical considerations about doing ethnography among shepherds

This investigation was carried out by an anthropologist born in a small coastal town in central Italy, a place marked by recent gentrification<sup>6</sup> yet still shaped by its rural past. Returning from fieldwork, I realised the insights I had gained in Funtanalba resonated with my own biography: the processes I observed there had also shaped my hometown, albeit in different timeframes and modalities. I recognised my own quite yet deep resentment towards the transformations my hometown endured, feelings born partly of romanticism and nostalgia, but equally grounded in the subjectivity of being raised in a (progressively less) rural context in central-south Italy, and of witnessing the very processes I describe here without yet having the words to capture them. The insights I gained in Barbagia are not confined to its mountain ranges; rather, this subregion proved an especially sweet vantage point from which to observe global transformations in both nature and society. Barbagia is both unique in its environmental and historical specificity, and representative of socioecological change in similar contexts.

My subjectivity as a researcher had at least a couple, major points of interaction with my fieldwork. On the one hand, being raised in an urbanized, (more or less) gentrified town, I was partly but inevitably perceived as what people

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<sup>6</sup> Although such gentrification came unevenly: it would be possible, for example, to highlight processes whereby local actors get priced out of bars, restaurants, and services; on the contrary, there has been no massive moving of new residents here, if one does not consider the summer exodus in which the town brims with tourists.

referred to as “city-dweller”—a category that, as we will see in a moment, designs a locally despised set of practical and ethical orientations. Being employed by the University of Milan could, at least initially, contribute to exacerbate this categorization: Milan is, in fact, employed in local discourses as a synecdoche for any massively urbanized and (thus) alienated, depersonalized context, being considered the quintessential “city”—thus, the place where quintessential “city-dwellers” live. On the other hand, being a male researcher had an obvious impact on this research, as it was focused on sheepfolds and shepherding lifeways—a field which, in Sardinia, is traditionally seen as exclusively male. Stepping as a male into a male-dominated field is inevitably going to influence data collection and access itself.

To engage with the more-than-human field of Funtanalba, I followed the American Anthropological Association’s ethical guidelines (AAA 2012), adapting them in the local context. I checked my research behaviour regularly with both supervisors and fieldwork collaborators, often discussing my interactions and sharing presentations, publications, photos, and insights from participation and interviews. This meant testing my methodological tools not only in academic contexts, but also with my collaborators in Barbagia. Sometimes, this meant mediating between two very different sets of values. If the principle to do no harm (*ibidem*)<sup>7</sup> was, for instance, central to my attempt at anonymizing local actors, I had to bear in mind the intersection of at least two scales: to protect local actors from external forces, and to ensure their anonymity against internal actors. Some of my collaborators were not worried about being identified by, say, national or international institutions, but about being recognized by fellow village people; some didn’t want anyone to know too precisely what was happening in their sheepfolds and cheesemaking pots. Hence, granting them anonymity through simple pseudonyms would have been insufficient. For this reason, I followed Liisa Malkki’s (1995) ethnographic approach in her work among Hutu refugees: while my ethnography focused mainly on the proximity with two local shepherds and cheesemakers, instead of simply swapping their names with pseudonyms, I merged different voices and subjectivities that now compose the actors appearing

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<sup>7</sup> This idea, which anthropology imported from the medical sciences, has been criticized: if, for example, it is usually clear how to define harm to an individual in medical practice, it is incredibly more difficult to uphold this idea while working with human communities, «in which what is good and what is harm is usually in contention» (Leaf in Bell 2014: 1-2) – and not only within the community, but also between local and globalized sets of ethical considerations.

in the following chapters – Matteo, Francesco, Antonio, and so on. This choice was made thinking about recognisability, but also coherence: people of similar ages and backgrounds were merged and split (cf. *ibidem*; cf. also Guglielmo 2024b) in order to give the reader a faithful representation of the people I encountered during my ethnography in Funtanalba, while also preventing the possibility to ascribe each story to an individual person.

One problem I did not foresee was my friends' complete refusal to sign any kind of official document, including consent forms. Most of my interlocutors had no problem with audio-recordings, photos, or videos; on the contrary, they were the ones asking me to shoot another photo or record another story. However, those same people refused having anything to do with official documents and signatures. I still remember very clearly when one of my fieldwork friends, having received yet another request to sign the consent form, told me that his right hand was hurting a little, and asked if I could sign it on his behalf. I had to adjust how I sought and obtained consent to what my fieldwork friends deemed 'right'<sup>8</sup>. This resulted in asking their permission to record in each instance and make them aware of the data I was collecting. This meant reminding them about what I recorded, the words and arguments I would employ, and their right to object to any of it through refusal or withdrawal. Sometimes, I was the one arguing that some conversations might be better left untouched in my recording device, or that some photos were better left untaken. I did so with the explicit intent of giving them a sense of how the data I was collecting would be used in the future, apart from using it as a strategy to continuously ensure that consent was truly given.

There were people who consented to having an anthropologist around and actively sought my company; others simply stopped answering my calls, and I took that as a withdrawal of their consent. While it is common for anthropologists to slowly seek and obtain consent, sometimes the opposite happened, and people who agreed to being recorded one day refused the next. This is a perfect example of how consent is never something that can be granted once and for all. Sometimes, they just felt like they did not want to be recorded *that day*, and I accepted it with no questions asked. Further, as I was writing informal (non-audio recorded) interviews in my field diary, I always explicitly included them, showing

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<sup>8</sup> For a complete discussion on informed consent as an anthropological value, cf. as ex. Wax 1995; Fluehr-Lobban 1996; Bell 2014.

I was noting their words and asking for corrections or clarifications. I also took any chance I was given to show them their data and how I was using it—the photos, articles, and conference papers I was producing. This not only served the purpose of informing my fieldwork friends about my research; it also avoided, if just marginally, an issue which others (Murphy & Dingwall 2007) already highlighted in ethnography. I couldn't help but notice that during long-term ethnography, the people we work with tend to forget that we are ethnographers, and that what they share with us can always be turned into data. This became evident in some interactions I had. For example, on one occasion a shepherd was lamenting the fact that young people nowadays do not want to work and spend their free time in the sheepfold while I, on the contrary, seemed more than eager to do so. That was the perfect time to remind him that, notwithstanding my love for nature and the wilderness, I was there *because* I was working as an ethnographer, and not for personal pleasure. Or, at least, that the two things coincided, and what seemed a guy “spending his free time” with them was actually working constantly to gather data. Now, instead of taking too much space to discuss some of my favourite aspects of our discipline—namely, ethics and methodology, and having highlighted and briefly discussed some of their major points, I will try instead to offer the reader a proper prospect of this work, and how it will guide them through its pages to explore socioecological change in Barbagia, and to understand metabolic justice and mutual nourishment through its ethnographic and anthropological description. I trust the reader will find many other nods to this brief section, during the course of this work.

Heuristically speaking, the routes to take could have been many. In the end, I choose to trace a path that starting from human practices and the local discussion around social decay, is intended to slowly delve deeper into food products and the more-than-human connectivities from which foods emerge. To do so, I employed multispecies ethnography (cf. Ameli 2022). This methodological framework produced an environmental anthropology especially focused on the life experiences of some of Funtanalba's eldest shepherds and most experienced cheesemakers. While the importance of ethnographic frequentation of these two elders cannot be overstated, I also expanded my research to nearby shepherds and cheesemakers, many of whom were drawn from these shepherds' social networks,

and whose voices now compose and complicate theirs. The first chapter follows the discussion between three elderly shepherds describing the atomization of social relations in Funtanalba. It explores into the local ways of performing and embodying a sense of belonging towards one's village and community, before turning to the shift in subjectivities my interlocutors describe as "becoming city-dwellers". This process of subjectivation is shown inextricably tied to labour formations: drawing on my fieldwork friends' words, I show how wage labour is perceived to have qualitatively altered land management and community life. In particular, wage labour appears almost antithetical with local practices of mutual help. This double effect on land and society is closely linked to the withering of the village's food sovereignty – the ability of the local (more-than-human) population to sustain itself through emplaced processes of mutual nourishment.

This discussion serves as a starting point for the following chapters. Chapter II examines transformations in cheesemaking, offering a brief history before describing pasteurization as an ecopolitical force that reshapes more-than-human communities, altering feeding relations and the emergence of bodies themselves. I illustrate this through local examples: the consumption of *su casu muricau* (curd) and *sa casada* (colostrum pudding), which highlight embodied connectivity between shepherds, environments, and their more-than-human kin. Pasteurization and the biologies emerging from local foods are then linked with insights from medical anthropology and epigenetics, helping to interpret my fieldwork friends' reflections on the disappearance of local foods, bodies, and relational ecologies.

Chapter III turns to meat production and local practices and ethics around killing nonhumans, employing both ethnography and auto-ethnography<sup>9</sup>. Focusing on ethical accounts is key here: as we move towards the fourth chapter and the conclusion, my attempt will be to make ethics, physical bodies, and ecopolitics drift closer to one another. To discuss nonhuman killing, I will start from a multispecies ethnography of butchering, weaving together my experience, that of the shepherd, and that of the lamb's mother, calling for her kid. This story will provoke a discussion about the nonhuman ability to understand death. I then turn towards local practices of animal burial in the hopes to underline the

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<sup>9</sup> Auto-ethnography has been described among the most employed, and useful, methods of investigation in multispecies ethnography; cf. Gillespie 2021; Ameli 2022.

multispecies connectivity, and the mutual nourishment they engender. Finally, I will offer an ethnographic account of myself and a shepherd witnessing the death of a ram to return once more to the knowability of death. All these accounts will be required to contextualize death and show the impossibility of discussing it as abstracted from the socioenvironmental context in which it happens.

These reflections will all be key to understanding mutual nourishment and metabolic justice, the concepts I discuss in the fourth chapter. To describe and problematize mutual nourishment, I will offer two ethnographic examples. The first will be that of *su casu martzu* (the rotten cheese). I aim to describe the craft and consumption of this cheese, as well as highlight the metabolic relationality engendered by shepherds and *Piophila Casei* (cheese skipper fly) larvae. The second example will describe the mutual nourishment between shepherds, sheep, and *Oestrus Ovis* (bot fly) larvae, that act as parasites of the entire more-than-sheep flock. Both these examples will be key in understanding mutual nourishment as a process of constant mastication between creatures, and mutual nourishment as a fundamental process in the metabolic justice of local ecosystems<sup>10</sup>. In this way, I aim to show metabolic justice as a bridge between political ecology and environmental anthropology, resolving discrepancies between monist and dualist approaches to the unravelling effects of Capitalocene and its possible remediations.

The conclusion discusses to food sovereignty, framed through the example of indeterminate debts, to show how society and environment reproduce each other. Food sovereignty is thus understood as the capacity of a local more-than-human population to sustain itself through mutual nourishment. At the same time, indeterminate debts and mutual help will be shown as a cultural thematization of metabolic justice, and thus of the very ethical and material processes that keep life coming forth.

This work follows the same long and winding path I walked while navigating fieldwork, where impressions echoed and reinforced one another,

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<sup>10</sup> Of course, what actually is an eco-system is and has been object of debate. The term was first coined in 1935 by ecologist Arthur Tansley, who sought to employ it to pinpoint a combination of «living and non-living elements in something greater than the sum of its parts» (in Raffaetà 2020: 239). However, as Roberta Raffaetà shows, the term really took off only after World War II, when fields such as cybernetics helped translating ecosystem thinking in terms digestible to western sciences (*ibidem*). Then, during the '60s and '70s, humans started being included as actors in ecosystems, a fact which paralleled and, according to Raffaetà, stimulated the birth of environmentalist movements (*ibid.*).

revealing the deep connectivity of societies, bodies, and ecologies. While attempting to show the inextricable connectivity between societies, bodies, and ecologies, its full scope becomes truly clear only at the end. For this reason, I ask the reader to bear with me as I make sense of mutually reinforcing trajectories weaving together human and nonhuman flesh, practices, and collectives. We begin, then, with moral economies, and the emergence of a strange new subject: the city-dweller, whose arrival unsettled them.



# I

## Becoming city-dwellers. About commons, privatization, and withering worlds

This chapter serves as the starting point of this investigation, which—by exploring socioecological change in Barbagia—will lead me to discuss the Capitalocene, its effects, and the reparations enacted by the people I worked with to survive these global processes. I will follow the discussion between three elders, all involved in food production activities (two shepherds and one artisanal cheesemaker), as they try to navigate the changes they see happening all around them, both in how people relate with one another and how their land is lived by the same people. After a brief introduction on traditional commoning practices and moral economies in Barbagia, the first section will describe the embodied sense of belonging people cultivate with their land through an ethnographic account of *is passilladas* (the strolls).

The next sections delve into the local meanings of “city-dwellers”, and the processes that brought this subjectivity and lifestyle to Funtanalba. To be—or to become—a “city-dweller” is described as a process of sociohistorically and politically determined subjectivation, which elders capture through comparing the habitus (cf. Bourdieu 2020) of city-dwellers with that of current villagers, and even more so those belonging to their past. The third section turns to labour formations in Funtanalba, with attention to the moral economies that persist in the Barbagia di Seulo. By tracing changes in labour practices in rural villages, I discuss how capitalist modes of production altered the management of time and, in turn, eroded the village’s social fabric. Finally, in the fourth section, I will show the centrality of food sovereignty in the local reproduction of society, thus discussing the processes of the enclosure of the commons and primitive accumulation as constitutive of capitalist economies. I argue that the penetration of such modes of

production and consumption are responsible for the withering of both food sovereignty and the social fabric in Funtanalba, as the two are inextricably bound.

During one of my first days of fieldwork, I accompanied Francesco, a goat-herder in his late sixties, to gather woods for his stove and the fireplace in my house. I got into his car, and we visited a plot of forest belonging to his brothers; now, with axes and chainsaws in hand, we are chopping and gathering trunks. Francesco keeps telling me to choose those that are “beautiful”—it goes without saying that I have no clue on how to distinguish a “beautiful” log from one that is only half cool, maybe. As we are chopping and gathering, he asks if I wanted to go have dinner at his. «Yes but, at least, let me buy some pizzas for your family!» I answer. How ingenuous I was: it was still far too early to attempt such a move and daring to offer something back. «*Naah*», he answers, «you’re helping me with the logs, I’ll help you with dinner. How about that? *Ajudu torrau*, we say, mutual help, returning help» (inf. 10/11/12). When I ask him to explain it more, he answers with a sour, faint smile, describing it as an exchange of labour where workers share both the means and the fruits of the work. It’s like when you kill a pig, he says: many people gather to help with butchering, and then everyone eats pork together. But it is something of the past: «now people do it less frequently because money is needed for everything: bills, insurance...before, people did it much more» (*ibidem*).

It is probably important here to follow the anthropologist Gino Satta (2001) in his examination of Sardinian hospitality, especially towards *istranzos* (strangers, outsiders, but most importantly, guests). Following a prior study by Antonio Pigliaru (1959), Satta reflects on how the ethnographer in Barbagia is subject to a kind of “veiling” operated by the local community: the researcher gets integrated in the local fabric with a status of exceptionality that shelters them from local information, and may present a fictional, conventional image of «the community of solidarity, of disinterested relations, etc.» (Satta 2001: 102). I worked explicitly to fiddle with this local institution, constantly testing my limits as a guest: “Hey, this time, the drinks are on me!” — “No, don’t even think about it, you’re a guest here.” — “Oh, come on! I’ve been here for months; will there ever be a time when I can offer something back?!”

Slowly, and albeit in a limited way, I managed to become part of local circulations of gifts and offerings, and I could see how this qualitatively changed people's perception of my presence in town. Trust-building started long before, but in truth, it had just started in those moments.

In any case, offering food and labour in Barbagia is a fundamental part of local moral economies. People use *su cumbido* (lit. "the invitation") to offer drinks and food as a way to circulating moral debts within the community, exchanging favours, labour, but most importantly, reproducing social obligations among villagers (cf. Satta 2001: 166-168). *Ajudu torrau* is one other example of local institutions aimed at preserving the social fabric. Shepherds also practiced *sa paradura* (the reparation): when one of them lost a great deal of sheep, the other would gift them some sheep to recreate the flock. As Francesco and many others told me, such gifting strictly followed local norms of justice and retribution: one would not receive *sa paradura* if the community recognized that sheep were lost because of the shepherd's carelessness, or as a consequence of an *abigeato* (cattle stealing) that, for some reason, was judged as a rightful revenge by the village's community (Guglielmo 2023).

Such institutions<sup>11</sup> are not simply sets of rules but are better understood as a «cognitive and relational paradigm» (Padiglione in Satta 2001: 151) historically derived from *sa komunella*, the common use of land. Although outlawed in 1823, *sa komunella* remained strong in Barbagia. Shepherds in Funtanalba confirmed that their parents were still doing *sa komunella*, albeit very differently from the past – paying it with money rather than natural products being the first difference quoted. Here, *sa komunella s'indesci sculada* (the commons were fucked up), as many told me, around the Seventies, when people took inspiration from northern-Italy models of industrial farming, and started to buy and fence land to make their own private *aziendine* (little farming businesses). It was during this period that the contemporary "shepherd", and Sardinia as a quintessentially pastoral island, came into existence. Subsistence agriculture gradually gave way to sheep farming,

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<sup>11</sup> Examples of the local organization of agricultural labour abound in historical and anthropological literature. Carlo Maxia (2005), for example, offered a more thorough investigation of socio-productive relations among shepherds in Sardinia, accounting for different kinds of contracts and work formations. Some of them, such as the «'society' *a cumpàngius*» (*ibidem*: 102) (as companions) were also explored during my ethnography; unfortunately, to dig into all kinds of social contracts in Sardinia would lead us astray from the main point of this chapter. See also Meloni 1984: 111-ss.

with flock numbers increasing exponentially (Meloni 1984). This, in turn, emerged within the context of the modernization without development (Schneider *et al.* 1972) many rural Mediterranean regions experienced, where industrialized patterns of consumption came to coexist with a stagnation of local production<sup>12</sup>.

As a result, today a patchwork productivism can be observed among shepherds in Funtanalba. As they slowly transformed into producers (Zerilli, Pitzalis 2021: 86), sheepfolds came to integrate contemporary machinery with rusty tools: creaking tractors and stored vaccines coexist with hand-milking and the illegal neutering of pigs using scissors, ropes, and wine as disinfectant. Rewinding history by at least two centuries would show land in rural Sardinia as mainly administered by commoners through the commons, which secured food sovereignty. Giulio Angioni describes rural villages as «potentially autonomous entities regarding productive and housing possibility and organization» (1989: 183-184). Thus, while lands were administered through communal uses, Sardinian communities were able to «organize their access to resources in a way that granted survival through minimal and obliged forms of distribution and redistribution» (*ibidem*). Under federal rule local communities mostly provided for themselves, organizing access to land through dividing *pauberile* and *vidazzone/idassoni*. Lands were thus cycled annually between shepherding and agricultural use and monitored over by *su barracellau*, a group of men from the community itself (*ibid.*: 184-185; Maxia 2005)—a system Angioni notes functioned up until the enclosure of the commons. I will return to labour formations in Barbagia later in this chapter. For now, it suffices to note that this is old news for scholars of commoning: rural societies across the world have known such practices, generally employed to enhance community wealth (cf. Ostrom 1990; Fabietti & Salzman 1996; Parascandolo 2016; Coccoli 2019; Federici 2019; Graeber & Wengrow 2021). Likewise, economies based on gifting remain a classic anthropological topic (cf. as ex. Mauss 2016; Godelier 2018).

Commoning practices, as I will show, still persist in Barbagia, and continue to reproduce the social fabric. Yet things are beginning to feel unsettled. Meloni's ethnography (1984) attempted to track social changes in a small village in

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<sup>12</sup> The production of the Sardinian subject has been discussed in a decolonial fashion in Cherchi & Pau 2024, especially by Carla Panico (2024) and Federica Soddu (2024). Thus, it becomes possible to reflect about rural Mediterranean regions as a form of European South – what political ecology would call a locus of externalization of the socio-productive costs for the maintaining democracy and the State (see as ex. Mbembe 2019; Armiero 2021).

Barbagia between 1950 and 1970. He showed how traditional elements in Sardinia's culture found themselves mixed up with breaking points from the past. My ethnography will instead use 1970 as a starting point and try to describe socioenvironmental changes in Funtanalba's community. This chapter deals with the changing of society in Funtanalba, especially the withering of its social fabric in relation to changes in policies, the market, the environment. To depict it, I use a particularly narrow point of view: that of men around 65 years-old, directly tied to agricultural labour. Such narrowness is an explicit methodological choice: as my intent is to show the metabolic relations shaping human-animal relational health, I sought to find relatively old people who were or have been employed in shepherding which, especially in the past, has been a predominantly male activity (cf. as ex. Satta 2001). Furthermore, my intent is to show shepherding—intended not just as a job but as a whole socio-biological environment—as part of what Stefania Barca calls the forces of reproduction, those who «keep the world alive, yet their environmental agency goes largely unrecognized» (2022: 1).

Hence, the next sections follow a discussion with three shepherds in their late sixties, all living in Funtanalba, on the changing social environment and the perceived withering of the village's fabric—what people call “becoming city-dwellers” – alongside the decline of shepherding as a force of reproduction of a naturalcultural environment. In doing so, I will employ the ethnographic data I collected during my fieldwork research in order to produce a theory—an anthropology—of socioecological change in Barbagia. I will show how individual experiences here link up with the local society at the village scale, and how such experiences reflect broader changes on the global scale. Most importantly, my hope is to provide an emplaced description of the making and unmaking of societies, and how local communities manage to reproduce themselves—an investigation that I lead with the tools of environmental anthropology, but that is at the very heart of classical anthropology too (cf. as ex. Evans-Pritchard 1992). This may seem unimportant to some. Yet, as I will show, the rupture of these functions in Barbagia led not only to the withering of the social fabric, but also to the declining food quality and environmental conditions—illustrating how global forces find themselves expressed in local contexts of relative marginality. I am going to discuss places, relations, and time, trying to show how they become conterminously relevant when discussing food sovereignty—that is, the ability of

local populations to sustain themselves through their work on their land (see Federici 2019, cf. also Via Campesina 1996; Patel 2009). In the wake of the socioecological unravelling we witness today, it is of pivotal importance to understand how human societies adjust at the micro scale to secure communal survival. In any case, before delving in these issues, I want to start from a much simpler point: *is passilladas*, or the habit of taking long walks around town.

## 1. Walking through belonging. An introduction to cohabitation in Funtanalba

After a long, extenuating day in the sheepfold, I met with Francesco near his house: since I live in Funtanalba, almost not a single evening has passed without an invitation to have dinner with him and his family—Maura, his wife, and Aurora, his daughter. After some time, a joke started running between us, and then in the broader Funtanalba’s community, that he was my adoptive father, or that I *actually* was his son, left behind after some crazy times in “the continent”. More than once, both tourists and residents asked him if I was his son since many people thought we shared a similarity in both form and character. As soon as I arrived in his house, I asked if they wanted some pizza, trying to contribute to our shared dinners: this time, things had changed, and I was able to buy pizza for everyone. Francesco and I decided to reach the town’s bar by foot to order the pizza, what felt like a trek due to the twenty-minute consistent steep climb from the lowest to the highest point of the village. Of course, the small trip inevitably expanded to hours of walking around, traversing the streets slithering through the town and those outside, the dirt and dust roads reaching *su sartu* (the wilderness) through loops and windings. Such climbs slowly became a daily habit—*sa passillada*, “the walk”, they call it in Sardinian. However, *sa passillada* is much more than your regular walk in the park.

It is, to start, *the way* Francesco came to know me. I was just unpacking my stuff after arriving on the field for the first time when I heard a loud scream coming from my window: “*Alessà! Alessandro!*”—it was Francesco, who knew that a young anthropologist was coming to study shepherding in his land. He didn’t want to hear any excuses: I was to go with him to have a walk, chat, and get to know each

other. For Francesco, *sa passillada* weaves together peer-to-peer reflection, land management, relationship-building, and more. He often used these walks to vent his frustrations or enjoy a chat while pruning trees, clearing rubbish from the roads, repairing *muretti a secco* (dry-stone walls) scattered around town, or greeting passersby—tourists and locals alike—stopping to chat or simply wave. At times, his relatives joined us, and the reflection could turn into an occasion to reproduce or negotiate authority, or to consider possible courses of action on shared problems. I occasionally noticed others taking such long walks; however, I now realize that most were considerably older than Francesco – by at least ten or fifteen years. In the village, men of his age rarely embark on *passilladas*, preferring to either stay at the village’s bar or at home altogether. Younger men, on the other hand, have taken a strange turn: they reproduce their grandfather’s habit of having *passilladas* but, instead of walking, many let their cars loose, loudly darting through the tight streets of Funtanalba, often blasting reggaeton music from their sophisticated hi-fis.

In any case, while the bar can be a (especially male) space for weaving relations with peers, its dimensionality may be flatter than the *passilladas*: there’s no direct land management or control, no random encounters in the streets with either human or nonhuman passersby, no gathering of fruits, berries, or mushrooms—eaten, collected to take home, or photographed to boast with peers about *how big it was*. By contrast, consumption in the village’s bar consists mostly of packed products produced elsewhere, either relatively close or afar, even if the bar owners strive to include local products in their menus. This effort, while aligned with the current wave of heritagization of food and locality in Barbagia, still manages to incorporate local (more-or-less) moral economies with the broader market. Monetary and non-monetary debts and values interweave at the kitchen’s gate, when locally crafted ricotta gets paid with money, beers, and favours from the bar’s employees. If one adds how the bar’s counter is a crucial nexus for the reproduction of local moral economies through *su cumbidu* (“the invitation”; see as ex. Satta 2001: 164-ss.), it would appear clear how *passilladas* are not the only way through which the local population co-inhabits public spaces and reproduces its social ties and obligations. Things become more complex the more you look at them; hard distinctions tend to fade away. In any case, Francesco’s *passilladas* are much more than regular walks.

Let us think, for example, about sensuous commitment: «Do you like it like that?» (inf. 03/06/24), he would ask me, pointing to the shrubs around us while walking on the old railway. Embarrassed and not knowing what to answer, nor about what he was pointing to, I say «I prefer the woods, but it is also beautiful like this»; «aaah!» he would then answer: «I love it this way, with the rosemary, and all the scents around us». That was one of the moments I sensed how stratified his knowledge of *su sartu* (the wilderness) must be: when he asked if I liked that, I focused on my sight to assess its beauty; instead, he employed a multisensorial approach in his appreciation of the wilderness, taking in scents and connecting them to the scenery we were inhabiting. In this way, he both showed and explained an embodied approach to the wilderness<sup>13</sup>. I imagine that's also how a deep sense of connection is taught across generations, with young people hearing their parent's way of employing memory and perception to gather knowledge and aesthetic appreciation of their surroundings. One time, he stopped amidst the silent forest and inhaled and exhaled loudly the cold air, asking me with his eyes wide open: «and [city-dwellers] say that there is nothing here! *Do you feel that?! Do you?!*». I inhaled the freezing air too and nodded, guessing he was referring to everything around us: the trees and the hills, the crashing of a nearby river, the creaks and the pitched calls in the forest, as insects and birds played their song, the sunset and the chill, and the smells that he only could distinguish clearly—aromatic plants and flowers. Aurora, his daughter, was still discovering new paths and spots in *su sartu* around the village despite living the vast majority of her life in Funtanalba, I was attempting to do ethnography, and Francesco was teaching us a way of belonging.

During *passilladas* food, land management, and the reproduction of the social fabric may often go hand in hand. During the spring, Francesco took me and Aurora on spots that he knew by heart: *that* wild cherry tree, forty minutes away

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<sup>13</sup> Embodiment is today an almost classical hermeneutical frame in the anthropological analysis of, for example, ethnomedicine and ritual efficacy (see as ex. Csordas 1997; 2002) or bodily perception (Le Breton 2007). It proposes a removal of the Cartesian dualism to discuss perception and cultural symbols: in this way, cultural practices get materially sewn into one's body, which regulates its perceptual and biologic functioning around those culturally produced habits and stimuli. For instance, in the ethnographic example I gave above, I was influenced by what some call the oculo-centrism of Western culture (cf. Tomasello 2017), by which sight is considered, and thus employed, as the primary means to collect perceptual data about the world. Conversely, Francesco was using scents to assess the "beauty" of the place we were walking in. In any case, the hermeneutical framework of embodiment is often in communication with other theories of the embodied mind (see as ex. Lakoff, Johnson 1980; 1999) or society (Crossley 2001). For examples of embodiment, perception, and cattle breeders, see Grasseni 2004.

from his house, which nourished us little by little as each cherry matured with the passing of days. But Francesco was not the only one knowing about that tree: Maria and Francesca, two local women in their fifties, knew about it too, and went to gather its fruits while walking the same path, but from the opposite direction. Each day this became a tacit challenge: who would get there first and take the day's best cherries? And each day we encountered each other, joking on our rivalry—"did you steal our cherries today *too*!?", they would exclaim, mimicking rage. Jolly competition is not at all the norm though: much more frequently, we would be stopped by residents outside their houses, and they would offer us meat, fruits, and berries, and wine and cigarettes or weed, after we sat to enjoy a moment of respite in front of their fire. And while Francesco is one of the few of his generation carrying out *passilladas*, such exchanges nevertheless reproduced a local moral economy<sup>14</sup> based on the mutual gifting of food, services, and care. Sometimes, we would show up at people's houses uninvited and unannounced, only to receive the same treatment. Boiling hot horse meat was cooked on the fireplace, sliced and served as a *murtzu* (snack), all the while Francesco checked on a friend whose driving licence was taken away by the police. In such occasions, *sa passillada* became even deeper than usual, leaking into care practices and community building, making sure that a distant friend with a bad addiction was still faring well. And if he wasn't, it was about trying to cheer them up, to make them feel part of a greater whole, a net of caring people who are always there for their peers. I remember being moved from this, thinking about rugged, hardened humans strongly yet graciously holding each other up amidst their irremediable fragility and mortality.

While walking, I peered into what it could mean, to Francesco, to walk among houses and cars in Funtanalba: every doorstep was of some parent, or friend, or a friend's friend, or a parent's parent. Each house, each car had a name, and a story, and each story had other names naming additional stories. In this way, a car parked somewhere is not just a car: it is *someone's* car, parked at someone's place, at a precise time of the day and season. Names and stories contribute to weave the fabric of relations in which each is immersed, and that comes to build a

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<sup>14</sup> The concept of moral economy has been widely employed in anthropology, often in relation to peasant rebellion (Scott 1976), but also female solidarity in Africa (Hyden 2001) and to household economy (Cheal 2019) after being introduced by historian E.P. Thomposon (1971). I will expand on this concept and its implications and declinations in Funtanalba in the fourth paragraph of this chapter.

deep and deeply emplaced sense of belonging. Only now I realize what it means that this is *their* village. I also realize my house became a stop for Francesco's *passilladas*: when I locked myself up to study, organize data or write articles, he would often ring my doorbell in the late afternoon. "Ajo Alessà, let's go have dinner already!", he would exclaim hastily, two or three hours before dinner time, jokingly acting as if he had been waiting for me since hours. At other times, *passilladas* took a more nostalgic path. Sometimes, he would stop and grieve while looking at the empty orchards just outside the village, sourly mumbling that "there is no one left", while painting an embodied historiography of human presence into the wilderness: that orchard right there, that was his uncle's, or a family friend's, they produced *the best* potatoes there, they had favas and fruit trees that he loved to plunder as a kid. And look at it now: there's nothing left. There is no one left. And thus, now houses and orchards have a name no more: they bear but a remembrance, sewn in the doors' wooden knobs and scattered among the orchards' weeds. Francesco's belonging withers away as stories become memories, and their living names get slowly transformed into keepsakes.

This is, perhaps, another reason why Francesco wanted me by his side, while embarking in *passilladas*: to have someone bearing witness, hearing the stories, and recording his grief. Most of all, it was about transmitting and preserving stories, keeping them alive through memory, yes, but also through one's embodied presence, through the muscles and breaths that carries one to orchards now empty with people, yet still filled to the brim with memory and meaning.



*Fig. 1*

*Embarking on a passillada just minutes away from Funtanalba's old central square.*

The interpersonal closeness and cohabitation of spaces is something that stood out during my fieldwork: people really felt like moving in *their* space, in *their* village. It is hard to grasp it firmly. It is about the ability to use public spaces without considering them public spaces, but common goods. To suddenly grab a rusty, battery-powered skewer and roast some goat meat in the central square, and offer some to passersby, together with wine and chats. It is to take the blow, and negotiate cohabitation, when someone complains about the noise. It is asking the people who usually inhabit spaces, not institutions, for permission to light said fire, and to invite them to eat together—strategically, but also wholeheartedly. It is to inhabit squares and tight streets not as guests—the guests of private proprietors or the State—but as a community, where one's stepping is always done bluntly, yet carefully. It is the capacity to manipulate one's village individually, maybe through fixing some walls or signposts, but always in extreme accord with the village's sensitivity. It is to complain about being among the last in the town who still do all of this. It is to weave memories and a sense of belonging to places and people, founding and re-founding the social fabric through constant confrontation, discussion, and shared experiences of eating and drinking together. Most of all, it

is to share tools and helping hands, favours and money, or company<sup>15</sup>. I do not wish to present *sa passillada* as something inherently and utterly different from, say, taking a stroll in Central Park, New York: I am sure many themes would overlap, as many others would clash. Again, sociohistorical and environmental themes between Barbagia and my hometown in central Italy already overlap to some extent. It is important not to overstate difference, thus furthering an othering process which Sardinian subjects have already endured. What I am trying to depict here are some of the features that emerged during my stay in Barbagia, and especially Funtanalba. They will soon come in handy as we dive in the next sections, which will try to show the changes elderly people see in their ways of belonging to such places.

## 2. When the city came to town

Today's *passillada* has been rather uneventful: after I proposed to offer pizzas for dinner, we reached the bar, placed our order, drank a couple of beers, and then decided to go ahead and return to Francesco's house, as the bar's owner will deliver the pizzas himself. The drinks are, of course, on him. As we descend towards the old village again, we pass in front of the market owned by Matteo's wife, and there he is, unloading his van of fruit and vegetables he bought in Cagliari. Almost in the same moment, we are joined by Antonio, another shepherd in his sixties, one with considerably fewer sheep than Matteo does. When I first met Antonio, it was in *su monti* (on the mountain; in the countryside), and we were introduced by Matteo. He was quick to stress that shepherding is «just a hobby for me, now» (inf. 1/12/22), remembering about the days when he made a living out of it, and for his whole family. If I don't go to the sheep, everything is lost» (*ibidem*), he said, even if it is at an economic loss:

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<sup>15</sup> It would be all too easy to just dismiss these things as something that may happen only in “small villages”, where people are able to “know each other”. Such argument would not be too dissimilar from the idea that common property and non-hierarchical societies can only occur in small groups – a theory that has been disproven by anthropology and archaeology. For some examples, cf. Graeber, Wengrow 2021.

I could keep [and make use of] some ten euros [more] in my pockets, but I always have to go to the sheep, even if I got a bad sickness. Our fathers, before us, with just eighty sheep, they made their sons study, and graduate, but now, how do you do it? Then they go away, they go in the city. I could never do that, to live with those timetables, then people don't eat, they don't sleep...here, no one is rich, the land doesn't make you rich. But it never lets you starve (*ibidem*).

Curious: is it really true that land doesn't make you rich? If one thinks about, say, primitive accumulation, things would look like the exact opposite: the capitalist regime, and its founding accumulation, were *based* on the expropriation of local lands to further global markets (cf. as ex. Coccoli 2019). Or let us think about Monsanto, and other mega-corporations hoarding all the seeds and the lands and the foods: it would be hard to maintain that land doesn't make one rich. It surely makes *someone* rich. And Antonio knows this very well. What he is talking about is a *relation* with the land—a non-exploitative, deeply local way of tending the land. Indigeneity and locality, social fabrics and their severing, sheep tending and sheep killing, the social and political ways in which time is mobilized and invented: these are all themes that will be explored in the course of this work and that, conveniently enough, emerged during the ethnographic moment I wish to describe here.

Despite the chill wind that started blowing noisily among the stone and cement houses, the three elders start discussing: the matter is serious, as Antonio is accusing the people of Funtanalba of having become “city-dwellers”—an accusation few of the elders would take lightly. The dualism Antonio is employing rests on the idea that Sardinia's centre (the Barbagia) and periphery (the coasts) are neatly separated both materially and socio-historically: Barbaricini and “city-dwellers”, consequently, would share dramatically different sets of values. This idea is tied with a whole lot of historical and political notions: the coasts are where money is, as Sardinia's coasts are dramatically more industrialized than Barbagia, and industrialized especially with continentals' money. Continentals' money, in turn, is often symbolized as morally problematic. Let us think about the heroically narrated farmer, Ovidio Marras, who refused to sell his lands to continentals who wanted to build a tourist resort there.<sup>16</sup> His story is tied with the stories of many

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<sup>16</sup> See as ex. <https://www.unionesarda.it/news-sardegna/provincia-cagliari/il-pastore-duro-e-puro-non-vendo-nemmeno-per-700-milioni-bzm8a9x0> (last accessed 06/01/2025).

others, farmers and shepherds, who were tempted to sell their lush lands and let continentals build their resorts and villas—“what would you do, if they offered you 200 million euros for your lands?” many would murmur sometimes angry, sometimes intimidated, and sometimes resigned, with a shadow on their face and eyes wide open, but pointed slightly lower than their interlocutor’s. And while one could accept such an offer in an instant, knowing to have made enough money to feed their sons and nephews, it is easy to spot the moral danger some realize they would be exposing themselves to by accepting such an offer.

I believe this moral danger is deeply entwined with what Tracey Heatherington (2010: 104-106) would call embodied authority: Sardinians, and especially Barbaricinis’ identity<sup>17</sup>, is often profoundly linked with their lands, in both practical and symbolical terms, and this can be said to create a deep-seated sense of both belonging and authority. What I suspect is that the moral fear many embody at the idea of being expropriated of their lands is, among other things, deeply tied with the sense that, as rural villages depend less on and less from their countryside, they become cities, and thus people become city-dwellers too. City-dwellers are generally wealthier, sure, but they are also often cheap, stingy, pointy-nosed, and interested in nothing but their own health and wealth. Worst of all, they are said to scrounge all they can and then ask for a discount when buying the rest. I remember the instant look of complicity that Francesco and I shared when we ended up selling his cheese together during a *festa* (village feast), and a man from Cagliari started eating all the little test slices while trying to distract us with questions. After having finished more than half of the just-prepared plate, he asked for more, only to then ask for a *tiny* wheel of cheese—“but you will make a discount for me, will you?”. Francesco was giving me knowing glances, and then spent half the day enraged. That is, quintessentially, what being a city-dweller is about: not to recognize value beyond money, and thus failing to respect all that which goes beyond money. “You don’t ask for a discount in the supermarket, don’t you?!”, Francesco would exclaim on many of those occasions, with a joking tone barely masking his disappointment. Freeloaders are commonly and evidently despised by anyone in the community of Funtanalba and, I reckon, in more places in Barbagia, constituting a tested and true social category for individuals. Subtracting

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<sup>17</sup> For other works investigating more profoundly the elements composing Sardinian identity models, see as ex. Bachis 2015. Other works have underlined how such models often oppose a mythic past to the present, see as ex. Meloni 2015.

oneself from local ties of mutual gifting and nourishment, in any context of structural scarcity, is a sin hardly forgiven by local populations, and here it could be traced back to the damages to individual and communal property worthy of vengeance—another social practice widely recognized in Barbagia, especially in older times (see Meloni 1984: 110-111).

That is one of the reasons why, according to many, *feste* changed drastically: still in the Seventies, people were opening their houses to passersby, offering food and wine. However, as more and more people started to come from the Campidano, all expecting to be offered food and wine, people in Funtanalba started charging prices, and monetary values phagocytized what were previously exchanges based on and reproducing a moral economy. Gino Satta (2001) offered a clear depiction of this process through his ethnography of the “lunches with shepherds”, a tourist attraction that employed shepherding communities in Barbagia to simulate feast days in the sheepfold and sell such experience to tourists, thus commercializing hospitality (*ibidem*: 79) and monetizing festive practices of redistribution. In this way, according to Satta, lunching with shepherds represents «the sacrifice of a possible relationship in the name of an economic advantage» (*ibid.*: 121). Again, we find different values and practices in the same village and, sometimes, in the same individuals: if some in Funtanalba stubbornly rely on *cumbidai* (offering/gifting), or charging ridiculous prices for the goods they offer, others charge what they perceive to be the *prezzo giusto* (right price) and enjoy days of accelerated and often untaxed gains. Communal *festini* are still a thing in Funtanalba, but they shifted more and more towards tourist attractions during my ethnographic fieldwork, which spanned from 2020 to 2024. The reasons my friends gave me for it are very similar to the ones cited by the anthropologist Carole Counihan: «[t]he growing presence of outsiders, who came not to participate in strengthening social community but only to acquire free food» (1984: 54). This is only partially true: the presence of *scrocconi* (freeloaders), s/he who consumes but never gives it back, is only one side of the coin. The other side is the local population’s wish to patrimonialize their own traditional festivals, to attract more and more outsiders not participating in strengthening social community but growing the economic wealth of families and individuals involved in food distribution. This is a shade of the transition Counihan (1984) observed in

Sardinian *feste*, which shifted from acts of abundant public consumption, through the atomization of the social fabric, to acts of abundant private consumption.

Non-monetary values still find their place in Funtanalba's present-day market economy—and, conversely, market economy was already long established in Sardinia during the Nineties. What I want to introduce now is the category of “city-dweller” to allow the reader to appreciate fully how heavily Antonio's accusation may be perceived by some in Funtanalba, especially those directly employed in agricultural labour. City-dweller-like behaviours may be found in the village too. People in the village may also *become* city-dwellers, or be threatened by others with such possibility. For example, Francesco was outraged by the request of some tourists coming from Sinoli, the next village to Funtanalba, who demanded to have a plastic plate to carry home the cheese they were buying from him: “you are becoming a city-dweller yourself” was his half-joking answer. Thus, this category does not really imply a strong geographic connotation; instead, it is firstly a category marking (while sometimes exacerbating) a moral difference. To act as a city-dweller is about the social values implied in one's behaviour. Secondly, “city-dweller” is a class category. It generally marks people richer than the speaker, but even one's wealth is irremediably overshadowed by one's public social behaviour. To put it simply, such a category does not mark richness *per se*, but the social use of one's money. If one hoards, boasts, and never redistributes, they may very well be city-dweller-like. It must be very clear: when Antonio, standing strong in the blowing, freezing wind, harshly said that «We are becoming like city-dwellers»<sup>18</sup>, no one but a city dweller would take that fact lightly. Such an accusation is directly tied to the social structures everyone feels belonging to: to accuse Funtanalba's community of becoming city-dweller-like means to accuse it of losing its social ties, and the means for reproducing them. However, if none of them take this accusation lightly, and even if Matteo earnestly compares what he knows about neighbouring villages, finding how Funtanalba's social fabric changed, Francesco is in stark disagreement with them. As Antonio describes,

Sinoli also has it still—this tradition of being so much closer with one another. They are closer with one another, for their town. We are not—we lost these...the people from

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<sup>18</sup> All the interactions in this conversation have been recorded on 30/03/24 after asking for oral consent.

Agoni<sup>19</sup> too [†]; instead here in Funtanalba is different, because we have always been a place of passage. With the *campidano*, we always had relations...we have nothing in common with the Ogliastra.

M: *No!* To us, that's another world.

A: The Ogliastra is a different world to us!

M: We reach Sidali<sup>20</sup> and *bo!*

A: It's all finished! The *campidano* is different instead [as we still have relations with it].

M: Eeeh, we deal more with the *campidano*...

A: We deal more with them! If we move to Arizto<sup>21</sup>, maybe, we are not there [having business and familial relations]; Sinoli has more relationships with those villages [†]. And so, we are like that. So, Funtanalba is always a village like those-it's always a bit like that.

F: *Naaah*, I don't...

A: Yes Francé, we are like that! You, Francé, when you lived in tziu Erasmo's house [†], you think not, but there was a different relationship [between the village people]. Now you live below [in the lower part of the village], here, now I go out to sit in the shade, [angrier] with whom do I chat?!

F: Eh...well, but this...you are talking about another thing, you are talking about depopulation!

M: Yes, but when it is like that, people get farther from each other!

A: We get farther! We do not have left any...how do we meet each other? We [only] meet in the vineyard.

F: Well, but there is always something...

A: But it is different! It is different. [...R]elationships were...they were...relationships were closer, do you understand? Today I-if I see a car going through [the village], I don't give a shit, while before the neighborhood-if something happened...eh?! We were more attentive! That's because if something happens, if I live here [pointing to a house close to us], and you here [pointing to the next house], and you here, eh, if something happened, [one would say] "oh Matté, what happened...".

F: But that's because there is no people! Not because we don't have any...no, it doesn't...they are separate things.

M: [Pointing towards various houses around us, all property of people who died or moved away] this was a neighborhood. And they were all related to one another [†].

F: And everyone got along, while now...but it's a different thing, it's depopulation. But this doesn't mean that we are like city-dwellers...there is no one left here!

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<sup>19</sup> Fictional name to indicate a very close town to Funtanalba, with a similar population.

<sup>20</sup> Fictional name to indicate a very close town to Funtanalba, with a similar population.

<sup>21</sup> Arizto is a town not far north from the Barbagia di Seulo.

Their geographic excursus around neighbouring villages is filled with local knowledge about social structures, demographics, history. Antonio and Matteo strongly agree that the Ogliastra, a subregion of Sardinia placed in the central-eastern part of the island, is “a whole different world” for the people of Funtanalba. Such considerations basically acknowledge some truth in Antonio’s accusation: Matteo is admitting that they are, in fact, city-dweller-like if compared with the people from Ogliastra, but even from neighbouring villages such as Sinoli and Sidali. They motivate this with the fact that Funtanalba historically had many ties with the *Campidano*: in the past, shepherds in transhumance would bring their flocks down to the warm pastures of this subregion; furthermore, many people in Funtanalba today work, or have worked, or will work in that area. Conversely, Funtanalba is one of the very first small villages one would encounter when moving North from Cagliari, trying to reach the innermost parts of Sardinia. In any case, both acknowledge that social ties, even in neighbouring villages, are much closer than in Funtanalba. Antonio exemplifies the withering of ties in two ways: his loneliness when sitting in the shade, and the village people’s ability to share emplaced information on their village. Both complaints point to the withering of social ties in Funtanalba: the reduced cohabitation of public spaces results in his loneliness and the inability, for the townsfolk, to share information about their village. When going to Matteo’s sheepfold, or Francesco’s vineyard, we encountered Antonio more than once, stopping to have an idle chat about his sons, and the changing things in the village. Yet, this daily interaction seemed like loneliness to Antonio and his peers. When he says that they only meet in the vineyard, it is with an almost surprised tone, as if such daily banter was, in fact, nothing but a pale ghost of what Antonio recalls.

However, while Matteo is almost convinced by Antonio’s accusation that people in Funtanalba have become city-dweller-like, Francesco can’t stand such an idea. He vehemently defends the idea that it’s not Funtanalba’s people who have become city-dweller-like, it’s just that depopulation loosened ties inside and across families. However, as soon as Francesco says that «that’s because there are no people» Matteo, as if talking about something they both know very well, answers by stressing that the houses around us, albeit now empty, were once inhabited by people who were all *relatives*. While Francesco keeps blaming depopulation, Matteo subtly points to the relations linking people together. Francesco’s point is

not untrue: if before the village was filled with people who got along with each other, it is because there was actually someone to inhabit the place. But this is not the end of the story either. Funtanalba has experienced various waves of emigration: first, the generation before Francesco's was caught up in emigration fluxes that took them abroad, to Germany, France, and other distant places in Europe and America. Then, the generation of Francesco's sons started leaving Funtanalba to seek jobs and scholarization outside, either in Cagliari or in the continent<sup>22</sup>. Conterminously, their values and sensibilities changed, and you could sense that in the encounter between those two generations something changed.

A: [My daughter] can't live here, what does she do here, the [pharmaceutical chemist]?! What do you make her do here?! Ah?! Then, unfortunately, she has to go where jobs are! No?! Where jobs are, and she can do her thing. And she said: "my wage is like this", same thing, "I have to pay rent, this, that, what could I give to a son?!". I mean, why would she make a baby?!

Conversely, young people who stay in the village lack mentors, as the elders who stayed slowly become ancestors. As Armando, a shepherd just past thirty years, told me while talking about depopulation: «Not even elders are here anymore. Before, when you were young, you started working with them, they told you to chop wood, or to do stuff...now a kid doesn't have a place to work» (inf. 21/03/24). In any case, Antonio's, Matteo's, and Francesco's generation finds itself in the middle of these two waves of emigration: some of his peers have emigrated either to Italy or abroad, some of them studied in Cagliari, but the majority of them either stayed or returned to the village. As a result, when I checked the demographics for Funtanalba, I could see that its population had doubled in just fifty years. These changes are directly tied to European Union policies since the Fifties, which sought to drastically reduce the number of farmers using mechanization, chemicalization, and the overall capitalization of agricultural labour (Mies, Bennholdt-Thomsen

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<sup>22</sup> A similar process was shown by Jane Collier's (1997) ethnographic investigation of Los Olivos, a small village in Western Andalusia. Such investigation was further deepened by Hadas Weiss (2022), who testified how the *ethos* of desire that made people abandon their villages turned into one of endurance, which places «moral weight on ongoing efforts to get by» (*ibidem*: 63-64), and thus «renders hardships a challenge that requires and elevates strength of character, construing it as accomplishment rather than affliction» (*ibid.*: 65). In this way, the structural violence people endured because of the deployment of capitalist modes of production was transformed into a value, and thus domesticated as a just way to get by.

2001: 999)<sup>23</sup>. Subsidies for farmers thus came, granted to invest in «big machinery and production for the market. Those who could not compete in this field gave up farming, particularly young men who sought wage employment in industry» (*ibidem*). In many parts of Europe, this process was complemented with the beautification of rural villages, which «meant to make the village look like a suburban area, with parks for children, side-walks, well-kept houses where barns and stables were being transformed into flats for tourists, and kitchen gardens were turned into well-trimmed lawns» (*ibid.*; cf. also Moore 2000). Such beautification is deployed as a means for capital accumulation, which, again, substitutes local knowledges for food production, gathering, and preparation. As farmers become wage labourers, their means for food production are proxied by money and the market. Thus, well-trimmed lawns can substitute kitchen gardens, barns can be turned into flats, and the image of the countryside can be employed for furthering capital accumulation via tourism, while exacerbating the separation between local societies and their means of reproduction. Thus, while the expansion of market relations indeed brought people away from rural villages, suburban areas were conterminously brought into the countryside. Suburban areas, just like rural villages, are not simple spaces, but sets of relations between people and their space, and beautification is only a fraction of it. You change the space; you change the relations people have with it. Antonio, angered, exclaims:

Do you realize my son doesn't stay here anymore, my daughter doesn't stay anymore, who the fuck stays here anymore?! Who makes the traditions continue?! [Shouting] *who*?! There will be no one left in some time! And who keeps [the traditions ...]?!

F: Eh ok, but this...

A: No! I'm telling you that we—you take your grandmother into account, [then] *tziu* Erasmo, [then] you, [then] your sons. You do the social ladders<sup>24</sup> and see how we—how we are going forward.

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<sup>23</sup> This was later followed, in other parts of the world, Africa especially, with «the World's Bank attempt to create land markets and place all natural resources in the hands of commercial enterprises. [...T]he World Bank has adopted the creed that only money is productive, while land is sterile and a cause of poverty if 'only' used for subsistence. Thus, not only has the bank campaigned against subsistence farming, through land law reform, individual tilting, and the abolition of customary land tenure, it has also spared no effort to bring women under the control of monetary relations» (Federici 2019: 20).

<sup>24</sup> Here, Lucio probably refers to something at the intersection between modernization, industrialization, and the disappearance of traditional lifeways in rural Sardinia. To “do” the social ladder means to assess how class and modernity changed society and familial structures across four generations. The “social ladder” thus refers to class, of course, but its configuration in Lucio's words is more peculiar yet: on the one hand, the social ladder refers to the improved schooling

After Antonio speaks these words, a brief yet cold silence ensues. And, as soon as Francesco tries yet again to deny that something indeed changed, Antonio interrupts him angered, exclaiming «That’s civilization! What do you want me to say?!» with arms open, shuddering. Silence again; Matteo and Francesco can’t help but take the blow.

The entrance of “civilization” is a process I could witness while living in Funtanalba, along with everyone else. I recall seeing the anger and disappointment of the bar’s regular clients as they watched, powerless and in shock, local police and workers paint white stripes on the street to designate parking spots. «In all of my life, I never saw a policeman fining someone, then these guys [young policemen] come here, you tell them “One second, I’m unloading my stuff”, nothing, they fine you! *Tac!*» (inf. 8/06/24) exclaimed Damiano, 65-year-old, shaking his head with outraged expression, to then continue: «A pedestrian crossing?! Who the fuck needs pedestrian crossings, strollers?! But if no one is being born in the village anymore [what is the point]?!» (*ibid.*). People were discussing how they always parked everywhere, even in front of other people’s houses: if there’s a problem, someone will come and tell you. Such clash of local and institutional norms for space management signals the arrival of the State as an unwelcome intrusion, at least for some in the village: others, Francesco included, agreed that after all it was a good thing to have white stripes and a pedestrian crossing, as it makes the place more orderly, and avoids having cars amassed at the bar’s entrance. Conversely, Matteo told me about the time “they” poured cement in front of his house, to have sidewalks for people and, ironically, strollers again, to which Matteo had Damiano’s exact reaction. In any case, regardless of the diversity of opinions on the presence of white stripes and pedestrian crossings, such a decisional process has been top-down from its inception, and locals had no say, for good or bad. Institutions came and ordered *their* space without asking for their permission or opinion. They didn’t need it. When one likes it or not, there is no stopping it.

“Civilization” also came through the introduction of legal responsibility and took hold as local fabrics of care and inter-familial dependence started loosening.

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conditions – the “ladder” metaphor implying there is some kind of improvement going on; on the other, it presents the haunting possibility of the extinction of one’s lifeway.

I was interviewing Matteo after a lunch in his sheepfold when he began venting about parents going to pick up their children from school.

The fact is that they don't want to take any- they talk about this "responsibility". I say I would go there and stop them [the parents picking up children], I never went to school to pick up my son. *Never*. Even if there already were people going to pick [their sons] up, I never picked them up. And sometimes they got back later, at 14 instead of 13, eh, even at 15, no, I never went there to pick them up, they tell you that you need to pick them up so that they don't have their responsibility, do you understand?! [...When I was young] *no!* This thing never existed. [...] Everyone took on their responsibilities. I come to you and say it's your fault... *tsk*, it didn't exist, everyone took their responsibilities.

A: People didn't sue each other?

M: [Raising his eyebrows, whispering] who the fuck-[with normal tone] there was so much respect [between people] that, before doing such a thing, things had to pass<sup>25</sup> [...]. It's that-well, everything was different, come on. It's that everyone counted-when you passed in some place acting badly, everyone would tell you something, uncles, aunts, parents, your father's cousins, your grandfather's cousins, "hey kiddo, you have to go back home, what are you doing...". While now, [disappointed] *what the fuck...* you don't even *know* who the kids are. Not even parents, they don't know each other anymore. Parents don't recognize each other anymore. In the past, cousins, even after-even second-generation relatives, shit...when you were strolling around, "eh, beware, I'm your dad's cousin *mì*, we're relatives!" [giggles]. [...] My father was here, imagine if he would leave the sheepfold to come pick me up at school [laughing]! Nowadays, *fuck*, nowadays [kids] don't even do gym classes anymore, in gym classes they are all watched over, it's...all watched so they don't scratch their ankle, so no one- because their mother may end up suing you (14/06/24).

As Matteo's narrative highlights, the introduction of the legal concept of responsibility was superimposed over local ways of responsibility distribution; only individuals can be legally responsible, not communities. However, community control over the community's prole was the expression of a deeply ingrained sense of belonging, able to reproduce society on a cellular level (see Federici 2019: 111). Such communal practices for raising babies are widely observed in anthropological literature concerning local rural populations: raising a child often involves the labour of the whole extended family (see as ex.

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<sup>25</sup> This expression is hardly translatable in English, and implies that many, major things had to happen before one resorted to suing.

Weismantel 2019: 61), a practice itself deeply embedded in the possibility for a given society to reproduce itself both materially and inter-generationally. Furthermore, Matteo opposes local respect to the act of suing, treating it as the reason why people did not sue each other that much.

This testifies his perception of an emplaced system for community management that did not rely on institutions; instead, they were again superimposed—or, at least, juxtaposed—on local sets of practices of rightness and responsibility. This is something Giulia, a forty-years-old woman from Funtanalba working in Cagliari, would stress while chatting with me. If, when she was young, inter-familial grudges were resolved internally—often physically punishing kids for their misdeeds, with time people increasingly started suing each other. This, according to her, created a rift in Funtanalba’s society: if before people faced each other, now they are resorting to police and the State to resolve their quarrels. In this way, as we will see in the following paragraph, the local population’s capacity to locally reproduce itself withers away, substituting inter-familial dependence with State-dependence.

Similarly, other activities so fundamental for such reproduction have become “civilized”: I already introduced the *feste*, where mutual help and nourishment have been proxied by money and the market. But not all *feste* were commodified. Some have been banished altogether, or better, they were left to die: Funtanalba was famous, in the nearby villages, for a particular *festa* involving the everyday cooking of animal innards in front of big, communal fires sparsely lit all around town. I was too late to see this happening: as such *festa* became enjoyable to a progressively wider array of external actors, the phantom of legal authorizations started looming over the partying shepherds, who preferred never to repeat such *festa* rather than having it transformed by HACCP (Hazard Analysis Critical Control Points) controls and the like. They would have needed to change their entire way of collecting meat—illegally killing and butchering in one’s sheepfold was not going to cut it anymore—and, thus, they preferred to eat those innards in the private spaces of their houses. Here is one instance of the privatization of consumption Counihan argues about (1984): as spaces become increasingly regulated by the introduction of institutional norms, local lifeways retract in the only space that can still foster them—one’s private house. Something is obviously lost in the process: the cohabitation of spaces, communal labour, and

public consumption and sharing retract on themselves, becoming ever paler as the years pass.

Beautification also reached Funtanalba, both before and during my permanence in the village. I was having a *pasillada* with Francesco when we met someone working in the municipality who started lamenting the presence of farm tools and an *Apecar* (three-wheeled scooter) in the middle of the old village's square: "It is not beautiful," was the underlying question. This comment enraged Francesco, who scolded the municipality worker: "*mì*<sup>26</sup>, people live here, it is not a postcard!" he exclaimed, offended. It is important to note that nor the tools nor the *Apecar* were his: Francesco's rage is entirely political, rather than a way to cover himself. It must be said: Francesco was the worst choice of person to lament with about the presence of farm tools in the village square. That is because Francesco, as the reader might have already picked up, entertains a profound relation with his environment, one I wish to call emplaced romanticism: it is not an abstract depiction of a past glory, but a materialization of it through one's practices. «If one does not help the village, the village is going to die» he would tell me while fixing a *muretto a secco* along the street. But of what village was he talking about? His emplaced romanticism, while contemplating some notion of beauty, also called for a world that, probably, never existed in its totality. It is Francesco's view of a glory long past, and yet, Francesco strives to actualize it. And he, to some extent, succeeds. In doing so, he remembered me Donna Haraway's orchid, the *Ophris Apifera*: this orchid evolved its own petals to mimic the bee that allowed its reproduction through pollination; however, such bee is today extinct, and all we have left of it is its representation impressed in the orchid's petals (2019: 101-104). They both call for something long gone, but in doing so they tenderly manage to conjure its ghost, and make it real, and make it live through eyes and smiles, and stories, and tongues that feel the bittersweet flavour that this kind of ghosts have.

In any case, Francesco's denial of Antonio's words follows his unwillingness to recognize that something truly changed in Funtanalba, despite his attempts to keep things "how they were". Despite relying as much as possible on non-monetary economies, despite believing in the importance of reproducing inter-familial dependence, and despite his intimate inhabiting public spaces, things have

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<sup>26</sup> Regional expression employed to say "look".

changed. It does not matter how much he tries to enliven Funtanalba's social fabric and material beauty through fixing and repairing, through gifting and helping: his very attempt, in its silent stubbornness and nostalgia, testifies that things have indeed changed. However, melancholia and nostalgia are not here simply a way to bathe in a (to some extent) imagined past. To the contrary, they act as action drivers: they compel Francesco not to revel, but to materially act both on the village's materiality and social fabric. It is not by chance that everyone, in Funtanalba and beyond, jokingly knows Francesco as someone who "doesn't want to profit from his work", as he often offers more food and wine to customers than he sells. Even in his stubbornness in providing food, and charging the very minimum to sell his cheese, Francesco is desperately trying to keep something alive. And he manages indeed, showing his emplaced romanticism as a practice of world-making, rather than past-remembering.

This emplaced romanticism is something I will return on in the conclusion of this work. For now, what I want to underline is the truth in Antonio's words: yes, depopulation in Funtanalba changed things, as Francesco says. But this one fact does not exist in a vacuum: depopulation is only one symptom of a much bigger set of changes that occurred in Funtanalba in the last Century, a set that Antonio calls "civilization". Thus, it is not simply Funtanalba's people who travelled towards civilization: civilization also travelled towards Funtanalba, as people and views and practices changed. Not only did village people start dwelling in cities, but cities started dwelling in village people too. What my fieldwork friends were complaining about is the shifting in the ways of belonging to village spaces. In their discussion, they underline changes in the discursive-material practices that constitute living in a community, describing what they perceive to be a form of (inevitable) withering. What Antonio and Matteo are describing is a ghostly substance that inhabits people and slowly changes the way in which they interact with each other: they are, in fact, testifying to the birth of a new subject, the "city-dweller", who at some point started to dwell in the village with them. This is what I mean by saying that "the city came to town": material-discursive practices and subjectivities were and still are in the process of being plastically changed as new values, relations, and hegemonic modes of production spread from Sardinia's coasts to its mountainous core: it is Antonio's dreaded "arrival of civilization". As we will see in the following sections, wage labour and the progressive

disappearance of food sovereignty are profoundly tied with the production of this new subject and, thus, to the withering of Funtanalba's social ties.

### 3. The wage is a person's ruin. On time, labour and livability

The sun has completely set beyond the massive hills surrounding Funtanalba; the air starts freezing and gusts of wind become like blades on cheeks and hands. Dotted houses begin to light up from behind closed shutters, and the smell of fireplace smoke sweeps more frequently in the tight, dark road just beside the town's main street. Meanwhile, the three keep confronting towns in Barbagia and their urban planning in relation to people's social closeness: significantly, Antonio argues that even in big cities like Rome, when people live close to each other, they know and help each other out or spend time together. However, Matteo does not agree:

M: But wait, some days ago, with Alessandro, we were saying, why people got along better before than now? Why they got along? Ale, you tell him why people got along.

AL: Well, it's because-

M: They got along because of necessity! Because you could not quarrel with Antonio, or another one, because Antonio was the one crafting hoes! Or Antonio had the winepress. While us, we had the grindstone! Do you understand why people got along? You could not start a fight.

Matteo is referring to a discussion we had a few weeks ago, when we were discussing local practices of respect. As I kept pushing him, trying to understand why, according to him, people had fewer quarrels when he was younger, he suddenly realized: "Alessà, my dad couldn't fight with other people because if he quarreled with the one making hoes, who would make him a new hoe when he needed it?!". Such reflection points to the deeply entwined local practices of rightness and material culture: cultural artifacts, and the mastery to craft them, are themselves sewn in local moral economies in which value and morality dance together. What keeps people from fighting each other here is not an obscure abstraction, but a profoundly material yet deeply moral inter-dependency from one's community. You couldn't just buy hoes from Amazon. Most importantly,

hoes were directly linked to the material reproduction of each family: you need hoes to plant seeds and grow food. And if you grow beans and you want cheese, you'll need to befriend a shepherd, and gift him some of your beans. Thus, a simple hoe was connected to a much broader set of practices, which included individual advantages as well as community-making and redistribution—you needed community to obtain hoes, and you needed hoes to reproduce your community. As Matteo reflected on a later occasion, such moral economy was further exacerbated by the specialization in jobs, which was lost as people “improved [their conditions]” and “learnt to do all kinds of things by themselves”: raising pigs and sheep, butchering and sheaving, making hams and cheese. And while he looked at such generalization of labour as an improvement, he did admit that job specialization once helped people to sustain their mutual dependence through the sharing of food and labour. Similarly, the steep increase of sheep in Sardinia during the second half of the twentieth century was propelled by the State and industries (Zerilli, Pitzalis 2021: 81), and thus, seemingly paradoxically, reflects the withering of local food sovereignty, composed instead by a complementarity between farming and shepherding (cf. Meloni 1984: 103)—itself a reason for the exchange of symbolic and material goods. Such sharing of food and labour was then itself bound to the cohabitation of spaces, which had to be constantly negotiated horizontally – something that is at the heart of what anthropologist David Graeber (2012) calls democratic practices.

Nicolas Peterson and John Taylor (2003) employed the concept of moral economy to assess changes in Aboriginal communities in New South Wales, and use it describe «the allocation of resources to the reproduction of social relationships at the cost of profit maximization and obvious immediate personal benefit» (*ibidem*: 106) which, conversely, troubles «the kinds of accumulation that are fundamental to material well-being in the contemporary Australian economy» (*ibid.*). Similarly, David Cheal would describe moral economies as «motivated by a desire to produce socially preferred (i.e. moral) relationships between the incumbents of different social categories», where transactions between people «take the form of a ritual interaction order to approach and avoidance, in which the possibility of conflict is minimized» (2019: 14). For this reason, «[w]ithin a moral economy, a rational individual will use all available means to maintain the

framework of ritualized relationships, which is the source of long-term economic security» (*ibidem*).

As I showed before, such moral economy in Funtanalba was and still is itself intertwined with food production, the cohabitation of public and private spaces, and practices of communal care, even if something is starting to feel off to the elders. It was and still is also deeply tied with hospitality and generosity, expressed both in the *feste* and in the daily exchange of favours which may or may not involve hard physical work: chopping and gathering wood, collecting stones, repairing fences, milking, butchering, and so on. In such economies, peer-to-peer debt «often functioned as a sort of mutual aid, a means by which communities circulated their scarce resources to those most in need» (Federici 2019: 62)<sup>27</sup>. It is for this reason that, as we were nearing Christmas, Francesco asked me if Matteo had gifted me a lamb to bring home: after all the work I had been doing in his sheepfold, Francesco held that he *had to* gift one to me. No matter how much I underlined that my job was paid back through data, and that monetary transactions between ethnographers and interlocutors are morally gray, Francesco didn't see how all of that was relevant; still, Matteo *had to* gift a lamb to me. Thus, after some weeks, as we all met in Matteo's sheepfold, he jokingly asked me in his presence if we wanted to steal one of his lambs. Such facetious recalling to *abigeato* (cattle stealing) was, to my surprise, enough for Matteo to make the link and understand Francesco's message. Two days later, a skinned lamb was awaiting transportation to the continent. We see again *ajudu torrau* (mutual help): as my data-collection work was not understood as "true work" by my friends, and because all labour must be reciprocated, I was gifted food. By jokingly mentioning *abigeato*, Francesco conjured a set of values around moral economies that framed Matteo as having a debt with me. Matteo, picking up instantly such a message, contextualized himself in an arena of moral actors in which, now, I too was involved. I thus sense debt in Barbagia is used as an indeterminate token of obligations binding families and individuals: what Satta calls «gifts without compensation» (2001: 122), or «unilateral gift» (*ibidem*: 145) enacts forms of indeterminate indebtedness that redistributes wealth while reproducing the social fabric<sup>28</sup>. However the case, my family back in the continent was delighted of

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<sup>27</sup> For a complete, historic-anthropological account of debt, cf. Graeber 2014.

<sup>28</sup> I will expand more on this issue in the conclusion of this work.

receiving such gift, and my mother felt obligated to reciprocate with some homemade liquors.

Such generosity and hospitality have also been described as of central importance, for example, in Australian Aboriginal communities (Peterson, Taylor 2003: 108), albeit tied with very different cultural constructions of self and identity. On the contrary, «those Indigenous households wishing to transform their social and economic status [...] sought to limit daily connections with relatives» (*ibidem*: 112) by moving away, either in the towns themselves or farther, in big cities. It takes time to build relationships, and time is a high-valued commodity in capitalist economies, especially for those who have little besides their time to sell (cf. Graeber 2018; Saito 2022). Similarly to Funtanalba, then, older people in Aboriginal communities started lamenting «the loss of the ‘caring and sharing’ that characterized the old days» (Macdonald in Peterson, Taylor 2003: 114). David Cheal maintains an operative distinction between moral and political economy—the latter characterized by «the rational pursuit of [one’s] self-interests» where «transactions must take the form of exchanges of values» to «obtain the best possible outcome» for oneself while making exchange relations competitive (2019: 16). However, reading Henry Rutz’s (2019) study of Fijian household economy, he highlights how «[u]nder modern conditions, the Fijian household economy is structured by *both* principles of moral economy (the “Fijian way”) and principles of political economy (the “money way”)» (Cheal 2019: 18). He thus concludes that «we are not, after all, bound to choose between moral and political economy as mutually exclusive principles for analyzing informal transactions» (*ibidem*: 19): such structures are often conterminously present in household organization in societies «that have only recently been affected by the expansion of commodity production and wage employment» (*ibid.*), in both the global South and the global North. We have seen this with the town’s bar interactions: monetary and non-monetary values often interchange, as locally made ricotta is exchanged for both money and favors, and the pizza on which the ricotta goes is then offered to someone else to further hospitality and mutual obligations.



*Fig. 2*

*Gathering twigs and leaves for one's goats was something that took some economic pressure off while guaranteeing better feed for non-human companions. This endeavour entailed a complex set of actors: in this picture, the branches are being carried by a van owned by one goat keeper's brother, which is parked in a cousin's land, who asked said goat breeder to clear it from the branches. Before arriving, the goat keeper gratuitously replenished the van's oil, feeling guilty for borrowing it too often.*



*Fig. 3*

*Su tondidorgiu, the shaving of sheep, has been a collective endeavour until the last generation: people got together to shave each other's sheep, and took the occasion to have a collective feast. Today, such behaviour is progressively rarer, as people retire on private uses and rely less and less on moral economies to survive.*

Moral economies and social ties are difficult to untangle, to the point that the household becomes a narrow standpoint to analyze the reproduction of society on a local scale (Weismantel 2019). As Mary Weismantel writes about Zumbagua (northern Andes), «[n]ot only the domestic economy but the social fabric itself and the lived experience» is produced through «the movement of goods and labour: people create families through the exchange of work on owned property, and daily reproduce their households by sharing the products of their labour» (*ibidem*: 70). As Antonio continues, turning towards me:

A: Alessà, I'll tell you one thing. Do you know where I was born? Do you see this house here? These were my grandmother's houses. My grandmother, she was [born in] 1880. These were the first houses made in the higher district, granny's house and everything. I lived all my life here, my mother's house was here, and here, here it was...I slept there. Here I remember, the things Matteo was saying, so, a ladle was missing? A ladle was lent. "Oh, lend me your ladle", but we were one step away, from here to there [pointing towards two houses one besides the other].

F: If you come down in my neighborhood, these things still happen. Me, Fabio, Andrea – "oh, André!"; "oh Francé, lend me some salt! O Lù, lend me this" ...when *tzia* Ilaria was-here no [it doesn't happen], but...it is like that.

A: And there is no one left [in this part of the town]! I remember, I, when I slept here, I am telling you about sixty years ago...

The sharing of food, tools, and labour is central for the reproduction of both moral economies and local societies on a family scale, but also on an inter-familial and, as the changing *feste* of Funtanalba suggest, an inter-town scale. Moral economies *and* moral obligations between individuals, families, and towns are what permit the constant reproduction of the social fabric, which itself allows for the reproduction of moral economies through its socially defined boundaries and patterns. As Karl Polanyi famously wrote about Indian rural masses, while «under the regime of feudalism and of the village community, noblesse oblige, clan solidarity, and regulation of the corn market checked famines, under the rule of the market, the people could not be prevented from starving according to the rules of the game» (2001: 168).

In Funtanalba, households have retracted on more private uses. However, many still live the cohabitation of extended families, where relatives and friends

may show up and even enter one's house uninvited, bringing food and requests, ladles and lamentations. It was so frequent that, while I was on fieldwork, I took the habit of buying a six-pack of the locally beloved *Ichnusa* beer only to have it stored in the fridge, ready for whenever someone would pop at my door—and I don't like drinking beer. This fact has to be contextualized in an emplaced urban configuration which people come to co-inhabit as they go about their daily business, which, often, involves lending or being lent something to some degree. This is where depopulation becomes relevant. As market economies supplant moral economies, people leave rural towns, and as the fabric slowly unravels, exchange, cohabitation, and mutual dependency become scarcer. This fact further reinforces one's dependency on wages. Thus, young people tend to try to acquire independent households, often far away from their parents', and try to amass as much personal wealth as possible<sup>29</sup>, both because they may value it as superior to their parents' set of values and because they *need* such wealth to survive in places where political economy, rather than moral economy, is the primary driver of food and resource acquisition. It is for this reason that Matteo, interrupting Antonio's remembrance of his youth, bluntly cuts off the discourse:

M: In any case, it was the need. The need made people get along. It's a shade that stayed in some places, for someone, but generally speaking it doesn't...it doesn't exist anymore, families do not exist anymore [...].

A: To live here or to live in a condo in the city, for me it's the same [silence]. I believe there's little difference. Do you understand?! You have your flat, you go out, [you say] "good morning", "good evening"...

"The need" is Matteo's way of referring to the inescapable intertwinement of sociomaterial obligations and moral economies, and it points us back again at the hospitality and generosity in both festive and daily interactions. Generosity and hospitality are parts of a moral economy as they «maintain the framework of ritualized relationships, which is the source of long-term economic security» (Cheal 2019: 14), itself fundamental for the organic reproduction of individuals, families, and communities—both human and more-than-human, as we will see in the next chapters. Such ritualized relationships, conversely, are jeopardized when contextualized in market economies, as families and individuals shift their

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<sup>29</sup> See Olsen 2019 for a similar example in Slavonia (Croatia), East Europe.

dependency from peers to markets and institutions. Polanyi's words come in handy again: to «separate labour from other activities of life and to subject it to the laws of the market was to annihilate all organic forms of existence and to replace them by [...] an atomistic and individualistic one» (2001: 171). This program *had* to destabilize local communities to work, and did so by presenting the freedom of contract as a substitute for “more backward” types of allegiance–kinship, neighbourhood, profession, creed (*ibidem*). Market relations had to «destroy noncontractual relations between individuals and prevent their spontaneous reformation» (*ibid.*).

Long seconds of ice-cold silence followed Antonio's first sentence. They are hardly translatable on paper. If not for the long-standing friendship that binds them, Francesco and Matteo would have probably been offended by such talk. Everyone was sensing the cutting tension such a sentence created, and he tried to break the tension by continuing to describe the supposed coldness of an interaction between people inhabiting the same condo, interested only in greeting each other out of courtesy. While Francesco is still silent, Matteo instantly answers, denying Antonio's words: as much as he agrees with the majority of his reasoning, that is too much for him too, and he is not willing to accept such narrative, as it would basically mean to accept that people in Funtanalba are, in fact, no different than city-dwellers. Thus, Francesco chimes in, again defending Funtanalba's liveability by saying that, at least, in a condo, you have people. For this reason, the discussion shifts towards falling birthrates and, finally, to wage labour:

M: It's like when the next generation<sup>30</sup> does not come [in sheep]! It's like we say, sheep, if you don't leave [alive someone from] the next generation, they grow old and then die!

F: But it's not depopulation, we had many emigrations in the past! In the past! When...

A: Look, I get angry–hear me out. I have one son and one daughter, mmmh? She is in her thirties, she's in Turin, and she graduated in chemistry, at the university. The other son, the same. And I told them “but I want to become a grandfather. When will you make me a grandfather?”. And they say: “oh dad, but how do I do to...and I have to pay for this, and for that, and for that also...”.

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<sup>30</sup> In Sardinian, Matteo uses an expression indicating “military service” and new people joining it annually.

F: And you think they're right?! I don't think they're right! How come, your father grew three sons, four sons, my father grew six sons...now [young people] shit themselves...

M: Let's not say that before we had things and now we don't! Before, we had nothing...nothing, nothing! [...] The thing is that everyone wanted—[turning towards me, pointing his finger] you all wanted the wage! The wage is what impoverished—the wage impoverished everyone! It did that to you taking it, and to me also! Because you think you can do who-knows-what with a wage, but instead you don't do shit, [you do] nothing. [The wage] is a person's ruin.

It's not the first time Matteo's particular aversion to wage labour comes up. During my time in Funtanalba I could sense how it held a vaguely bad reputation among some in town, especially those directly working the land, and among them, Matteo especially. This fact has various, nested reasons, and I will try to dissect them in the next pages. First off, wage labour is depicted as intimately connected to the dissipation of the local moral economy. According to Matteo,

Society changed because people stopped doing these jobs [connected to the land] [...]. They got away [from the village], they accepted to gain their wage, and thought they were better off like that. It doesn't suit them...it doesn't suit them doing anything anymore. They go and buy it, but slowly...you have to eat also the things you don't want, the things you don't like. If you don't produce [food], I mean. Because when you go and buy it, it is not the same thing. Not to mention the fact that they give you a little bit of everything, a little bit of shit, a little bit of everything...and still, money is not enough, and people tend to save it (09/02/24).

It is interesting how Matteo goes at great lengths to link food quality with autonomous production, only to explain why, in his opinion, society changed. The thing is, Matteo here is not simply talking about people going away from the village and stopping to work the land: what is really his point, I suspect, is that through wages people tended to subtract themselves from chains of local exchanges, thus contributing to the dissipation of Funtanalba's social fabric—itsself intimately sewn with food production and redistribution. Conversely, «if you don't have a wage...you need to get along with everyone!» (*ibidem*).

Furthermore, wage labourers are often considered to live in a temporality different to the shepherds. People often remarked on the different ways time is managed under wage labour, lamenting that labourers stop working as soon as

their shift ends, whereas shepherds stop only when the job is done. Similarly, when I was so tired that I overslept and showed up one hour late at the sheepfold, Matteo's son teased me, asking if I was following "office hours". My interlocutors underlined how much they enjoyed the freedom granted by their job. Of course, they could never let themselves skip more than a couple of days of work, since animals would need to be tended and fed by expert hands. But they would often highlight how their job let them "sit down and have lunch" and then "get up [from the table]" precisely when they wanted to, having to be accountable to no one except their family, parents, relatives, and friends, and nonhuman kin. Now that I think of it, the only one they never had to account for was a figurative boss. One time, Matteo asked me what time it was and seeing my instant response, he added: "You know, I never bought a clock. Do you know why? Because once you buy it, you have to follow it. People expect you to follow it. I don't have a clock; this way, I can do things with my time".

According to philosopher Vinciane Despret and ecologist Michel Meuret, shepherding activities are constituted by the making of a particular time - «[a] common time, different from the previous flow of time [... and] this common time creates the flock – it is a herding time» (Despret & Meuret 2016: 32). But it is not only that: as Matteo uttered his words, he had his usual, ingenious smirk on his face, the one he puts when he feels he cheated the system. Time itself was a key invention that propelled the rise of wage labour and, later, the management of industrial production through a fixed grid of objective time—what Lauren Fournier (2020) calls *chrononormativity*. The fact that time can be experienced and thought about very differently across human cultures may not surprise anthropologists, who have employed ethnographic data to explore cultural differences in the perception and conceptualization of time since the inception of the discipline (cf. Gell 2020). In any case, it is safe to say that before the work of Isaac Newton, who believed time to be an absolute, accurate, and independent reality (cf. as ex. Sinha & Da Silva Sinha 2022), time was always understood as an abstraction and had little to do with work (cf. Graeber 2019). Yes, people did measure sidereal time, but that was almost exclusively of interest to priests and astronomers: things were «assumed to be messier» (*ibidem*: 89) on Earth. Graeber (*ibid.*: 90), for example, shows how the rural people he worked with in Madagascar described time and distance through food, measuring the time it

would take to walk from one village to another with cooking of rice pots. Conversely, the Amondawa people in Amazonia are reported to have no word for an abstract “time”, and do not measure their age through years (Sinha & Da Silva Sinha 2022). In medieval Europe people would say that something took «“three paternosters”, or two boiling of an egg» (Graeber 2019: 90.). Time then, the time we track through ticking clocks that regulate our working and sleeping hours, the time that runs out and flows in a unidirectional path forward, and can be spent or squandered, as any time, has a precise intellectual and sociomaterial history. Postcolonial scholar Gayatri Chakravorty Spivak (1999: 60-ss.) showed how similarities can be traced between the *Gitā* and Hegel’s view of time: both propose a fundamental hierarchy between timing (the sequentially lived, embodied time) and Time, understood as a somewhat universal and a-historical category. And even if Hegel and the *Gitā* turned out to be right, still what people have experience of is mostly timing. However, their daily activities still are often managed under the banner of Time: it is transcendent Time, obviously, and not the materially grounded timing, which regulates wage labour.

According to Graeber, who spent an entire work exploring the relation between time, wage labour, and what he calls “bullshit jobs” (2019: 88), this is something so original and peculiar, in our whole evolutive history, that the vast majority of humans that ever walked on Earth would find the idea of “selling one’s time” quite hard to conceive. While it is difficult to track a precise history of how and when our current concept of work emerged, one thing is certain: the idea that one should always be working steadily, in the past, has never been associated with nobles nor freemen, not even with peasants. It was associated with slaves instead. When looking at ancient Romans or Greeks, «the overwhelming majority of examples of wage labour that we do encounter [...] are of people who are already slaves: a slave potter might indeed arrange with his master to work in a ceramics factory, sending half the wages to his master and keeping the rest» (*ibidem*: 89). Similarly, during the Middle Ages, wage labour could be found in port cities such as Venice, but again «it was carried out almost entirely by unfree labour» (*ibid.*). Then, plantation owners in the Nineteenth Century would advise that «it’s better to keep slaves busy even at made-up tasks than to allow them to idle about in the off-season; the reason given always being that if slaves were left with time on their hands, they were likely to start plotting to flee or revolt» (*ibid.*: 88). This is the only

tangible historical equivalent we can find to today's work regime, at least when looking at time management. However, capitalist time is different yet: as workers *sell* their time, not working would mean they would be stealing from their employer. Thus, unlike Nineteenth-Century slaves, following this moral logic would mean that idleness is not simply dangerous, it is actually and already theft (*ibid.*). It is not much a *promise* of damage, but damage already. Nevertheless, it took many simultaneous sociomaterial changes to invent this notion of time, and even more to spread it into the general population, and thus to construct the possibility to sell it.

By the fourteenth century, most European towns had created clock towers—usually funded and encouraged by the local merchant guild [...]. The dissemination of domestic clocks and then pocket watches took much longer, coinciding largely with the advent of the industrial revolution beginning in the late 1700s [...]. Sidereal time, the absolute time of the heavens, had to come to earth and began to regulate even the most intimate daily affairs. But time was simultaneously a fixed grid, and a possession. Everyone was encouraged to see time as did the medieval merchant: as a finite property to be carefully budgeted and disposed of, much like money. What's more, the new technologies also allowed any person's fixed time on earth to be chopped up into uniform units that could be bought and *sold* for money (*ibid.*: 90-91).

Philosophers of science such as John Dupré and Regenia Gagnier (1996: 554) may add a reflection on the roles Puritanism and some forms of Calvinism played in this act, as they were the first to tie salvation with the accumulation of wealth, offering an even more detailed picture of the processes taking place: between the eighteenth and nineteenth century, in England, middle classes started to think that poor workers were poor because they lacked time discipline. Conversely, workers rightfully began to fight for hourly rates and fixed-hour contracts, demanding that “free time” be granted to them. Subsequently, in the twentieth century, industrialization came to be seen as equivalent with modernity. So it was that the «uncivilized Other» had been «devoured of its own benefit—assimilated into capitalist/industrial modernity» (Barca 2020: 20). Thus, «the idea that [...]time truly did belong to the person who had bought it» (Graeber 2019: 92) took hold in workers, even if it «would have seemed perverse and outrageous to their great-grandparents, as, indeed, to most people who ever lived» (*ibidem*). Let us consider

peasants in feudal Europe: «their work schedule was nothing remotely as regular or disciplined as the current nine-to-five – the typical medieval serf, male or female, probably worked from dawn to dusk for twenty or thirty days out of any year, but just a few hours a day otherwise, and on feast days, not at all. And feast days were not infrequent» (*ibid.*: 87). Indeed, for the majority of our evolutionary history, work patterns took «the form of periodic intense bursts of energy, followed by relaxation, followed by slowly picking up again toward another intense bout. This is what farming is like, for instance: all-hands-on-deck mobilization around planting and harvest, but otherwise, whole seasons taken up largely by minding and mending things» (*ibid.*: 86; cf. Thompson 1967).

Indeed, working in the sheepfold means to wake up following the sun and seasons, and feed the animals in the cold and scorching heat, it means to milk and fix fences in the snow and torrid soils; but it also means to have frequent stops to chat, eat something, smoke a cigarette, call someone and, generally, being idle amidst trees and shrubs and rocks, slowly fixing and reordering things while preparing for the next big task. It entails taking sheep to pastures and convincing goats to return home from the highest cliffs, but also enjoying their presence while ruminating on the weeds, taking in the silent vastness surrounding everyone and everything. Sometimes, it entails embarking on little adventures to find hidden waterfalls and magnificent views while nonhumans enjoy the pastures.

Hence, I believe my interlocutors, being very aware of what Spivak would call Time, construct their identity in opposition to it, reaffirming their ability to follow timing instead. In despising wage labour and cheering the freedom they see in shepherding and farming; they thus express both a political and a moral stance. Their stance is political, because it implies the cultural construction of otherness via the concepts of “city-dwellers” and “civilization” and the enactment of a form of schismogenesis—the exasperation of difference as a reaffirmation of identity (cf. Bateson 2021). In doing so, they reconfirm their identity *vis-à-vis* a conceived continental/city-dwelling other, producing a political stance towards class and social differences that are seen as operating within the frameworks of Time, instead than those of timing. One may sense the classical Marxian dichotomy being at work here: on the one hand, there is free labour, on the other, there is

alienated labour (cf. as ex. Gagnier, Dupré 1995; Saito 2022)<sup>31</sup>. However, things are far more complex. Firstly, wage labourers in Funtanalba are themselves very much immersed in the local moral economy: degrees may change, but sharing, offering and gifting are often reproduced through money also. *Su cumbidu* (the invitation) is a perfect example of this. At the bar's counter, to pay for someone's drinks means to reproduce the moral debt binding individuals and families while providing physical and social sustenance<sup>32</sup>. Thus, monetary and non-monetary values and debts interweave, and money is translated into a token of mutuality.

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<sup>31</sup> One may also reflect on alienation and fulfilment as symptoms of a productivist ethic, and on the separation of labour and personal fulfilment in capitalist societies (Dupré, Gagnier 1996: 558-559). The shepherds I worked with found great pride in their work, and never considered their activities as exclusively "work" nor "leisure". Their "work" was, in fact, their whole life: as I am trying to show, shepherding can be immersed in a moral economy which comes to pervade every aspect of one's life – from the town's square and streets to bars, from sheepfolds to neighbouring towns. Sometimes it is toil and strife, as John Stuart Mill would suggest, sometimes it is pleasure and enjoyment, as critics of alienated labour envision (cf. Gagnier, Dupré 1995). What I sense here is that we are still missing something. It reminds me of the classical conundrum of religious anthropology (cf. as ex. Filoramo 2004), or even in the anthropology of family structures (cf. as ex. Fabietti 2018): often, when anthropologists dig into something they are trying to understand, they discover that such "something" was their invention in the first place. Thus, for example, the very premises of studying "religion" assume that for other societies does indeed exist a sphere of spiritual commitment *separated* from their everyday lives; conversely, anthropologists studying familial structures found out that the hermeneutic categories they were using (e.g. "nuclear family") were premised on an ethnocentric understanding of families (cf. Fabietti 2018). What I am trying to say is that, as many already have suggested (cf. as ex. Gagnier, Dupré 1995; Chakrabarty 2000), "work" and "labour" may be just as ethnocentric as categories, and may be crafting the very object of their study. Thus, it is of fundamental importance to include the voices of local populations, as they may retain practices and conceptions that challenge our current understanding of work, labour, capitalism, and the production of goods. For example, Regenia Gagnier and John Dupré (1995), in order to surpass the dichotomy between work and leisure, propose that work should be intended as both productive and leisure (e.g. painting, building, caring, etc.), and that their counterpart is idleness. For this reason, they advise not only to limit the work day to allow the development of caring relations and fulfilling leisure activities: for them, both are to be understood as "work" (see as ex. Federici 2019: 155; Barca 2020 for a discussion on reproductive labour), and "work" should leave space to idleness. However, while I share their proposition as a cornerstone for wage labour, the performance of shepherding work in Barbagia shows how such categories still overlap: how to define the shepherd who, accompanying the flock to pastures, stops for enjoying the fresh air, the scenery, and the soundscape sheep are producing through their bells? Even more, how to define the shepherd who sits for a couple of hours to watch over sheep? Is it work-leisure, or is it idleness? And what to say about chatting with passersby while reaching someone's house to sell your cheese – what about the shits and giggles with those who are buying your cheese? What about offering or being offered wine while enacting the monetary transaction? I am afraid (see also Sinha & Da Silva Sinha 2022) we could be treating "work" as we treated "religion": as a sphere of activities separable from the flux of everyday lives of people, still assuming Time as the basis of our reasoning, and thus faintly employing a grid of time-wage-life exchange as the basis for our conception of what "work" is. And while this approach is extremely useful in some contexts (say, granting people a living wage and actually some time to live their lives), it falls short of imagination when it comes to defining how work *should* be conceived, especially beyond capitalism and «eco-capitalist realism» (Barca 2020: 15-ss).

<sup>32</sup> Of course, *su cumbidu* itself is far more complex than this: sometimes, it is used to solve quarrels, or as a background interaction while negotiating or discussing. Often, it is a way to publicly underline one's social alliances and webs, or to acquire symbolic value by being seen with a respected member of the community or, conversely, state authorities and the like.

Secondly, Matteo's words are pointing to something a little more nuanced than a crude dichotomy between wage and free labour. What makes my interlocutors' stance conterminously moral is the fact that the aforementioned categories of otherness are premised on an embodied knowledge of sociomaterial changes in Sardinia: let us remember city-dwellers that, with a pointy nose, try to scrounge cheese and then ask for a discount, or Antonio's accusation, pointing his finger towards Funtanalba's village people becoming city-dwellers.

In this section, my interlocutors showed the clashes between wage labour and moral economies: gifts and money may coexist, but as wages and payments substitute local exchanges of indeterminate debts, things start to steer differently. Hence, my interlocutors sometimes react through schismogenesis, exacerbating their differences to underline their material, but also moral distance from "city-dwellers": to never buy a watch, for Matteo, is an act of resistance against chrononormativity, and the hegemonic transformation of timing into Time. However, temporality is not everything that he has in mind when he affirms that "the wage is a person's ruin". As he underlines, wages impoverished everyone: those taking it, and those who, like him, live off the direct product of their labour. This notion, at first, may seem counterintuitive: how can wages make one poor? To understand it, we must then return to moral economies and the food sovereignty they entail.



*Fig. 4*

*Two shepherds coming from different towns gathered to milk sheep, as one of them had harsh pain in his hand's articulations.*

#### 4. “We always had something to eat”. Food sovereignty, commons, and their counterpart

As the night darkens, Francesco grows impatient: pizzas may be on their way, and he hates to eat cold pizza. However, Matteo and Antonio are still discussing, and my interest in their words is ever growing. As the discussion shifted towards falling birthrates, I tried to bring inflation up: as living wages in Italy stayed mostly the same since decades, while housing and living expenses increased considerably, young people find it hard to make up a family. This was Antonio’s lamentation about his daughter: he would love to become a grandad, but his daughter’s wage is not enough to envision a secure future for her, not to mention a future child. However, Antonio does not agree:

But then I get angry! I get angry as Francesco and Matteo, I get angry. And I tell you: how did we manage to make [your generation] go studying, and make you go [in different cities], and make you do this and that...Alessà, my father had one yoke for oxen, and he made me and my brother study, have you any idea of how many stories, he made his sons graduate while chasing four sheep [...]. When I got back to school, when I was in middle school, my grandparents were at the house, we had the sheepfold, we always had chickens, because an egg—eggs were never missing! [Smiling] never! And my mother and father were not there, because they were in the countryside [working]. And what did [my grandparents] prepare? Onions, and that's it...and you know what my daughter told me? Oh dad, an egg is basically a meal! And yes, I told her, it is, but [...] we had [just] eggs, then when we had some chicken, we had chicken, then when we had beans, we ate only beans, because the season...then potatoes only, then favas, I mean, everything was there! But the hunger, we...we had a pig that lasted one year – *su mannali!* Us, then...

F: We made sausages, we made...there was always – we always had a little thing or two...

A: But it wasn't a big piggery, wasn't it?! We had just one *mannali*...

F: But we always had – we always had something to eat.

M: You give something, then the other gave you a piece of something else...then...you gave something to that other, and then that person [...] but you did not have the need to eat all these things that you have now! My father stayed on the mountaintop living off bread and cheese! And he lived all his life off of bread and cheese...and I—now I saw it with Alessandro. We are on the mountain, and instead of going away—[I say:] come on Alessà, let's stay here [for lunch]. A couple of eggs, a little bread, wine, it's not that you need who-knows-what...I prefer it more when I am in the sheepfold, eating eggs, rather than when I go down, to *Casteddu*<sup>33</sup>, eating paninis...

Antonio's anger narrates the slow transition from a moral economy based on the direct production of food to a market economy based on wage labor. Most importantly, he implicitly describes the withering of Funtanalba's food sovereignty through three generations, from his parents to his prole. One thing is striking, though. On the one hand, their answers seem to indicate that "hunger" was constant in their lives. On the other hand, "everything was there", they "always had something to eat": food availability, and probably of good quality, was at their constant disposal. It is Matteo again that gives us a key to interpreting such availability: food was constantly immersed in a web of mutual exchange, a

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<sup>33</sup> Sardinian for Cagliari.

fundamental part of the local moral economies. It was, in fact, the basis on which inter-familial dependency was built; even more, it is what sometimes made labour and *festa* coincide. When shepherds get together to butcher a pig, oftentimes, more people than necessary are summoned for the task. The end of the job is always accompanied by shared consumption, and of the direct products of one's labour when possible (i.e. sharing the pig's liver right after communally killing them, and their meat after the butchering). Similar forms of food sharing and common labour were often enacted also with veterinarians<sup>34</sup>, or village people called to help killing big mammals or castrate pigs<sup>35</sup>.



Fig. 5

*Me, Matteo, and his son went to Antonio's (a 65-year-old shepherd from a nearby village) sheepfold for helping in killing and butchering a pig. Then, Matteo helped Antonio to spread salt*

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<sup>34</sup> In truth, it also happened with police officers coming to check the sheepfold – though they didn't accept any form of shared consumption. These offerings are, most of the time, deployed onto shaded lines of mutuality and social savviness: notwithstanding the fact that shepherds may be scared, and hide stuff from the police, *su cumbidu* (the invitation) is performed, first of all, as a customary act, but also because the creation of mutual obligations is what constitutes local norms of respect – “you can't mess too badly with me, if I offered you food and we ate it together, can you?”. This is an interesting ethnographic interaction: while shepherds may employ food offerings strategically, it is also customary for them; on the other hand, for police officers, to accept such an offering may make them feel vulnerable to forms of corruption. The most stimulating thought here is that both are right: *su cumbidu* forms one of the bases of social exchange and circulation in Barbagia; however, when such practice meets the scale of the State and institutions, it gets transformed into corruption. It becomes corruption *precisely* because State representatives should be abstracted from local webs of exchange – they should be “impartial”, as the State itself loves to represent itself. And while such distance is indeed the basis of a healthy democratic State, at least theoretically, it inevitably contradicts the ways in which local people understand mutual obligations and cohabitation. The contract is naturalized: impersonal institutions are to be trusted *instead* of the people in one's community.

<sup>35</sup> For a similar example involving the shaving of sheep, see Satta 2001: 113-ss.

*and pepper on fresh hams. Four of those hams (some twenty or thirty in total) were made from a pig Matteo bought from Antonio, but that Antonio raised, killed and processed.*

It may be a good time now to return to Carole Counihan's (1984) observations on the parallel changes in food production and social reproduction in Bosa, a town in northeastern Sardinia. Until the 1960s, wheat production was central to the Bosan economy. Bread was so central to the Sardinian—and more broadly Mediterranean—diet and culture that it came to symbolize well-being, health, and wealth (*ibid.*: 49–50; cf. Cirese et al. 1977)<sup>36</sup>. Thus, until the Sixties,

harvest and threshing were big jobs which involved reciprocal cooperation with other men and women. Men produced grain and brought it home [...]. The women organized the collective labour of baking, calling together neighbors, relatives or *comari*<sup>37</sup> to help, assistance which was later reciprocated when they did their own baking (*ibid.*: 50-51).

Bread was embedded in local moral economies, gifted and exchanged for other foods people had at their disposal. It could even serve as a token of exchange, incorporated into the circulation of labour and favours that Francesco calls *ajudu torrau* (mutual help). However, with the mechanization of agriculture in the 1960s, grain cultivation in Bosa began to decline, disappearing almost entirely within a decade. Salaries became more attractive than subsistence farming, and «the steady abandonment of wheat cultivation in the early 1960s dealt a final blow to home baking, which accompanied the demise of other home-processing activities like making tomato preserves, salting olives, or drying figs» (*ibid.*: 51). By the time Counihan published her article twenty years later, not a single woman in Bosa baked bread, and the town relied instead on local male bakers and their waged labourers. As a consequence, male and female peasants no longer needed each other for bread making: salaries and government pensions allowed everyone to buy bread, shifting the reliance on mutual support to dependency from wages and the State (*ibid.*: 52). Today, local bread production does not revolve around

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<sup>36</sup> Still today, in many of the mainland Italian regions, “bread” is used as a metonym of wealth and self-sufficiency. “To put the bread on the table” or “to gain one’s bread”, for example, are common cognitive metaphors (Lakoff & Johnson 1980) referring to economic autonomy.

<sup>37</sup> *Comari* (female) and *compari* (male) are very close friends, to the point that Counihan defines them as «fictive kin» (1984: 57n.6). They are «ordinarily the people who hold one’s children at baptism and to whom one is thus linked by special obligation and respect» (*ibidem*), but can as well be someone to whom one is linked by a long-standing friendship.

social ties of mutual help, at least not as much as it did in the past. This process of social atomization, in Bosa, was epitomized by the death of a young man who died of circulatory collapse—a news so unusual that it made the front page of the regional Sardinian newspaper. As Counihan writes, he «did not die of poverty as so many did in the past; he had a government pension. Rather, he died because the sustaining web of family and community had broken» (*ibid.*: 53). This, according to Counihan, furthers the thesis of economic anthropology according to which capitalist modes of production inevitably lead «to an atomization of social relations» (*ibid.*: 56).

Today, with the decline in local primary production and the increasing reliance on the market, the incessant mutual giving and receiving of foods slows and becomes less crucial to survival. Thus one of the most important forces in linking people together—reciprocal prestations—is fading away and with it goes people’s interdependence (*ibid.*: 53).

Through money, government, and the market, people’s need to rely on one another fades. In turn, they progressively proxy parts of their social fabric through them. Counihan sees a direct link between the decline of subsistence production and the withering of «[t]he continuous giving and receiving of bread and other foods so important to tying people together and ensuring their survival» (*ibid.*: 56).



Fig. 6

*Mutual gifting, banter, and shared time are always part of economic transactions: here, a cheesemaker and a former goat-breeder met to exchange cheese with money, and ended up chatting for hours, eating together and discussing the good old times.*

This, I believe, partly explain the perceived contradiction in my interlocutors' words: the availability of *diverse* food products was poor—one could not eat pork everyday—and yet food was always available to everyone, just not as a commodity to be bought through one's wage. If anything, food had to be gifted or exchanged among peers. In other terms, people's access to foodstuff was regulated by socioecological constraints, rather than wages.

Polanyi's words may come in handy again: he describes the establishment of the labour market as one *based* on the threat of starvation. «The natives are to be forced to make a living by selling their labour» (2001: 171), of course, but for that to be possible «traditional institutions must be destroyed, and prevented from reforming, since, as a rule, the individual in primitive society [*sic*] is not threatened by starvation unless the community as a whole is in a like predicament» (*ibidem*). You can't have free markets without the threat of starvation. Anthropology is the best witness for that. In Sri Lanka, the Kaffirs tend to organize to assist right away for those in need; Kwakiutl people never knew the risk of going hungry (cf. *ibid.*). Generally speaking, «[t]here is no starvation in societies living on the subsistence margin» (Herskovits in *ibid.*): ironically enough, «the white man's initial

contribution to the black man's [*sic*] world mainly consisted in introducing him to the uses of the scourge of hunger» (*ibid.*: 172). According to the historian and anthropologist, from this point of view, there is not a profound difference with what extractive colonial capitalism still does today, albeit away from the eyes and hearts of Global North citizens. Further, a similar «smashing up of social structures in order to extract the element of labour from them, was done in the eighteenth century to white populations by white men for similar purposes» (*ibid.*). According to him, early labourers were very close to natives in their abhorrence of the factory, where they felt degraded and exploited. But no matter cultural differences: the threat of punishment, mutilation and, most of all, starvation were all excellent incentives. However, to weaponize hunger, «it was necessary to liquidate organic society, which refused to let the individual starve (*ibid.*: 173).

The thing is that the globalization and deep penetration of capitalist markets worked to undermine the self-sufficiency of individual regions in order to create a total economic interdependence between distant countries. Such undermining started with primitive accumulation, especially in the form of land enclosure (Federici 2019: 21): to undermine people's self-sufficiency, it is enough to chase them off their land and transform them into beggars and, later, wage workers. Enclosures, and thus private accumulation, can only work by ending the communal control over the means of subsistence (*ibidem*: 28): the first step to capitalizing industry is to rationalize agriculture—a process where tractors and fertilizers are far less critical than privatizing land property relations (*ibid.*: 35). As Stefania Barca writes,

[t]he long history of primitive accumulation demonstrates how the true enemies of capitalist/industrial modernity are subsistence production, food sovereignty and autonomy, based on the direct relationship of people with non-human nature; thus, capital's first objective was turning commoners into proletarians (2022: 42).

Thus, if «in 1688 one-third of the total area of England and Wales was common land» (*ibid.*: 87), by the end of the twentieth century common land was reduced to 3 percent of that area. This was not a peaceful process by any means: commoners all around Europe revolted, and their riots were systematically oppressed by authorities, as «[t]he market system was more allergic to rioting than

any other economic system we know» (Polanyi 2001: 195). Let us think about the Tudor government, *relying* on rioting to bring to attention local complaints and how their paradigm changed in the nineteenth century, where breaches of the peace committed by armed crowds were considered rebellions (*ibid.*: 195-196). According to Polanyi, the «stupendous industrial achievements of market economy had been bought at the price of great harm to the substance of society» (*ibid.*: 195).

Thus, the English commons were set on fire by local populations resisting the enclosures (cf. Linebaugh 2019) and, almost at the same time, shepherds and farmers were rioting in all of Barbagia. In 1820 the Piedmont region enacted the “*Editto sopra le Chiudende*” (Edict on what must be enclosed), permitting municipalities and private individuals to fence the lands (Sanna 2021: 257). In 1832, shepherds in Barbagia organized themselves in «armed quadrilles» (*ibidem*: 258) and started to systemically destroy all enclosures. Such rebellion spread like wildfire, and people in nearby subregions, such as the Guspinese and the Lugudoro, soon decided to grab their pitchforks too. Their riots were only quenched by severe repressions and numerous sentenced to jail—or death, in two instances (*ibid.*); and yet they continued, in 1868, with the revolt of «*su connottu*» (“what is known”, i.e. the past land uses) against the abolition of the *ademprivi*—the rights to everyday use of the land (Fois 2021: 273). An integral part of this process of enclosure and expropriation was the plundering of Sardinian forests, whose logs served to implement railways and the army (Caterini 2013). These processes were intimately linked to both the rationalization of land uses and nation-building, encompassing both symbolic and material efforts. All these rebellions were aimed at protecting *sa komunella*, that is, the use of the land through commoning practices.

In any case, primitive accumulation did not just happen once: it is still a fundamental process for the reproduction of capitalism (*ibid.*: 21; cf. Barca 2022: 42; Guglielmo 2024b). Silvia Federici asks us to look at Nigeria, where «people are thrown off communally owned land by the military, to make way for plantations owned and managed by the World Bank» (2019: 27), allegedly intended to solve the debt crisis through their “structural adjustment program”. Similar things happen in West Papua, where people are dying of hunger due to the deployment of plantation capitalism to further oil palm production, which encloses their forests

and thus their possibility of surviving off of them (see, for ex., Chao 2022a; 2023). In China, the transition to a free-market economy drove one hundred million people away from their communally operated land (Federici 2019: 27-28), and today it is «experiencing a massive enclosure process, possibly on a scale unmatched by any other country» (*ibid.*: 55). These are just few examples, but they help us look at modern processes of accumulation in their purest form: massive expropriations intended to further the imperial mode of living in the Global North (Brand & Wissen 2021) while undermining social interdependency and food sovereignty for local populations.

Meanwhile, the imperial mode of living is cracking, too. In the USA, millions of people were made homeless by the interlocked crisis of farms, rentals, mortgages, gentrification, and the collapse of the social safety net. The dismantling of the “welfare state” in the Global North forced people such as students, welfare recipients, and pensioners «to borrow from the banks to purchase services (health care, education, pensions) that the state formerly subsidized, so that *many reproductive activities have now become immediate sites of capital accumulation*» (Federici 2019: 62, emphasis added). It is agreed, writes Federici, that debt serves to privatize the means of reproduction. This is an aspect on which I will return later. For now, suffices to say that, because of the past and present enclosure processes, «few people today worldwide can live purely on subsistence, even in predominantly agricultural areas» (*ibid.*: 67). Hence, local foods and dietary staples disappear, getting substituted by cheap foods that people are subsidized with, or can pay with their wages (cf. as ex. Cottino 2013; Federici 2019; Chao 2019; 2022a).

This process is so widespread that the idea of bad / industrial / white / plastic food can be seen as an almost transcultural category in populations that underwent a transition from locally produced to globally distributed foods, albeit differentiated according to particular sociohistorical contexts. When Matteo pointed to how food was constantly immersed in a web of mutual exchange, he added that «you did not have the need to eat all these things that you have now»: he prefers it when he stays «in the sheepfold, eating eggs, rather than when I go down, to *Casteddu*, eating paninis». This phrase ties to a locally widespread category, which I already exemplified (Guglielmo 2023; 2024) with Francesco’s expression of coloured food: foods understood to be industrially produced, less

nutritional, less flavourful, and less healthy for both humans and environments. Thus, for example, industrial milk is joked about as “being only good as dish soap”, while sheepfold-made cheese is said to “fill one’s stomach until dinner”. People come to feel disgust by looking at “industrial meat”, to the point of feeling the physical need to puke in watching it cook; furthermore, local food consumption is locally understood to be among the main reasons of centenaries in the island—after all, as Matteo was stressing before, his father «stayed on the mountaintop living off bread and cheese», and «lived all his life off of bread and cheese». Similarly, speaking with cheesemakers in Bulgaria, Sevgi Mutlu Sirakova found out that they contrapose their yogurt with mass-produced ones, considered “fake” yogurts. And while fake yogurts are progressively replacing “true” ones, people still can distinguish them through sensing «the multispecies interactions that produce them» (2023: 255-257). The Marind people of West Papua speak instead about “plastic foods” when talking about the processed products introduced by government subsidies as a consequence of the enclosure of their forests (Chao 2019: 7). Such foods are again described as not having any «taste of the land» and being not nourishing for the body, instead making one «more and more hungry» (*ibidem*; cf. also 2022a) instead. Still in Papua, Orokaiwa people describe “whitemen food” as being symbolically consistent with its eaters: white men eat sealed products, produced far away from them, and, most importantly, they do not share their food, which can be only acquired through money (Mol 2021: 29-31). At the other side of the globe, we find Tonga, where people started developing obesity, cancer and heart diseases as a consequence of the introduction of industrialized food and a globalized diet (Cottino 2013). Not by chance, similar problems of widespread diffusion of non-communicable diseases are seen in America, where two thirds of the population is overweight, and type-2 diabetes is spreading even amongst the youth (Macias 2008: 1088).

Manuela Tassan (2017: 29) showed how a narrative on the naturalness of foods is widely employed by food industries to further new forms of accumulation; moreover, she showed how “natural foods” can become a complex meta-category underlining both food cultures and forms of identitarian constructions. However such categories, when contextualized in different kinds of rural communities, often show an understanding of food products as capable of embodying the natural-cultural conditions of their production (Guglielmo 2023), and are used to

further local understandings of metabolic justice and environmental reproduction (Guglielmo 2024a). Not only then speaking of coloured / plastic food may hint at broader ecological processes of diffused toxicity; the “colour”, “the plastic” are employed as synecdoche of a profound change in the world that local populations link with modernity (Chao 2022: 106-107; cf. Guglielmo 2023). I will show the extent of this transformation—from “local” to “coloured” foods—in the following chapters, showing how the transition from moral to market economies deeply affected more-than-human health and justice. For now, let us focus on food and local moral economies by returning on Matteo’s words. A smaller part in his words is, in fact, probably even more important than the rest: he said that he prefers to stay in the sheepfold, and that he saw it “now”, “with Alessandro”. What I believe this means is that my ethnographic frequentation of his sheepfold dug some memories of his past, where he was the young man staying at the sheepfold with a much older shepherd, his father. In preferring to eat a couple of eggs grabbed just hours before from his chickens, and drinking wine produced on his land while sitting in his sheepfold, he was re-living a kind of sociality and cohabitation of such space which of course entailed food but, most importantly, entailed the reproduction of a more-than-human family. Food’s materiality is always bound with meaning, and meaning is always bound with materiality. It is not by chance that while traversing the scrubby rocks with sheep, he would indulge in memories, pointing to where all the sheepfolds were just forty or fifty years ago. «How beautiful is the country when people live in it. Before, here, there was plenty of people; one there, one other there, you could see them at this hour, returning back to the sheepfold...that’s it, I’m the last one now. I’m the last of the Mohicans» (inf. 13/04/23) he would say with a bittersweet smile. Antonio Maria Pusceddu (2015) observed the elder’s experience of landscape in Sardinia and captured an expression that is highly descriptive: the countryside, for them, is «like a home that no one inhabits no more» (*ibidem*)<sup>38</sup>.

According to my fieldwork experience, the absences my friends live take a similar form to how anthropologist Christina Zarowsky (2004) sees trauma. Granted, her context is dramatically different: her fieldwork focused on trauma responses of Ethiopian Somali refugees, who returned to their land after being

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<sup>38</sup> In Italian, both “house” and “home” are translated with “*casa*”. I chose to translate it with “home” to convey the felt and deeply personal emotions people here link with their land.

displaced only to find it so profoundly changed, in both material and structural ways, that they didn't experience a return at all. Thus, «Ethiopian Somalis [...] experienced displacement and dispossession primarily as an ethnic collectivity oppressed by a state controlled by a different ethnolinguistic and religious group» (*ibidem*: 191-192): they still feel dispossessed, even after coming back. Zarowsky shows how trauma responses, for the people she worked with, were very dissimilar from the psychiatric standard interpretation: rather than focusing on individual responses, such as anxiety, depression, guilt, and the like, their responses kept «coming back to politics» (*ibid.*: 190). Their traumatic memory is felt and practiced as a collective memory of a shared, deeply political trauma. Their return was thus

Itself a political and ritual act: a recognition of the destruction of much of the fabric of the community at the same time as a refusal to vanish, a collective mourning of both private and collective losses at the same time as a deliberate creation of both history and the possibility of a future through the rhetorical – indeed ritualized – telling of the story of dispossession to each other, to their children, and to any outsiders who might be made to listen (*ibid.*: 202).

Zarowsky is adamant in her take: her interlocutors had little use in focusing on their suffering and misery. They wanted instead to build a «politicized collective memory and master narrative challenging power and injustice from the local to the global» (*ibid.*: 205) and, according to the author, if this represents trauma, then it would be very different from what conventional models of PTSD would describe.

Of course, the experience of Ethiopian Somali war refugees can never be reduced to that of elderly shepherds living at the periphery of the Global North. But as I was hearing their discussion about becoming city-dwellers, I couldn't help but feel their silent yet clear disorientation, and a profound sense of loss. It was a bittersweet sensation that far too often accompanied their words, for me not to notice it; I felt it in the slight changing of tone as they were telling me of their past, of the world that once was. A world that, probably, never existed precisely as they recall it. Maybe its sweetness was sweeter, and its bitterness harsher yet. But I saw them. I saw Francesco, Matteo, and many others, living the land and off of the land, and how alive it was for them. And I saw how, sometimes, a thin mist crept in those lived spaces, a mist of ghosts, of memories of worlds gone past. I am sure

they could feel it, while embarking in *passilladas* or taking sheep to pastures. They were the ones pointing ghosts for me to see. Inhabited houses and abandoned sheepfolds, empty orchards and desert squares: they were not much the ghosts of people, but more of the relationships between them. They crept ever closer, and they were welcomed with a bitter smile. Bitterness was not always there, not as much as the smile. Matteo, Francesco, and many others smiled amidst the unravelling. Their world is falling apart, and yet their whole existence is dedicated to keeping its threads together.



*Fig. 7*

*Matteo, while taking the sheep to pastures, often spent time to indicate me where old sheepfolds were, that he used to frequent as a kid.*

It becomes evident, through the analysis of this discussion between three sixty-five-year-old shepherds, that the withering of the social fabric, in Funtanalba, went hand in hand with the withering of its population's demographics and food sovereignty. Sardinian shepherds have been described as "unwilling gardeners" of the landscape (Pitzalis, Zerilli 2013a), as the presence of their multispecies family is able to reproduce a whole ecological niche. This reminds me of what Stefania Barca would call the forces of reproduction: «they keep the world alive, yet their environmental agency goes largely unrecognized» (2022: 1). The forces of reproduction are both human and non-human, and thus are not divorced from the environment itself: here, pollination and moral economies go hand in hand. This adds nuance to Deborah Bird Rose's (2013a: 127) interpretation of Australian

totemism as an institution of common property to further long-term environmental management and reproduction: oftentimes, for rural populations, moral economies are so bound with their sociomaterial environment that they become ways to communally ensure the environment's reproduction<sup>39</sup>. In turn, moral economies, as well as subsistence farming and, I may add, nonhumans' freedom to negotiate their living and metabolic conditions, are inevitably enemies of capital accumulation (*ibidem*: 42). Thus, as they wither, it becomes possible to privatize them, enacting a twofold process: on the one hand, privatizing the means of reproduction substitutes social care through monetized care; on the other, it enables the Anthropocene discourse's folly to focus on (white, rich) human's ingenuity to master nature and repair the ecological crisis through technology and, ultimately, through extractivism, colonialism, and capitalism itself (cf. Federici 2019; Barca 2022; Saito 2022). To obscure the agency of the forces of reproduction (Barca 2022) means to enable a narrative in which wealth is created through material extraction, rather than being the direct product of environmental reproduction (Saito 2022). In turn, to reify nature and the environment means to operate the metaphysical flattening (Price in Liboiron 2021: 47) that, ultimately, led to the very situation we find ourselves in: it is to reduce reality to a set of arbitrarily chosen features in order to control it—and failing to do so, as hermeneutic and ontoepistemic frameworks can never fully grasp the world from which they emerge.

In this chapter, I tried to weave together place, relations, and time to show how they conterminously emerge as fundamental to food sovereignty: moral economies are crafted through local ways of belonging—of inhabiting and being inhabited by the more-than-human community that, in turn, secures collective survival not just to individuals or families, but to a whole local ecology. Hence, (human) food sovereignty emerges as the product of a set of relations between peculiar subjects, their land, and how time and labour are shared between them. For this reason, in the following chapters, I will show how the withering of Funtanalba's social fabric is inextricable from food production, thus human health, and then from environmental metabolic processes, and therefore ecological health. For this reason, while I will employ the concept of the metabolic rift (cf. Barca

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<sup>39</sup> As I contend in Guglielmo 2024a, for example, the local notions of “colored” vs. “original” foods serves as a means to reproduce the environment from which original foods emerge.

2022; Saito 2022) to frame these transformations, I do not intend to frame it as an exclusively capitalist product that disrupts the metabolic interactions between human labour and the environment. Instead, I will try to show the emergence and survival of the forces of reproduction as the product of a metabolic interaction between the living, the non-living, and the sociopolitical frameworks in which they emerge. I will start with food: the next chapter will tackle cheese production in Barbagia; the following will instead be dedicated to meat production and animal killing. In this way, I aim to show human and non-human agency as mirroring and responding to one other in a generalized metabolism both producing and being produced by Life and Non-life (see Povinelli 2016), humans and nonhumans.



## II

# Dangerous Cheeses, Endangered Bodies. Disappearing multispecies collectives in Barbagia

Food production is a prime subject to investigate the mutual weavings between physical matter and society: if foods can be said to embody their naturalcultural environment (cf. Guglielmo 2023), naturalcultural environments are also influenced by such products. This chapter will try to focus into the practices of food production in Barbagia to show how their change was mirrored in more-than-human bodies and ecologies alike.

After a brief hint at the history of cheesemaking in Sardinia, I will turn to ethnography in order to explore pasteurization as an ecopolitical force, changing the relations in more-than-human communities and modifying ecologies in turn. Furthermore, I will explore the embodied relationality engendered by free-range shepherding, showing the modifications shepherds perceive in nonhuman bodies, and the extinction of local bodies because of industrialization. Subsequently, I will show how cheesemaking was and still is at the centre of the creation of more-than-human bodies: the second section will focus on *su casu muricau* (the curd) and its local consumption to try and demonstrate how peculiar social configurations contribute to the consumption of peculiar foods which, in turn, contribute to shaping always local bodies. Then, in the third section, I will employ *sa Casada*, a traditional cheese produced through colostrum, to exemplify the embodied connectivity between human and goat kids engendered by shepherding assemblages. Lastly, the fourth section will employ medical anthropology and epigenetics as a framework to understand my fieldwork friends' considerations about the disappearance of cheese, cheesemaking, and the socioecological conditions of its very existence. However, before delving into such issues, let me tell the reader a tale about the devil and his meeting with a Sardinian hunter.

Apparently, some in Sardinia say that cheese was first stolen from the devil himself, while he was busy milking deer in the forest (Murru Corrigan 2015). As the legend has it, a hunter was going to the countryside when he saw a flock of *crabolos*, wild animals that some consider to be deer, being placidly milked by a man clothed with their same pelts. This mysterious man, milking and rearing wild animals as they were sheep—a «shepherd of wild animals» (*ibidem*: 210)<sup>40</sup>—was called Trugliu, and invited the hunter to see for himself the magic happening, and to taste his cheese, at the sole condition that the hunter would never reveal his secret craft. But our clever hunter had different plans: he lied and stole a small lump of the white matter that was making milk curdle. In this way, he was able to repeat the process, and the technology of cheese was made accessible for all humans—although, they never managed to tame some of the nonhumans that Trugliu was able to call companions.

Some others, in Funtanalba, told me that the invention of cheese was instead an act of pure ingenious creativity: a shepherd had to carry some milk with him and, having no bucket, resorted to using a goat's stomach. In this way milk curdled, and cheese was born. I am more inclined to believe this second story; mainly because I prefer to imagine cheese in Sardinia was born from an act of creativity rather than from one of stealing. Having lived with my fieldwork friends for more than one and year, and having witnessed their prowess and ingenuity in coming up with makeshift yet working solutions to any problem, I am convinced that one of their ancestors could have easily thought of such a pragmatic way to substitute a bucket for carrying milk<sup>41</sup>. Or maybe it was Trugliu himself who, discovering that mortals came up with a way to replicate his magic, spread false voices about them stealing his recipe—we all know the devil can be very persuasive.

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<sup>40</sup> Such story has stimulating parallels with those presented by the anthropologist Philippe Descola (2005) in order to present perspectivism: wild animals are wild to humans only, as they live in their own societies, and see themselves as human in the same way. Moreover, interestingly enough, Murru Corrigan (2015: 210) reports that Trugliu, the devil, was sent by Jesus himself to care for the wild animals he had at heart. Thus, in this unexpected alliance, it comes naturally to ask oneself if Trugliu really was the devil, and why Jesus would craft such a strange alliance to protect a bunch of deer dispersed in the Sardinian wilderness.

<sup>41</sup> The two legends also present a difference in the historical times in which such discovery could have been made. Even if Trugliu could have been “transformed” into the devil by a later Christianization of popular legends, the hunter was reported to have forgotten his rifle (Murru Corrigan 2015: 209), thus placing him at least in the second half of the 1800. The shepherd my friends refer to, instead, could have lived in far more ancient times than this hunter.

In any case, whether Sardinians stole cheese from the devil or invented it themselves, they have been producing it since time immemorial. Historical and ethnographic data show how cheese production in Sardinia remained consistent throughout the centuries, at least until the XX Century, when things started to change as Sardinian sociopolitical systems transitioned towards capitalist regimes of production. The anthropologist Giannetta Murru Corriga (*ibidem*) collected a generous *corpus* of texts, starting from the Roman period, showing this preservation of knowledges, and the various complaints past authors moved to shepherds, who seemingly produced an exceptional cheese while using techniques not so apt for commerce and exportation. They were, for the majority, people coming from outside the island, who complimented Sardinian shepherd's correct practices and criticized what they saw as wrong convictions, often directing them to follow basic hygiene procedures (*ibidem*: 217). Murru Corriga uses the example of the reformist Francesco Gemelli's work in 1776: according to her, he cared for Sardinia and Sardinians, and for uplifting their economic and productive destiny (*ibid.*: 215). Hence, he depicted the Sardinian cheesemaking landscape as full of richness, showing his love for Sardinian cheeses, but couldn't help but point out some bad practices shepherds enacted. First, they removed the cream, making their cheeses low-fat and dry; secondly, they would do so with *pane carasau*, one of the flat, dry breads traditionally produced here: thus, the crumbling bread would inevitably end up in milk, and then in cheese (in *ibid.*: 216). The thing is, as Murru Corriga points out, that removing the cream with bread probably constituted a fundamental nutritional intake to shepherds, «granting that food autonomy that nomadic life imposed»<sup>42</sup> (*ibid.*). Thus, cheese production, in 1776 already, was caught between local and transactional practices, negotiating between market and life needs—on the one hand, a pivotal nutritional resource granting food sovereignty (Via Campesina 1996) to shepherds; on the other, a commodity sold all around Italy and Europe, appreciated as a delicacy by high and medium-class urban dwellers. In such an encounter between local and global assemblages, we see one of the first problems of scale.

Many scholars assessed similar issues. The anthropologist Anna Tsing, for one, looked at problems of scale in both research and production: she asks us to consider sugarcane plantation in Brazil, and how the atomization of both

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<sup>42</sup> The translation is operated by me. From now on: TA.

interspecies relations for the plant, and of social ties of African enslaved workers, served the purpose to extract immense profits for Europeans, who «were too far away to see the effects» (2015: 39). Thus, Europeans understood that «alienation, interchangeability [of workers and nonhuman products], and expansion could lead to unprecedented profits. This formula shaped the dreams we have come to call progress and modernity» (*ibidem*: 40) and produced one of the first “scalable” enterprises of the Global North, which followed in expanding such formula all around the world. The problem is: things are not easily scaled up as capitalist enterprises would like. More-than-human assemblages «are contaminated and thus unstable; they refuse to scale up smoothly» (*ibid.*: 43). What this means is that one cannot simply grab a configuration of interspecies relations between living and non-living<sup>43</sup> entities and act as if they could work seamlessly when taken out of their original context. The geographer and postcolonial scholar Max Liboiron described this perfectly:

[s]cale is not about relative size. Scale is about what relationships matter within a particular context. For example, if you look at live skin cells under a microscope, you'd notice osmosis (flowy water movement) and other activities taking place within the cellular membrane. If you put away the microscope and look at the arm the skin cells come from, you'd notice goose bumps and tattoos. Even though arms are made of skin cells, they do not act like skin cells, and chopping an arm into little pieces does not produce skin cells – though it might produce a prison sentence. Cells and arms are fundamentally different things, even though they are intimately, inextricably related. Scale is a way to talk about this ontological shift, where the processes that matter (relaaaaatioooooons!) are of a fundamentally different sort at different scales without severing relations that cross scales (2021: 84).

In 1776 already, Sardinian cheese and shepherds were encountering the first problems of scale, where shifting values and needs clashed at the intersection between the global and local level: marketability on the one hand, survival and food sovereignty on the other. Cheeses act like cells, and they compose arms when collected for the global market—arms that are well beyond reach for the molecular processes happening at the lower scale of shepherds and cheesemakers. The two are interdependent, and yet structural and economic reasons were already making

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<sup>43</sup> The anthropologist Elizabeth Povinelli (2016) worked on the distinction between living and non-living, finding its Aristotelian roots, and showing how such cultural dichotomy served to justify extractivism and colonialism.

the arm more crucial than the cells, let alone proteins and molecules. One can only hope that, at some point, some cells may go rogue and start messing with the arm.

In any case, things began to truly scale up for Sardinian shepherds and cheesemakers only between 1800 and 1900. During this period, production shifted from a shepherding economy to an industrial one, marked by the abandonment of nomadism, the use of «preindustrial dairies»<sup>44</sup> (Murru Corrìga: 223) to produce Pecorino Romano (Roman Pecorino), and the substitution of animal rennet with industrially produced ones<sup>45</sup>, able to curd milk with market-oriented flavours. This process accompanied the loss of situated knowledges: all the shepherds I worked with declared they would be unable, today, to use animal rennet to curd their milk. As a result, most of my fieldwork friends today use *Naturen* rennet, a bovine rennet industrially produced and distributed. They still know how to produce natural rennet though: *su call'e crapittu* (goat kid rennet) is considered a delicacy, and is consumed both raw, spreading it on bread, and fried with bacon when fresher. Ironically, today are industrial dairy factories the ones that are employing animal rennet again to curd their cheeses, guided by consumers expectations to buy «local resources and 'identitarian' products»<sup>46</sup> (*ibid.*: 234): local knowledges have thus been translated from situated to industrial, even if with profound adaptations to comply with hygienic and market standards. According to Murru Corrìga, we are assisting in Sardinia to a process of reinvention of tradition<sup>47</sup>, something akin to what Harry West (2012; 2019a) and Heather Paxson (2021) observed in England, France, and America. Such reinvention is made more evident with DOC (Controlled Designation of Origin) denominations: the anthropologist Valeria Siniscalchi (cf. as ex. 2018) extensively studied Fiore Sardo's production and conservation, and the shifting moral, symbolic, and economic values embodied in its marketization and promotion, and its entrance in the Slow Food movement. Her work mirrors some interactions I had regarding Pecorino: shepherds lament the wild competition with industrial dairies, using pasteurized milk as they collect it from a vast number of different

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<sup>44</sup> T.A.

<sup>45</sup> Most of my fieldwork friends use *Naturen* rennet, a bovine rennet industrially produced and distributed.

<sup>46</sup> T.A.

<sup>47</sup> Examples of this process could be highlighted in Funtanalba also. Apart from strategies to draw city-dwelling or continental tourists to come and experience "true Sardinia" or "true pastoralism", some also tried to commercialize their products through ingenious and creative packages, shapes, and names, so as to enhance their marketability.

flocks, whereas they use raw milk, considered safer because it is extracted from one singular flock (*ibidem*: 58). Thus, industrial producers were pushing for a broader regulation that would help them to massify production, whereas small producers wished for stricter boundaries to valorise cheeses produced in Barbagia (*ibid*: 58-59). To dive into the intricacies and struggles of more or less local producers in favour or against DOC regulations would be outside the scope of this chapter; moreover, it has already been extensively observed by other anthropologists (cf. as ex. Corti 2016; Grasseni 2012; 2017). What I am most interested here is the complex web of changing practices, values, and environments in Barbagia, and how they are reflected in food production and consumption habits and, most importantly, in the bodies of the more-than-human subjectivities gravitating around cheese production in Barbagia. How this framework helps us understand the food habits of rural Sardinians, and what can it reveal about the shifting biologies that emerge from the interaction between traditional and neoliberal trajectories in food production? To answer, I need to make milk and cheese contextual; that is, I need to point out the socioecological differences that engender and are engendered by different processes of milk and cheese production. To do so, I will bring the readers to Matteo's sheepfold where, having left milk curdling in a tin pot, we accompanied sheep to pastures, and then came back to craft cheese.

## 1. The ecopolitics of cheese: pasteurization and relational lives

While in the small, rustic house in his sheepfold, Matteo puts an old tin pot on a rusty stove, and he lights it with a piece of cardboard after connecting it to a gas tank. It is a sunny day, one in which the sun shines bright but coldly, and you can almost feel the frost slowly cracking and melting on the trees and grass that breathe and absorb the freezing air around the sheepfold. Outside, we hear the donkeys' bells ringing—they came from up the *tacco* (plateau; lit. heel) to try and get some grains, while granting a smile on Matteo's face. I ask him about pasteurization:

M: [Lighting the stove attached to the gas tank and swearing for its malfunctions] Well, these things, pasteurization, are all things that are needed for preserving the product. You bring it...you bring it to a certain temperature, you make it boil, I can't remember how much you heat it, 80 degrees, when you bring it—you take away—at 80 degrees you also sterilize it, it does not have anything...anything that the sheep ate, it served nothing. It served nothing that sheep ate good stuff, bad stuff...you bring milk to zero again! It's like water! And so you have to go on and buy starters, you add them, they are sold by companies, lyophilized, that they build in laboratories, and they sell those starters to me, who I am Podda, and craft cheeses, they sell it to you, who are Mura<sup>48</sup>, they sell it to someone else...and then this cheese, yes they are good, but they have the same...they...eh [sighing with a sour smile], they are produced with the same lyophilized [starter], as you give it to me you give it to someone in Milan, to someone in...in this way, everything good they ate, these sheep...while instead, as we do it, if they ate well there will be a cheese...with a different taste. They are things...original, things... [he sighs].

A: So, if you were to pasteurize your milk, it would be as the one [sold] by Parmalat.

M: Well, of course. You bring it to 80 degrees, you destroy everything, each of its...everything good it has, and then I come to you to buy...*but I am regular* [following the law], in the eyes of the State. I craft a regular product and I can also put a label on it. Instead, in this way, I craft a product which is a bit...this is a little wheel of *irregular* cheese [smiling]. Eh...it is very dangerous for your health [laughing]!. Do you understand? The State [tells you]...it is seriously impairing for your health (12/02/23).

Matteo here summons a set of biological notions that he firstly links to multispecies webs of mutual nourishment, and then to State and market (bio)normativity—especially when I mentioned Parmalat, a major industrial producer of milk and dairy in Italy. He names his practice of crafting cheese as irregular, framing his art of controlling decay (West 2019b) as a form of interspecies resistance (Beilin, Suryanarayanan 2017) towards the State, market, and health institutions. But if one were to take a closer look at milk, they would discover that his words are not entirely true in biochemical terms: milk from organic and conventional farming systems has still different chemical profiles (cf. as ex. Massouras *et al.* 2018), pasteurization can't really change that. However, I don't believe Matteo is really arguing the contrary. Instead, he refers to the homogenization of breeding conditions that pasteurization brings as an ecobiopolitical device: favouring industrialized environments, pasteurization acts as

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<sup>48</sup> Podda and Mura are extremely common surnames in Sardinia.

one element in the disallowance of rural more-than-human assemblages, making them impractical, irrational, and economically unsound (cf. Guglielmo forthcoming). Moreover, industrial producers collect milk from different flocks, pasteurize it, and use it together to craft market-oriented cheeses: In this way, the socioecological conditions of milk production are homogenized, solidifying the eco-biopolitical power that favours industrialized production while leaving rural producers to decline. It is, again, a problem of scale—a form of metaphysical flattening (Price in Liboiron 2021: 47) characteristic of capitalist formations of power: *milk is milk*, they say, so why not scale things up and simplify them, reducing milk to a sum of arbitrarily chosen “relevant” factors in order to maximize outputs and profits? I have already argued elsewhere (Guglielmo 2023) how this is hardly the case: food is as mindful as the bodies from which it is extracted, embodying and expressing sociopolitical and ecological conditions in the bodies that consume it. The different chemical profiles in milk produced under different conditions also testify to this. For now, let us try to track down the local and global histories embedded in Matteo’s words, as one can easily pinpoint socioecological modifications by looking at the changes in dairy animals rearing, and in the politics of producing and distributing milk and cheese.

As agriculture intensified, the socioecological conditions in animals in farms changed too. The writers and dairy producers Bronwen and Francis Percival report that in America, between 1970 and 2000, «average herd size leapt from just 19 cows to 120 cows per farm» (2017: 3). Dairies realised that to achieve economic sustainability they had to push animal growth through industrial efficiency: cows were no longer allowed to roam places where they could eat diverse foods but were instead to be kept «where space was cheap and then fed them carefully calculated inputs to keep costs down and yields up» (*ibidem*: 5). This process went hand in hand with what the sociologist of science Hannah Landecker calls «the industrialization of metabolism» (2023; cf. also Krzywoszynska 2020: 237-238). First with arsenic, then with antibiotics and hormones, animal diet has been progressively medicalized, and their metabolism industrialized, to accommodate the needs of the growing food industries (*ibid.*: 73-75). Furthermore, artificial insemination and gene selection allowed breeders to control nonhuman reproduction to maximize yields of milk (Percival, Percival 2017: 58-61). The industrialization of metabolism is not limited to metabolism, or

to industrial production alone: even free-range sheep are also observed to have embodied modifications due to the changing market. Matteo was referring to this while showing me a sheep's udder:

Do you see how this nipple is, so thin? This is an ancient sheep; before, they all had nipples like this: they slept in the open and gave birth in the open, with the cold outside, and nipples so tiny are better for lambs, it's easier for them to suck on them because they have little mouths (Inf., 21/02/23).

Here, we see Matteo is far from any metaphysical flattening: rather than focusing solely on milk output, he adopts the nonhuman's perspective, imagining what a different nipple could mean for a lamb. Similarly, he once referred to "French" sheep increasingly used in milk production, which produce three to four litres of milk per day. With their sturdy teats, he remarked, «blow your hands away, they exist only for those who use the automatic milking machine» (Matteo, inf. 31/03/23). Matteo is likely referring to the Lacaune breed, introduced in Sardinia to maximize milk yields<sup>49</sup>, and his words again argue against metaphysical flattening. Here, as with pasteurization, Matteo is asking us to look at a much broader context than the relevant factors we arbitrarily choose when scaling up production. He would hardly argue against how good it is to not have pathogens in milk (what pasteurization ensures), and he would, of course, be more than ecstatic if his sheep suddenly started to produce six times the milk they offer now. These factors, taken alone, are hardly any bad. Still, he points out the gaps between these arbitrarily chosen factors, examining a broader context and attempting to show us what we are losing in the process. The link to industrial production is then further strengthened using the adjective "automatic": Matteo contrasts hand-milking, favoured by lesser milk outputs but softer teats, to industrially milked animals, whose teats have no bearing on the producers' hands because the process is "automated" and "machine-based". Similarly to what Tsing describes in relation to the atomization of humans and plants in plantations, multispecies proximity is curtailed to maximize production and reduce the risk of zoonoses emerging from mass animal agriculture (cf. Swabe 1999; Hinchliffe et al. 2017). This is yet

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<sup>49</sup> This sheep, originally from the French Roquefort region, can produce much more milk than the Sardinian sheep, and is today «one of the world's highest milk producing sheep breeds» (Li *et al.* 2022).

another facet of the multi-sided coin of food industrialization. Most importantly, industrialization here is shown to penetrate the very depths of nonhuman bodies and the relationships they sustain with humans and other nonhumans. Pigs and pig breeders also saw these embodied changes due to the massification and globalization of food production and tastes, as Adamo, a pig-breeder in his seventies, once told me:

Can you even compare the taste they [pigs] had [while living] in the woods? Eating berries, tons of acorn, minerals, as they too are good...it's a completely different thing. Then, before pigs were a lot fatter, they all produced four fingers of lard, everyone looked for lard because they used it for everything...to eat it like that, in the place of mortadella, o do to French fries in it (inf. 09/03/23)<sup>50</sup>!

Similarly, Matteo linked a similar process to his lambs, while butchering one and teaching me how to assess their “readiness” by the lumps of fat one can find on some of their internal organs:

M: It is not important for a lamb to be excessively fat, because in any case free-range ones are never too fat. Yes, they are a bit fat, but not too much, because as they walk, the don't...they burn a little [fats], but still they are...their meat is better, because in any case they eat a little bit of...the thing their mother give them, and then they also graze, so their meat...it's the best meat. And also the meat that should do less harm to you [...]. If they are raised...if they are forced [to fatten], I don't want them. I don't like them.

This process is also observed in cows. Before World War II, many were raised for multiple purposes—not only for milking but also as hard-working animals. After the massification of food production they were raised with the sole intent of producing the most significant quantity of milk and meat (Percival, Percival 2017: 44). Whereas animals have once been valued for their relational qualities, both physical and behavioural (to be bright, hard-workers, obedient, etc.) after this shift only one aspect of their bodies mattered: their milk and meat output. Many cow breeds once raised as excellent draft animals, disappeared with the spread of

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<sup>50</sup> For example, lard is sometimes still used in Funtanalba as a fire igniter, especially when using fresh or otherwise damp wood. On the use of pig fat and their importance for rural populations in Sardinia, see Meloni 1984: 100.

tractors, and, by the 1970s, they were close to extinction (*ibidem*; cf. also Swabe 1999).

Thus, an exceptional range of nonhuman breeds<sup>51</sup>, locally adapted through centuries of both natural and artificial selection, were erased to favour only those bodies that better conformed to industry and market. Similarly, the Gloucester cow breed, famous as its embodied resistances allowed the production of the first anti-smallpox serum in 1976, was rapidly substituted by less resistant but better producing breeds (Percival, Percival 20107: 62-63). This is yet another form of metaphysical flattening: animals are bred for meat, so maximizing meat output is all that matters. Those who did not produce anything interesting for human consumption were left to die: that would be the case of the Sardinian donkey breed, once abundant and now on the verge of extinction (cf. Kugler *et al.* 2008; Colli *et al.* 2011), rendered unemployed, when cars and tractors deemed better workers.



Fig. 8

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<sup>51</sup> Percival & Percival also problematize the concept of breed: «[a]s the United Nations Food and Agriculture Organization’s Commission on Genetic Resources for Food and Agriculture makes clear, “breed” is a term of art. Peel away the layers, and the concept is no more than a shared social construct, an artistic description that has far more to do with the way that humans classify the world than the essential properties of the animals themselves» (2017: 48). See also Raffaetà 2020: 252, in which her interlocutors deconstruct the concept of animal species, discussing how they are «an obstacle to the comprehension of biological processes», which are better understood as «ecotypes», integrating genomic identification with environmental features. T.A.

*This cow breed, not originally from Sardinia, was reported to be “not beautiful” by one shepherd.  
The reader can now have a sense on what he meant by that.*



*Fig. 9*

*Donkeys, now left jobless, are today employed with the purpose of passively earning an income. After all, one could say industrialisation has been a blessing to them, who are now enjoying free meals and more or less free spaces to roam.*

Anthropologist Benedetto Meloni also testified this in a Sardinian town seemingly similar to Funtanalba, which he calls Siniele, in the forty years between 1930 and 1970. The number of working cattle diminished from 140 to 8 individuals, while sheep and goats increased dramatically from 3,740 to 8,726 (Meloni 1984: 23). And while Lacaune sheep are larger and far more productive milkers than Sardinian sheep—and have slowly, almost entirely replaced them—the latter are described by my fieldwork friends as sturdier and more resistant to disease, and by historical sources as exceptionally adapted to scarce pastures (*ibid.*: 84). Change the way meat, milk, and cheese are produced, and an entire set of socioecological relations, bodies, and metabolisms is dramatically reshaped to favour industry and market. Optimization for the system becomes all that matters (*ibid.*: 66): milk and meat production are valued far more than the embodied traits nonhumans developed over thousands of years in specific local ecologies—or

rather, traits that shifted over time in response to environmental change. But macroscopic companions are not the only ones whose bodies and communities were reshaped by industrialization: microscopic critters fared poorly too<sup>52</sup>.

Before the emergence of roads, railroads, and refrigeration, consuming fresh milk was not widespread; it was mostly limited to farmers and their immediate social networks. Furthermore, milk quality was not ensured by certificates or authorities, but by the face-to-face proximity of rural social networks (*ibidem*: 122-123). If someone offered rotten or spoiled milk to their neighbour, they had to face consequences. Recalling the issues of belonging and moral economies explored in the previous chapter, one can add the interfamilial dependencies on which rural communities relied—and to some extent still rely—in Barbagia (cf. Counihan 1984; Angioni 1989; Parascandolo 2016). The result is a tightly interdependent set of obligations on which everyone depended for survival: when people must count only on their closest others to eat, they tend to behave. In any case, raw milk can truly host a complex, microscopic community teeming with bacteria good *and* bad. Sometimes, as the old saying goes, poison is not a substance, but a certain amount of it<sup>53</sup>. That's why, when doing *su murtzu* (the snack, the breakfast) in the sheepfold, Matteo always ascertained that I heated milk enough, nearly to boiling point, before pouring it in beer glasses with coffee and *pistoccu* bread. The truth is: milk can carry a vast number of dangerous pathogens. Cow milk, for example, may come laced with *Mycobacterium bovis*, *Staphylococcus aureus*, and *Streptococcus pyogenes*, critters who cause lethal pathologies such as bovine tuberculosis and scarlet fever. *Listeria monocytogenes*, another microscopic critter that may swim in milk, is able to kill over 20% of the

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<sup>52</sup> This partly contradicts Philippe Descola's reading of mediterranean shepherding practices as "direct positive action". Let me explain briefly. According to Descola (2024), humans tend to act according to either a "direct positive action" or an "indirect negative action". The first category describes an action explicitly directed toward individuals, and individual goals: I cure the sheep so that she is sick no more – and in fact, he links this kind of action to Mediterranean shepherding practices. On the contrary, rice farming in Asia often implies an "indirect, negative action" – one that is directed more towards the conditions of emergence of individuals, rather than individuals *per se*. "I tend the water, so the water may tend for the rice", is the underlying reasoning of this kind of action. However, as I will keep showing in the following pages, Mediterranean shepherding, at least the one that is observable in the Barbagia di Seulo, employs a mix of both to function. Yes, there are direct actions aimed at resolving discrete problems; however, it is also extremely common (even, perhaps, *more* common) to see shepherds attentively caring for the environment their flock move inside, as it is understood to determine milk and meat quality, apart from the very health of the local environmentmore-than-human community.

<sup>53</sup> This is only partially true. Max Liboiron (2021) has showed how intoxication from microplastic can act in strange ways, exposing bodies to harm on lower doses but diminishing its nefarious effects on higher doses.

people who ingest it; *Escherichia coli* instead can cause renal failure (Percival & Percival 2017: 125). Thus, as soon as railroads and cooling systems became widespread, and farmers started to sell milk far away, where «the consequences were out of sight, out of mind» (*ibid.*: 122), pasteurization emerged as the best ally to control the risks of raw milk consumption. “Destroy-and-replace” approaches to milk microbes sought safety through sterility, an «approach that is so comfortingly obvious that we have taken it for granted for more than a century, both in our food production and in our daily lives» (*ibid.*: 20). The cheesemaking process is very different from milk, though: it implies favouring the “good” microbial communities over the bad ones—something that local knowledges managed to do for centuries on end. Let’s take the example of *Campylobacter jejuni*, which causes diarrhoea, stomach cramps, and fever. While US Centers for Disease Control and Prevention found out that it was responsible for something around 54% of illnesses associated with raw-milk consumption, this critter is extremely vulnerable to any aspect of the cheesemaking process—acidification, heating, salting, and so on (*ibidem*: 124). Hence, local cheesemaking knowledges (most of the time) managed to eschew these risks through an embodied set of knowledges on how to harness the microbial variety contained in raw milk and cheese: through trial and error, since immemorial time, such knowledges managed to foster the right communities of critters while helping them fighting against the bad ones (cf. *ibid.*: 107; 148)<sup>54</sup>.

This process has been named by the anthropologist Roberta Raffaetà (2021) as “microbial antagonism”: where pasteurization erases any community of microscopic critters, thus leaving free space to anyone who wants to colonize milk, her interlocutors suggested that their knowledges allowed for an antagonistic encounter between different microbial communities. However, the fight cheesemakers stage is rigged from the start, as they know how to favour the communities they like over the dangerous ones (*ibid.*): as Harry West (2019b) writes, cheesemaking is an art of controlling decay, of harnessing milk spoilage to favour microscopic critters in their metabolization in order to produce tasty foods. It must be clear: here, I am not advocating for a wild west of unregulated products, especially given our current set of processes for global food distribution. I am very

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<sup>54</sup> And thus, we encounter scale again. What we find here is a contradiction between local knowledges and the immediate productive necessities of normative giants – factories, corporations, the State, and so on.

aware that people (and microbes) do not tend to behave, especially when consequences and consumers are far and out of sight—take the case of the Pecorino Romano, produced with milk extracted from all kinds of different flocks in continental Italy and Sardinia, and then sold in America. What I am interested in pointing out is how this microbiopolitical control, as Heather Paxson (2008; 2014; 2016) would call it, as a function of the industrialization of food production, has far-reaching consequences on broader sets of more-than-human communities, and on the metabolic justice allowing for the reproduction of local ecologies. Matteo's perspective on milk, cheese, and pasteurization is not foolproof; however, in writing this, I am adopting a scientific perspective (ergo, a metaphysically flattened perspective) which, as Matteo reminds us, inherently misses out on the broader view of things.

Thus, we return to Matteo's sheepfold, listening to his words about pasteurization. With a sour smile—one that communicates disgust and distrust—he says: «you also sterilize [milk]; it does not have anything... anything that the sheep ate, it served nothing. It served nothing that sheep ate good stuff, bad stuff... you bring milk to zero again!» (Matteo 2, R16). Matteo's words frame a profoundly political link between metabolic justice and market bio-normativity: erasing the sheep's relational diet—through which they freely pick and choose what to eat—favours industrial producers over rural ones, as what sheep eat is no longer considered relevant. If «the flowers that an animal eats in the field may well turn out to affect flavour by controlling the behaviour of the microbes within cheeses» (Percival & Percival 2017: 85), then industrial starters can easily reproduce such flavours in any cheese, erasing the conditions of relative, relational freedom of animals caught in production, whether free-range or industrial. In this way, on the one hand, the industrialization of cheese production disempowers rural communities (cf. *ibid.*: 23); on the other, it penetrates the very processes of mutual nourishment in more-than-human communities, equating all feeding conditions and thereby favouring the reproduction of massified modes of production—the very modes unequivocally responsible for the ecological unravelling of the Capitalocene. Conversely, this same process undermines the reproduction of local ecologies sustained by mutual nourishment between living and non-living entities. Pasteurization can be framed beyond microbiopolitics, as an ecobiopolitical device

favouring the reproduction of Capitalocene's underlying conditions, while severing the conditions for the reproduction of local ecologies.

When thinking about metabolic justice, Sophie Chao invites us to «interrogate critically what powerful forces dictate what goes into which bodies, [...] and who or what becomes the eater and the eaten» (2023). Following her reasoning, I am pointing out how the industrialization of milk and cheese production has far-reaching consequences on the processes of mutual nourishment that sustain local ecologies. There is no politics that isn't also an ecopolitics: Capitalism is an ecology (cf. Moore 2016a; Landecker 2023), and every ecology is fundamentally and profoundly political. This is why I am convinced that this process resonates in both biological and social bodies: one cannot disentangle the withering of local ecologies from the decay of social webs and the transformation of more-than-human biologies. Let us now try to unpack this link.



*Fig 10*

*Su callu 'e crapittu (goatkid rennet) is produced by drying a goat kid's stomach, full of milk. In the process, the milk will be fermented by heat and enzymes, condensing into an extremely spicy paste that people spread on bread.*

## 2. Cheese as body, cheese as world. The bitter taste of changing socioecologies

It would be wrong to depict the shepherds I worked with as traditional producers anchored to an idyllic, mythical past. Anthropologist Filippo Zerilli and sociologist Marco Pitzalis, who extensively studied the MPS (*Movimento Pastori Sardi*, Sardinian Shepherds' Movement) write that «[s]hepherds have progressively 'vanished' as they were incorporated into wider social formations», and that today they emerge as «ideologically consistent with neoliberal values, being at the same time among its first victims» (Zerilli, Pitzalis 2021: 82). Their view goes a great length in deconstructing the myth of shepherds as inherently against the State, or wider formations of power such as the market. However, in the context of Funtanalba, I don't believe that would be accurate to depict my fieldwork friends as simply «petty capitalists» (*ibidem*). Following the postcolonial scholar Dipesh Chakrabarty's (2000) conceptualization of work and capital, I contend that their values and practices can align, but often also negotiate, compromise, and sometimes even oppose neoliberal structures of time, work, and values. What I've observed, in the porous boundary of the "wall of Barbagia" I lived in for more than 12 months, is that tradition—if such thing even exists—is often forgotten or reinvented; however neoliberal thoughts and practices are also constantly hybridized, in ever changing doses, with local values and praxis. Usually, I could witness my fieldwork friends enacting (or not enacting) practices that eschew any cost-benefit calculus, both in animal breeding, milk production, and cheesemaking. Some stubbornly refused to use any thermometer to control milk's temperature before and after curdling, or when doing *s'arrescottu* (ricotta cheese), or simply let cheese curd and age with practices far from standard and rationalistic; others, even if knowing that some animals were not producing enough milk, and thus were "eating for free", delayed or avoided killing them out of care and emotional attachment, or in the hopes that they would heal from fever, mastitis, and other illnesses. Such practices, in my view, show the porous nature of capitalistic and neoliberal production, and engender an ecology of obligations (Despret, Meuret, 2016) based on purely ethical and aesthetic reasons. This, I argue, makes shepherds something more than just «petty capitalists» (Zerilli, Pitzalis 2021): while they participate in national and transnational streams of

goods, and while they themselves push to achieve better gains and easier ways to sell their products, they also often entertain a relation with both the land and its inhabitants that goes well beyond rationalization, efficiency, and crude gains.

The thing is that, if 1900 represented a moment of profound changes in the political economy of Sardinian cheesemakers, the very nature of Sardinia's territory made it so that those changes were uneven in penetrating in such porous boundary<sup>55</sup>: if the capitalization of agriculture and tourism are evident in coastal regions, the mountainous ranges of Barbagia absorbed while filtering those trajectories, and are still negotiating between local and transnational ethics and practices (cf. Lelli 1975; Cohunian 1984). While accompanying sheep to pastures Matteo, looking at the rocky and lush mountains surrounding us, told me:

goat shepherds used to live in the most secluded places, which are better suited for goats, they had to live in mountain places that you can't reach with the car...like the Supramonte, also bandits used to live in the same places, because there the State cannot arrive. There [pointing towards a mountain in front of us], there was a sheepfold until '85, more or less (inf., 9 March 2023).

Thus, it would not be accurate to claim that humans alone resisted the State—both because, in shifting ways, they also reinforced it, and because they were not the only ones involved in resistance. Plants, animals, and even minerals can act as barriers and participate in exclusion from institutions (cf. Guglielmo, forthcoming). My fieldwork friends noted that concrete roads reached this subregion around the same time the sheepfold Matteo pointed to disappeared: it all happened between the 1970s and 1980s. This illustrates what Sophie Chao (2022a: 33–50) describes: roads act as double-edged pressure points, enabling the movement of goods, services, and people, while simultaneously severing more-than-human communities inhabiting those spaces—often through daily and invisible forms of ecocide (cf. also Rigby & Jones 2022).

In a way, roads act as a device of proliferation and communication (let us think about how they were fundamental to the deployment of plantations), but also produce a «chronically striated space that radically transforms the co-

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<sup>55</sup> This is an example of the already mentioned “modernization without development” (Schneider, Schneider, Hansen 1972), and indicates the juxtaposition of industrial practices of production and consumption and the underdevelopment characterizing some Mediterranean regions (cf. also Cohunian 1984: 47).

becoming of terrestrial life» (*ibidem*: 118). Similarly, «the steam locomotive was also instrumental in the dispossession and displacement of colonized people, together with those culturally as well as ecologically keystone species with whom their lives were enmeshed» (*ibidem*: 117-118; cf. also Ingold 2011). These slow changes demonstrate how neoliberal formations of power, sociocultural values, and local ecologies all resonate with one another, producing mirrored biophysical and symbolic transformations. Physical matter is not waiting for culture to shape it; instead, it is already responsible for its own creation: matter is a form of history in and of itself (Barad 2003).



*Fig. 11*

*The enclosure of the commons, and the proliferation of roads on their surface, undeniably provided great advantages to many—but equally, it had less advantageous effects for other actors, both human and nonhuman.*

In this way, following changes in food production, distribution, and consumption, one can follow changes in local socioecologies and economies. This is already expressed in renowned works in the field of environmental anthropology. One might naturally think of the shifting values and scales traced by Anna Tsing's (2015) *matsutake* mushrooms, which continually move between alienated commodities and profound symbolic values. Similarly, feast days in Funtanalba can be revisited, as their commodification has gone hand in hand with the withering of the village's social fabric. The anthropologist Gino Satta (2001), in his analysis of the tourist-centred practice of the *pranzo con i pastori* (lunch with the shepherds), shows how it is staged to resemble the original *spuntino* (snack; here also referred to as *murtzu*) that shepherds would share in *su sartu* (the wilderness). We already tackled this issue in the past chapter, discussing moral economies in Barbagia. The lunch and the snack find themselves opposite in that, if the *spuntino* is

the sacrifice of a value offered to collective consumption in the name of the institution or the maintaining of social relations, [the lunch-with-the-shepherds] represents instead the sacrifice of a possible relation in the name of economic advantage. While the gift without compensation (or whose restitution is in any case differed *sine die*) creates an obligation and institutes or perpetrates a relationship, the balanced reciprocity of direct economic exchange (the price of the lunch) is exhausted in the exchange itself, instituting nothing instead (*ibidem*: 121-122).

Or we may return to Carole Counihan's work in Bosa (1984), where the shift of bread from social value to commodity, and from household to professional production, went hand in hand with the atomization of social relations and the transformation of productive processes.

Thus, if on the one hand we can undoubtedly say that capitalist modes of production (or at least, capitalist ways of trying to practice production) have found their way in Funtanalba, we could undoubtedly add that more-than-human communities still resist them in ways which may be, as Cohunian points out, directly dependent on practices of food production and consumption, and on the overall food sovereignty of local populations. Following the transformations of bread production and consumption, Cohunian (1984) shows the atomization of social relations introduced by capitalist modes of exchange: while Bosans are more and more independent from each other, they «remain dependent on the state and

the economic elite for pensions and jobs» (*ibid.*: 56). Hence, her work perfectly links economic anthropology and political economy, showing how particular modes of food production and consumption are directly connected to the reproduction of different kinds of social fabrics. But how are these changes reflected in local ecologies? How are they echoed in the very bodies of the more-than-human subjectivities revolving around food production? How are the atomization of social relations and the changes in modes of production and consumption *physically* embodied by more-than-human collectives? Let's return to Matteo's sheepfold to have these questions answered.

On that same day, when Matteo and I were talking about pasteurization while he was making cheese, he proudly started telling me about the milk and cheese he produces<sup>56</sup>, about their fats, their nutritional values. Then, he crumpled some *casu muricau* (curd) in a small ball and offered it to me. I looked at him with a dubious glance, but he stretched his hand closer to me: «eat it, it's good for you!», he invited. I was still dubious—I am intolerant to fresh cheeses, and I suspect there's no fresher cheese than *casu muricau*—but I timidly accepted. It had a faint taste, one I could not grasp completely, but it was still good, and I told that to him. He raised his eyebrows, “I know it is; it's obvious it is”, he seemed to imply while starting to tear the big lump of *casu muricau* resting below the whey in small bits and then transferring it in a mould, pressing and pressing it again to expel the whey.

M: My dad used to tell me that *su casu muricau* gave you some kind of...energy, it gave you strength! He crumpled it for me in this nice ball, a big one, but when you're a child, you like it a little less...when you're a little child, I mean, 12 year-old, it's not that...you appreciate it better later, do you understand? Then, when you're a kid you're obliged to eat it [smiling], there was this and *bo*<sup>57</sup>, every day it was always the same breakfast [laughing]!

A: And do you think that's true?

M: [Serious again] well, yes, I too think that...it's a bit like that, yes. Because...because you had young guys that ate only – they lived in the countryside, they ate only these things, but...for sure, they had nothing to do with a young guy of our days, that's what I think. It was that...they exercised every day, they worked every day...I think that's

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<sup>56</sup> To say that “he” produces cheese and milk is a gross simplification, one which erases all non-human agency, microscopic and macroscopic, involved in producing milk and crafting cheese. See as ex. Paxson 2008; West 2019b, Guglielmo forthcoming.

<sup>57</sup> Regional expression meaning “full stop”.

true, yes. It's not *su casu muricau*, it's a different diet...I think I see – before, when they were 18 year-old – they said that one has the most strength around 20 years-old, 22...eh...and then I see people who now has a certain [old] age that maybe is stronger than some youngsters, I think so [...].

A: And what had changed in your opinion? Because you said that diet – it was a different diet.

M: I think it's also the hardness of life. You should tell me better. Mah...diet, they were not eating at all! Maybe it was more about all that exercise...eh...they were not eating at all, what were they eating? Now people are eating *too much*. So...they were not eating, *boh*<sup>58</sup>! Eating, they ate less, better stuff but they ate less! What the hell were they eating? Better stuff for sure, original stuff for sure (Matteo 2: R7-R12)!

A: And what do you mean with “original”?

M: Well, products like these...dairy. Ale, they were eating cheese and *bo*!

A: Ok, but when you tell me “they were eating original stuff” – if I buy a *caciotta* in the supermarket, which is still dairy, but would you call it “original”?

M: Eh...I don't think that's really original [laughing].

A: That's it! So what do you mean when you say “original”?

M: Eh, I mean a cheese made like this...eh...without any...as it was born, in the origin, as it was in the origins, without other additives, that's it. Parmalat *caciotta*...I don't know what to say [in disparaging tone]. This [milk] is milked and immediately brought to transformation, while that one undergoes...eh...undergoes other kinds of treatment, come on. Just think that they say that a piece of cheese like this...equals to two steaks! I don't know why, they were...well, today...apart from some guys who go to the gym [in a denigratory tone]...but before, they exercised from morning to night. And...muscles developed this way, that's it.

A: It seems like the thing you were saying about sheep, who the less they eat...

M: Eh, it is certainly like that! I remember them, they were all day digging in the vineyard, little boys...*fuck*. All day ploughing – you go on now and do a gym like that! Yes, maybe you make yourself some muscle, but that...[inflating his chest while bringing his open arms towards the back of his body, with eyes wide open] that developed your whole organism (Matteo 2: R9-R13)!

Matteo's first words convey an exchange of symbolic and biological values between familiar bodies: his father, as well as the economic and environmental circumstances, led him to eat *su casu muricau*. Still, this (half-)cheese was believed to strengthen the children's bodies – as also the *casu axedu*, another dairy product which shepherds report being good for one's liver, energy, and overall wellness (Murru Corrigan 2015: 230). One could read Matteo's story in many ways. I could

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<sup>58</sup> Regional expression meaning “I don't know”.

go fully materialistic with my interpretation, arguing that the consumption of *casu muricau* served to restore energies in strained, young bodies: Matteo worked as a shepherd at least since he was twelve, he says, if not before, as it was the norm at the time. Alternatively, I could argue that this gesture is one of family making in a shepherding society<sup>59</sup>: through the imposition of eating particular foods in particular moments, his father was shaping his own authority, conterminously shaping a proper relation to family and masculinity. Or I could write in the framework of the anthropology of perception (cf. as ex. Ingold 2000; Le Breton 2007): to accustom a kid to taste *casu muricau* means to shape their perception towards the right flavours and consistencies culturally, so that they would acquire a skilled taste<sup>60</sup> towards the right rennet dose and the right procedure to craft cheese itself. In this way, I could argue that such enculturation was meant to transmit the very practice of savouring *su casu muricau* while pressing cheese in the moulds, as a way of acquiring information about the future of that batch of wheels. In fact, Matteo—like all the other shepherds I worked with—still always tastes it when crafting cheese. What interests me most, however, is the cultural creation of bodies: the process that anthropologist Francesco Remotti (2013) calls *anthropopoiesis*, or the cultural crafting of humans, here observed through the consumption of foods. After all, «[people] ate less [but] better stuff for sure, original stuff for sure» (Matteo 2: R9).

What Matteo is referring to here is the depletion of nutritional and symbolic values in the industrial foodstuff, which now appear more frequent on his sheepfold's wooden table—especially during the short periods when his youngest son comes to help him milking and cheesing. As he explained, his older ones partially inherited his disgust towards industrial foods and his pride and appreciation for the “original stuff”. Damiano, the youngest one, is dramatically more aligned with industrial practices of food procurement and consumption, whether through snacks, fizzy drinks, or the disgust he manifests towards some of the traditional cheeses Matteo crafts. But here, Matteo is not talking about just food, is he? It's not simply food that constitutes human bodies: «it's not *su casu*

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<sup>59</sup> Benedetto Meloni (1984) tracked social and economic changes in families of a small town in Barbagia. Still, the aforementioned work by Carole Cohunian (1984) helps us better to track down the modes in which food production and consumption shaped communities at the familial and inter-familial levels.

<sup>60</sup> I draw this term from the concept of “skilled vision” which Grasseni (2004) developed among cattle breeders in northern Italy.

*muricau*» (*ibidem*), but a set of socioenvironmental practices and connectivities that shape one's embodied presence into the world. The understanding that «farming and cheesemaking are one and the same process» (Percival & Percival 2017: 25) then assumes a whole new meaning: beyond *terroir*, that is, the capacity of cheese to embody the naturalcultural conditions of its crafting, farming and cheesemaking are holistic elements of an entire world, producing bodies, environments, and relations together. Yes, people ate less but better stuff, but they were also constantly caught in a constant exchange of kinetic/thermal energy and bodily fluids with the broader local ecology. This continuous exchange, which I call metabolic, shifting metabolism from inside to outside and across living (and non-living) organisms, is what truly built different bodies in Barbagia.

How is it possible that gyms let you «make yourself some muscle», while ploughing the vineyard develops «your whole organism» (*ibidem*: R13)—and what does Matteo mean when he refers to a “whole” organism? Is it just nostalgic thinking, is it just a construction of masculinity that Matteo is talking about, or is there more to his words? And what about cheese – what is its place in this trans-corporeal form of metabolism? To start answering these questions, I'll introduce you to another cheese: *sa casada*, the colostrum cheese often referred to as “the shepherd's pudding”, and the extremely peculiar milk it is crafted from.



Fig. 12

*A lump of casu muricau. As the quantities of milk, as probably its fats, may vary from day to day, it is not unusual that some curd is left from the cheesemaking process. Leftovers are consumed directly on site by humans, but often also scattered around for dogs, pigs, and insects.*

### 3. Making goat kids to make human kids. *Sa Casada* and the body multispecies.

«Alessandro, do you know what this is?!»<sup>61</sup> Matteo asks me while coming out of the stable with a smile depicted on his face and a plastic *launa* (milk container), seemingly containing a little quantity of milk. I am in doubt: on the one hand, it

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<sup>61</sup> Informal interaction occurred on 12/02/23. All the subsequent interactions in this paragraph are to be considered the same.

does seem like...just milk; but if that was just milk, why ask the question? «Mmm...no, Matteo, I don't think I do». His smile grows wider, now almost communicating mockery. «This is colostrum. Do you know what colostrum is?». I didn't remember of having heard the term before. «Colostrum is a special milk, you see, sheep only produce it for *a few* days after giving birth<sup>62</sup>. And it is extremely fat, it gives you energy...the elders used it to craft a *casada*. One day I'll teach you how to do it: you'll milk your goat and collect the colostrum so that you can craft it too». Hence, the first time I was allowed to milk a goat, Matteo wasn't thinking about teaching me how to milk. Instead, he wanted to impart a different knowledge on me, and only time revealed how important that transmission was: he wanted to teach me about a cheese that would probably go extinct in probably a couple of generations at best. He tried to teach me about *sa casada*, something that even his younger son refuses to eat, as he's disgusted even by the idea of eating colostrum. And he wanted to do so, probably, as his own father did with him: throwing him in the stable, alone, to see for himself how things are done. I felt some pride realizing that, in that moment, Matteo was acting as a fatherly figure towards me.

And so, the day after, Matteo asks me if I want to try to milk a goat, and I promptly accept. He opens the stable where they are kept when pregnant or when they have just given birth. When we enter the space, all of them – a dozen, more or less – turn their heads to look at us, with an attentive glance. He stretches his arm, keeping it parallel to the ground, while opening his legs to create a big enough space between them, and calls - «*Né, né, Volpiné, né*». Instantly, one of them comes towards us: she's bark-brown with black stripes; her name, I learned, is Volpina (little fox). Little did I know, at that moment, that she was the best suited in her group to teach me how to milk. Sure, I noticed how she immediately reacted to Matteo's call, and how quick she was to position herself between his legs, but I had no clue on how fiercely resistant others would have been – Canutella (grey-little-one), for example, kept on literally sitting on my hands when, in the next months, I started taking care of all of the goat's milking; others just tried to run away when the milking time came, or even during the milking, obliging me to hold tighter to their teats, probably hurting them a little in the meanwhile. Goats, I have

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<sup>62</sup> Giancarlo Coccu reports that is produced only for three days after giving birth (in Murru Corriga 2015: 230).

learned in the twelve months of my fieldwork, are brilliant animals: some studies point towards the pivotal importance of their social interactions, and to the importance of keeping olfactory and auditory interactions with other members of their group even when isolated for medical treatments or other reasons (cf. as ex. Shackleton, Shank 1984; Miranda-de la Lama, Mattiello 2010; Siebert *et al.* 2011)<sup>63</sup>. In Barbagia, I have seen them being trained like dogs by young shepherds, answering their commands and even jumping on their laps when they performed the right gesture. They also have extremely diverse and distinguishable personalities: some of them are vivacious and curious, others hesitant and easily-scared, some others instead bully smaller goats, or even humans—one of them, Corruta (horned-one), who boasted a pair of horns as long as my arm, threatened me more than once to making me meet those prolonged weapons she stubbornly used to move away other goats during feeding time. This is why Matteo chose a precise goat to teach me how to milk.

Matteo positions himself over Volpina and starts milking in a plastic *launa*—the same he had used the day before to collect colostrum, to keep it separated from regular milk. He tells me how to use my arms, legs, and hands, and I keep asking him more questions. How to move my fingers and palms was my main concern, as he kept using them seamlessly, in a single, hard-to-catch gesture. He slows down and explains better but tells me that, in the end, I have to try and feel it for myself. Volpina was, as during all other times I milked her, extremely patient and condescending—“she’s one of those who love to be milked!”, told me Matteo once. And so I start, slowly collecting the vaguely yellowish, dense liquid that colostrum is. It is in this moment that I notice an astonishing behaviour: Volpina began to move her head, rubbing it on my forearms and legs, as goats and sheep do with their own sons to stimulate them in drinking their milk. Not only that: Volpina fiercely pushed away any lamb coming near me while I was milking, again as many do to favor their own kin. Not only was Matteo acting as a fatherly figure towards me, but Volpina was acting as a mother too. That moment of milking was thus sealed as one of family-making: not of human families, but of multispecies kin that extends care and proximity between species<sup>64</sup>. It is difficult, in these cases,

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<sup>63</sup> For a more auto-ethnographic take on goat intelligence and emotions, see King 2013: 3; 36-38.

<sup>64</sup> This family-making is not simply a poetic and romantic interspecies proximity: for such proximity to exist, shepherds often need to kill the majority of the goats’ or sheep’s offspring in order to collect milk. Sometimes, they start milking after the younglings are weaned but, most of

to maintain the objectifying gaze anthropologists should (?) have when practicing ethnography: moments like this show how observation and participation cannot be neatly separated. Furthermore, they show how illusory is the distance an ethnographer puts between themselves and the people they work with: even if we pretend to be somehow external, even if somehow we manage to feel ourselves as entirely external, a good ethnographer will never be felt as external as they should be by the people they work with. We are the observant participants, not them. Hence, our practice is inherently bound to change the people we work with, in heuristic, material, and emotional ways. How can one maintain ethnographic, scientific distance when a shepherd and a goat adopt them? Do you tell him that you are not there as a friend, or do you scold the goat for mistaking you for her own son? On such occasion, I could only acknowledge that I had in fact become kin for both of them, and bear in mind to keep this honour and obligation as close as I can—through writing, studying, and the constant restitution of my work.

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the time, some killing has to happen, especially if one wants to collect colostrum, which is pivotal for the offspring's health and growth.



*Fig. 13*

*Volpina, the goat who adopted me, enjoying some chin scratches.*

In any case, after finishing milking, I transfer the colostrum in a plastic bottle to bring home. There, I closely follow Matteo's instructions on how to craft *sa casada*. My first attempt is a failure: I obtain a granular paste similar to *casu muricau*; the second, instead, is a great success, and I manage to obtain the famous shepherd's pudding Matteo talked about. Its taste is strong, but the lemon and sugar offset the caprine taste in it adding a note of sour and sweetness which make for a complete, round flavor that fills my mouth. It's great.

Why are colostrum and *sa casada* relevant for my argument? Giannetta Murru Corrigan described this pudding as «colostrum curd» (2015: 230), which curdles without rennet, also mentioning that it once constituted the shepherd's supper. This supper is progressively disappearing as industrial production

substitutes shepherds in Barbagia. But Matteo gives us another clue: similarly to *casu muricau* and *casu axedu*, *sa casada* is good for one's health, as it gives energy—ergo, it shapes their body in biocultural ways. Its beneficial effect on health is, for my fieldwork friends, inferred from the observation of nonhumans eating colostrum. They can all tell, with a single glance, a lamb or goat kid that did not manage to eat colostrum in their first day of life, as they grow up to be skinny, trembling, and are often bound to die within some days. «I can see that—can you imagine which properties does *sa casada* have? I can see that when I give it [colostrum] to my dog, in a couple of days she becomes *fat*, she runs around like she was mad!», Matteo tells me with a dreamy smile while discussing the effects of this cheese on humans and nonhumans. His dog's fat and ability to run are thus contextually understood in terms of necessity, since he is referring to working shepherding dogs tasked with defending lambs from foxes and falcons. What is particularly interesting here is the multispecies continuum that this cheese engenders: to make *sa casada*, colostrum must be collected separately from regular milk, and, even more importantly, it requires a complex, relational environment of proximity between human and non-human creatures.

This fact, of course, changes in industrial settings: colostrum, with all its richness, is processed and consumed in very different ways by urban populations. Nanotechnology offers one such example, as it «provides several opportunities for the development of novel products and the expansion of food system applications including nutraceuticals, functional foods, bioactive substances, and pharmaceuticals» (Samal in Kaplan et al. 2022). This idea would produce a disgusted expression in my fieldwork friends, who would recognize these as “coloured foods”, inferring the socioecological conditions of their production. Furthermore, such modes of production raise questions of metabolic justice, which I will fully address later in this work. In any case, they also raise different conceptions of food and bodies. Philosophers Andrea Borghini, Nicola Piras, and Beatrice Serini already discussed the «Food Utopias» (2020) that both these views summon: on the one hand, nostalgic views of an idyllic yet imaginary past; on the other, hyper-rational approaches that consider foodstuff as just as sum of nutrients and pharmaceutical substances<sup>65</sup>—what Landecker (2011) would call the

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<sup>65</sup> I am here reminded again of Landecker's notion of the «industrialization of metabolism» in animal farming (2023). Similarly, human metabolism too can be seen as post-industrial (Landecker 2011: 173). Furthermore, Raffaetà (2020: 191-195) discussed the implications of

molecularization of environments, foods, and bodies. Thus, if many biological works point towards the health benefits of (mainly bovine) colostrum consumption (cf. as ex. Arslan *et al.* 2021; Fasse *et al.* 2021; Kaplan *et al.* 2022), we still know very little about the interactions between peculiar more-than-human lifeways, colostrum production, and consumption, and no data exist on the difference of consuming industrially-engineered colostrum and consuming processed colostrum in the form of *sa casada*, especially when connected to the whole socioecological environment in which it is traditionally produced<sup>66</sup>. I will expand more on this concept in the next section; for now, I just want to point out the different notions of food and bodies which my fieldwork friends and industrialized settings propose. Here in Barbagia, foods are often understood as relations between bodies and environments (cf. Heatherington 2010; Guglielmo 2023), and bodies themselves are bound in a process of constant co-production with the local ecology they inhabit and are inhabited by. The gym may develop some muscles, but ploughing the vineyard develops *your whole organism*, after all.

The local production and understanding of *sa casada* is irremediably tied with peculiar conditions of land use and animal handling, which are strongly disallowed by the progressive industrialization of food production in Barbagia. I could witness, in the twelve months of my fieldwork research, more and more people abandoning their shepherding lifeways because “*non faidi prusu*” (it is not possible anymore)<sup>67</sup>, because of milk prices, meat production, State and EU regulations, and the diffusion of industrially processed meat and dairy products, sold at considerably lower prices. Those processes of industrial development through machines and pesticides Cohunian referred to when discussing the atomization of social lives in Bosa (1984: 51), which the sociologists Maria Mies

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personalized medicine, which aims to individualize health on the most cellular level, with little or unknown impacts for public health – beyond the already dubious feasibility on scientific and economic terms.

<sup>66</sup> Something that should give food for thought for reflecting on what truly constitutes a “Mediterranean diet”: is it a set of fixed nutrients, or is it the interaction between nutrients, modes of production, and peculiar lifeways in ever-changing local ecologies? A similar thought is expressed by Raffaetà (2020: 136-138), arguing that our microbiome cannot be said to be produced by diet only, nor by environment only.

<sup>67</sup> It is already difficult to translate “*non fa*” (lit. “it doesn’t do”) in Italian, let alone English. While its most common meaning is “it is impossible (to do something)” (e.g. “*non fa lavorare con la pioggia*” – “it is not possible to work when it is raining”), its boundaries may vary, and take different shades depending on the context. Thus, sometimes, it also takes on the meaning of “it is useless” (e.g. “*andare a votare non fa*” – “it is useless to go voting”), or “it is inconvenient” (e.g. “*vendere il latte non fa più*” – “to sell milk is not convenient anymore”).

and Veronika Bennholdt-Thomsen further indicate as processes disrupting commons and communal lifeways (2001: 999; cf. also Harper, Siniscalchi 2021: 5), also produce the atomization of nonhuman lives and, most importantly, more-than-human *collectives*. Severing the processes of mutual nourishment that engender goat bodies and peculiar kinds of “original” milk, nonhuman bodies are changed, as are the ecologies through which they survive. Thus, you don’t have the same goat kids, the same goats, and the identical colostrum; then, you can’t craft traditional *casada* and, in this way, engender the biocultural processes it enacts in kids across species. Hence, what *sa casada* allows is a process of mutual nourishment between goats, humans, dogs, and probably the insects that end up feeding on milk and colostrum leftovers, often sprayed onto the hay to check if goats have mastitis. Or better: without considering foods as simple objects, but rather as relations allowing peculiar, biocultural metabolic processes across bodies, we see an entire set of socioecological practices that constituted the shepherding society in Barbagia, now slowly withering, that allowed the production of situated bodies and metabolisms now bound to disappear under the pressures of industrialism.

*Sa casada*<sup>68</sup> is probably bound to disappear in the next two generations at best: fewer and fewer people, growing older and older, today produce it in Funtanalba, both because “*non faidi prusu*” and because the younger population’s tastes are changing. Damiano, Matteo’s youngest son, is one example: when I asked him if he ate *sa casada* like his father, he answered with a decisive “no”, saying that he’s disgusted by the very idea of eating colostrum. Industrialization, land use, goat, plant, microbial and human lives: everything is embodied in this cheese, allowing or disallowing its existence together with the bodies and lifeways it enables. *Sa Casada* is thus a part of a diffused, interspecies metabolism, and conterminously one of its metabolites, its byproducts: it is caused by the same lifeways it favours and, through epigenetic<sup>69</sup> pathways, we can imagine it as a food

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<sup>68</sup> Or, at least, this particular iteration of it, emerging from the socioecological conditions I’m describing.

<sup>69</sup> I will employ notions of environmental epigenetics in the next paragraph. According to Landecker and Panofsky, «[e]nvironmental epigenetics is the study of factors such as nutrition, pollution, and stress in relation to gene regulation [...]. Alongside substances in the physical environment, features of the social environment are also under increasing scrutiny in epigenetics as a form of “exposure”, for example, parenting behaviors and socioeconomic factors related to stress» (2013: 334; cf. also Landecker 2011; Niewhoner, Lock 2018). It is important to note here that environmental epigenetics is at its very dawn, and we still have a lot of contradicting data and discoveries. Hence, one must not uncritically overstate the importance of food/toxicants intake,

changing how the bodies that eat it change the very way in which they metabolize foods (Landecker 2011)—something that I will address in the next section. This connectivity will come in handy throughout the course of this work, and will return as a fundamental tool to think about metabolic relationality and justice. For now, let us note that if Percival and Percival see cheese’s uniqueness in linking «the biodiversity of [...] flora, fauna, and microbiota» (2017: 16), thus constituting cheesemaking as a «holistic system» (*ibidem*: 69), this framework goes a step further, underlining how cheese not only links but *produces*, and is produced by, such diversity and relationality. We can now start to imagine which properties *sa casada* has—we can indeed.



Fig. 14

*A cheesemaker teaching his young nephew to feel and amass su casu muricau (the curd).*

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nor of one's social fabric, on the epigenetic effects in human populations (cf. Landecker, Panofsky 2013).



*Fig. 15*

*A shepherd teaching his youngest son the arts of cheesemaking.*

#### 4. The industrialization of (micro)socioecologies, or how industries reach the biosocial fabric of more-than-human communities

The most recent advancements in epigenetics (Niewhoner, Lock 2018; Landecker 2011; Landecker, Panofsky 2013) and metagenomics (Raffaetà 2020) describe the human body as a porous, agentic entity able to change itself according to its social and biophysical environment. However, especially in lay understandings, the human body is often conceived as a neutral entity—made of crude, mindless matter that simply responds to biochemistry and little more. The anthropologist Margaret Lock strongly disagrees. Comparing the embodied manifestations of menopause in Japanese, North American, and Canadian women, she found that symptoms varied according to what people believed menopause to be, as well as the socio-economic conditions in which those beliefs were held (cf. 1993; 2001). One example illustrates this difference clearly: only 19% of Japanese women reported experiencing the hot flushes commonly associated with menopause in the West, whereas the figure rose to around 60% in Canada and North America (Niewöhner & Lock 2018). Moreover, Japanese women enjoyed significantly greater longevity than American women (Lock 2001), and they are rivalled by Sardinian women—especially those in the Barbagia di Seulo region. How can we explain these differences if we persist in thinking of bodies as simple, mindless

matter? We cannot<sup>70</sup>; and that's why she developed a concept of biology as always local, or rather, situated.

Japanese and North American diets were dramatically different, of course, but there's much more at play. Japanese women enjoyed a better, more equal access to preventive medicine; moreover, wealth in Japan was better distributed than in North America. All these factors contributed to different embodiments of menopause, and thus, completely different embodied experiences of it. Diet, here, is only one part of a complex process of becoming in which human bodies emerge, shaped by the socioecological conditions of their existence. Thus, if we are to study the effects of food consumption and toxicants<sup>71</sup> intake, we need to account for the social environment around those organisms, and the structural forces gravitating around those bodies—socio-economic status as well as child abuse, for instance (Niewhöner, Lock 2018). And it's not just about individual bodies: these changes persist well beyond the event causing them, affecting cellular reproduction (mitosis) and organismic reproduction (meiosis) (*ibidem*). That is: not only exposure to stress factors changes how our 'inner laboratory' (Huxley in Landecker 2011) work in metabolizing food and toxicants; it changes our offspring's inner laboratory too. If you cause a response to stress in rat pups, the changes in gene regulations carry over for at least two generations (*ibid.*; Weaver *et al.* 2004). This has much to do also with social practices: maternal care, such as licking and grooming behaviour in rat pups, has similar, far-reaching effects on their body and in the bodies of their offspring (Weaver *et al.* 2004). Thus, female rats who performed high rates of caring behaviour towards their puppies produced offspring less reactive to stress, which in turn grew up to become individuals with higher rates of caring behaviours (*ibidem*). But stress factors and care practices are not happening in a void: Margaret Lock and the environmental scientist Jorg Niewhöner (2018) use the example of toxicant intake, which has strong structural,

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<sup>70</sup> Today, biomedical notions have greatly advanced in this regard, for example through epigenetics (Niewhöner, Lock 2018; Landecker 2011; Landecker, Panofsky 2013) and metagenomics (Raffaetà 2020).

<sup>71</sup> I use the term toxicants, over the term toxins, to acknowledge the structural and ecopolitical differences pointed out by Max Liboiron: «toxins (animal poisons) and toxicants (industrially produced chemicals) operate at different scales, engender different relationships, have different modes of both harm and violence, and thus have different politics» (2021: 94). Hence, while toxins operate in far smaller scales, and operate at the cellular level by «upsetting the soup» (*ibidem*), toxicants such as BPA operate on the endocrine and epigenetic level, disrupting the work of hormone receptors. Cf. also Pratt 2019: 438.

socioenvironmental causes, and diet again, which is also profoundly influenced by culture and socio-economic status. According to Landecker and Panofksy,

[a] long list of substances, including nutritional supplements, vehicle exhaust, cigarette smoke, benzene, pesticides, fungicides [...] have been shown to affect methylation or other epigenetic patterns in developing young animals, with allied changes in gene expression, physiological function, behavioral outcomes, fertility, or propensity to cancer or metabolic diseases (2013: 341).

However, situated biologies are not the only process at stake: local microbiologies (Koch 2011; Raffaetà 2020) are part of this too, as microbes can be seen as mediators of epigenetic processes (Raffaetà 2020: 235).

The anthropologist Roberta Raffaetà (*ibidem*) provides a wonderful explanation of how our understanding of microbes, humans, and environments underwent a complete transformation when technological advancements enabled the direct sampling of the microbiome, allowing us to collect samples from nature rather than cultivating them in laboratories. As she writes: «[i]nstead of describing health as a feature of one organism whose immune system works to tame and kill enemy invaders, we entered a time in which not only we are told that it is impossible to avoid relating with a myriad of microbes, but also that they are necessary, and the basis for our own health» (2020: 66). Microbes can be understood as some of the most effective mediators between genes and environments: like our own bodies, they reflect the socioecological conditions of specific places—whether inside or outside us (Landecker & Panofsky 2013: 339; Kely & Landecker 2019; Raffaetà 2020: 70–71). The concept of situated biologies makes clear how human practices, embedded in ever-changing socioecological environments, shape human biological bodies in ways that connect them across generations (Niewöhner & Lock 2018).

[E]pigenetic findings suggest that human and social/material environments develop in relation to each other [...]. What constitutes ‘the environment’ only becomes meaningfully defined in relation to a second entity to which that environment can be environment [...]. Hence, we speak of environment/human entanglement to demonstrate that a ceaseless process of relating is going on through which environment and human become defined as such (*ibidem*).

Thus, Niewöhner and Lock argue, bodies and environments co-constitute one another conterminously—through biocultural processes such as walking, breathing, bleeding, excreting, and, indeed, through living and dying (Das & Han in *ibid.*). In doing so, they move beyond interactionist thinking, which assumes the skin marks the boundary of the body, by grounding mutual embodiment instead in a process ontology (cf. Dupré 2014).

Their reasoning is provocative: which perspective do we assume when thinking about the environment? Just as a carrot may serve as part of our environment, we in turn become the carrot's environment, shaping its phylogenesis through, for instance, cultivation, the release of toxicants, and climate change. Similarly, sheep eating and the bushes they eat are both environment to us; conterminously, plants and shepherds are environments to sheep and sheep and shepherds are environment to plants—through ruminating, excreting, pruning, and walking, they contribute to their meiosis and phylogenesis, which in turn becomes environment for both humans and sheep. And how all this becoming takes place is influenced by sociopolitical forces: sheep may be the environment for bushes in Funtanalba, but the way in which they are able to become-environment for bushes is dependent on their socioecological context, and they are unable to do so, when caught in mass animal agriculture. Furthermore, how we humans become environment for those bushes vary based on our sociomaterial practices—through clean water, or through pesticides<sup>72</sup>? Through mutual sustenance between plant and animal life, or through extreme separation and coercion, as in plantation ecologies (cf. Tsing 2012; Mol 2021: 115)? Let us not fall too easily in the metaphysically flattening trap. We can do better.

Anthropologist Thomas Csordas (cf. as ex. 2002), reflecting on embodiment, employs the philosopher Maurice Merleau-Ponty's (2002: 353) idea of the body as a setting in relation to the world. According to Csordas, our bodily functions work as a «modulation of orientation in the world» (1997: 70), such that a reorientation of that setting produces healing. Through environmental epigenetics, we now know how deep this intuition goes, and far beyond the culturally shaped use of perception, muscles, and somatic attention. Our bodies

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<sup>72</sup> I will explore the issues of becoming (good) food for others in the last chapter. For now, it is worth mentioning Susanne Pratt's (2019) approach who, being ailed with heavy metal poisoning, asks us to consider the ways in which we become good or bad foods for our environments, and the sociopolitical trajectories allowing or disallowing such conversion.

act more as clouds than as discrete, finite objects, and so do environments, and the two constantly penetrate and interchange between one another, to the point that bodies and environments are no more things-in-themselves, but rather concepts that may or may not impede us to think about their mutual constitutions.

It would be a good time now to start asking: what about metabolism, then? If individual bodies are more a perspective rather than things, can we still talk about metabolism as the property of an individual body? We do not simply live in a socioecological environment: we are lived by it, and it metabolizes us in the same way as we metabolize it. Hence, the ways in which we become environment for others affect the ways in which others become environment for us. This, in turn, offers an additional view on metabolic justice, one in which toxicants and pollution, as well as intensive plant and animal agriculture, cannot be disposed of through diffusing or displacing them: sooner or later, they will come to pollute humans in the global North, as they already disproportionately pollute the bodies of local more-than-human populations in the global South (cf. as ex. Polanyi 2001; Paredes 2022; Chao 2022a, 2023). This is something that emerges also from local narratives about, for example, waste and pollution disposal, already considered a necessary function of democracies in political economy (cf. Armiero 2020):

Slowly but surely, it will come back to your house. Yes, yes, sooner or later, it comes back. They [rich and powerful people] seem truly clever, it seems that...that it doesn't touch them, while instead slowly...I die, but you die with me too. It is like that. "You die first"—yes, it is true, I die first...but sooner or later, it will arrive to you too. It is like that (Matteo, 09/02/24).

This is not a simple narrative accounting for a supposed “revenge of Nature”—quite the contrary; it is instead a way to account for nature and society *together*, and assess how socio-material practices and structural violence get sewn into Earth's biophysical processes. It is not by chance that Matteo compared today's situation with that of his youth right after the considerations above. He remembered with astonishment the time when he was a kid and Funtanalba had more than double the number of inhabitants. Back then, they were not able to fully fill with trash a three-wheeled scooter passing door to door once a week; to the contrary, less than half of that population today fills a fully-fledged truck passing each day. He is not fooled by any reductionism that links more trash with more people: he knows that socio-material practices are what count really.

However, this is not only about the global processes moving trash from the Global North to the Global South: such co-constitution between socioecological, political, and economic factors, which I call “metabolic”, also reaches incredibly smaller scales. The human gut microbiota in industrialized settings is profoundly different from the microbiotas of people in rural areas: Raffaetà (2020: 80-81) reminds us of the biologist Jeff Leach’s experiments with Hazda (a population in Tanzania) faecal matter, which aim to appropriate the microbiota of those population living, according to the scientist, at the «ground zero of humanity» (Leach in *ibidem*: 82). Thus, in 2014, during a September evening, «while the sun was gently setting on the shores of lake Eyasi in North Tanzania, the U.S. biologist Jeff Leach was inserting ‘a dosing pipette in his butt’, aiming to inject in his colon ‘a Hazda man’s feces»<sup>73</sup> (*ibidem*: 80). In his study, the multispecies communities living in Hazda bodies acted as a proxy for our «pre-modern ancestors»<sup>74</sup> (*ibidem*: 81). Those experiments, apart from reproducing racism and ethnocentrism, miss the point of how bodies are co-constituted between praxis and socioecological environments: being Hazda means to live in what Leach would call a natural environment, unstained in his imaginary by the wrongs of industrialization, but also to live with infections and high rates of child mortality (*ibidem*: 93). You cannot steal microbiota as easily as westerners steal resources, as Leach would like to do. Still, differences in gut microbiota are worth exploring (when one does it right).

Raffaetà quotes a study made by one of her interlocutors, who discovered that in European samples a modification in the physical anatomy of *E. rectale* can be found: these microscopic critters, in our guts, lost their flagella, an appendix that allows them to move. «*E. rectale*’s immobility in European populations with a Western lifestyle seems to confirm that, beyond [cultural] hybridizations, lifestyle modifies microbiota in the long run» (*ibid.*: 171)<sup>75</sup>. Similarly, microbiologists Justin and Erica Sonnenburg (2019) argue that «recent progress in medicine, food [*sic*], and sanitation» (*ibidem*: 1) are profoundly transforming the microbiota of people living in industrialized settings, to the point of producing «a configuration never before experienced by human populations» (*ibid.*). Again, we enter a rugged terrain: while antibiotics, caesarean section delivery, infant

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<sup>73</sup> T.A.

<sup>74</sup> T.A.

<sup>75</sup> T.A. For an example of what Raffaetà means with lifestyle, cf. 2020: 136-ss.

formula, and the widespread consumption of industrially processed foods have had profound health benefits for urban populations—just think of the lives saved by caesarean section—they have been implemented with little to no considerations of the impacts on human microbiota (*ibid.*; see also Cottino 2013) which, as Raffaetà reminded us above, is itself fundamental for human health. Thus, misregulation of the immune system leading to chronic inflammation, and the proliferation of «noncommunicable diseases (NCD), such as stroke, heart disease, some cancers, chronic kidney disease, diabetes, and dementias, all of which are fuelled by chronic inflammation, are associated with the worldwide expansion of industrialized lifestyles» (Sonnenburg & Sonnenburg 2019) and, according to them, may configure a crisis in worldwide human health in the next future. In such communities, microbiota services are changed to the point that, for example, drug metabolism and calorie storage are heightened, while their barrier function and their ability to develop tissues are made less prominent (*ibid.*: 5-6).

We cannot simply reduce lifestyle to diet, nor to environment (cf. Raffaetà 2020: 136-138). While it's true that «nutritional signals early in life set metabolic controls that will affect the physiology of eating as an adult» (Landecker, Panofsky 2013: 340; cf. also Landecker 2011; Niewöhner, Lock 2011), those signals are co-produced with broader dimensions embodied in food practices. Diet is just one expression of the diffused metabolism producing bodies and environments: it is produced by socioecological and political conditions that go far beyond the simple, material nutritional intake of one's body, and which are materialized in those foods and then re-expressed in bodies and environments (cf. Guglielmo 2023). As Landecker and Panofsky write:

the logic of environmental epigenetics suggests that environments are multiple and nested—the macro environment outside the body, the uterine milieu, the body as the context for the organ or tissue, the tissue as the context for the cell; the cellular milieu in turn surrounds the nucleus, and all these layers of intercalating environments are the context for the constant movement of molecules in the nucleus affecting chromatin and gene expression. These environments shape gene expression, and gene expression shapes physiology and behaviour. Then, insofar as organisms constitute each other's environments through sociality, these biologically modulated social environments become the socially modulated biologies of further generations of organisms. The causal arrows go both ways, and the ontology of the gene as content and the environment as context cease to make sense (2013: 350-351).

In this way, it is possible to expand Counihan's take on the atomization of the social fabric. She observed how changes in bread production in Bosa mirrored changes in the social fabric, with the industrialization of food production closely accompanying the progressive isolation and erosion of interfamilial dependence. Here, I am instead pointing out how the industrialization of food production, observed through the case-study of the production and consumption of some traditional cheeses, deeply influences more-than-human communities on each and every level: from microscopic environments to local ecologies, from human social ties to more-than-human connectivities in sheep diet. As Tsing writes, talking about grain domestication—or rather, human domestication by grains,

what maintained and extended grain cultivation was the emergence of social hierarchies—and the rise of the state. Intensive cereal agriculture can do one thing better than other forms of subsistence: support elites. States institutionalise the confiscation of a share of the harvest. Across Eurasia, the rise of states and their specialised civilisations is associated with the spread of intensive cereal agriculture. In some places, states followed agriculture; in other places, agriculture followed states. In each case, states promoted agriculture through their symbols and armies. Sometimes they criminalised other forms of subsistence; only outlaws would refuse the gift of state fertility. And for those inside state heartlands, this gift of fertility could maintain itself, at least in good times, through love (2012: 145-146).

Industrialization then acted as a major socioecological force, penetrating not only the very bodies of creatures, but also the relations that reproduce such bodies as well as the social fabric, the environment, and the bodies again through epigenetic influences carried by environmental and social pathways.

This fact confirms the Indigenous philosopher Kyle Powys Whyte's (2018) point, which will return in the conclusion of this work: food systems are really collective capacities, bringing together biocultural trajectories that may engender or jeopardize collective continuance, or the capacity for whole more-than-human systems to reproduce. One cannot disentangle food justice and sovereignty from the symbolic horizon people are immersed in: peculiar ways of producing, distributing, and consuming foods are deeply entrenched with both environmental and sociocultural systems, and they both influence one another. It is not by chance that one of the founding practices for mutual help in Barbagia, *s'aggiudu torrau*

(returned help), is disappearing, as Francesco told me while we were cutting woods for our fireplaces: «now it is done more rarely, because money is needed for everything, bills, insurance...before, it was done far more often» (inf., 10/11/22; cf. Guglielmo 2023). *S'aggiudu torrau* was possible, for me, as I held a privileged position as a paid PhD student working in Funtanalba for my fieldwork research; for the same reason, it was possible for me to work “for free” for the village’s soccer team, receiving free meals in return—that far exceeded the actual hours I worked for them.

It is not hard to imagine such ties of mutual help disappearing in the next generations, in the same way as the consumption of *su casu muricau* and *sa casada* are bound to go extinct, while the relational lives of the creatures on whose production such human populations rely on wither, becoming more and more massified. In turn, this affects the bodies of all the creatures involved, producing situated biologies according to the changing socioecological relations: let’s think for a moment about the cascading effects on local ecologies of creatures ingesting other creatures deeply influenced by toxicant intake – poisonous lives that will soon enough become poisonous deaths, and then poisonous lives again through decomposition (cf. as ex. Pratt 2020). Or let us imagine instead the epigenetic effects Volpina may have on the humans milking her, while she grooms them as her own child. «It’s not just *su casu muricau*», Matteo tells us, but the fact that people ate original stuff and «exercised the whole day», thus developing «their whole organism». The organism Matteo is referring to is far more porous than the neutral matter one could think about when imagining a biological body: it is an interrelated, agentive, fluid lump of ever-becoming matter, that constantly masticate and is masticated by the socioecological environment in which it emerges. «It’s not just *su casu muricau*», Matteo tells us. And now we know he’s right.



*Fig 16*

*A shepherd is carrying hay for his cows in the freezing morning air. The relationality engendered by free-range shepherding is able to craft local bodies for entire more-than-human communities.*



### III

## Death and Survival. Understanding nonhuman killing and dying in Barbagia

Milk and cheese are arguably the most classical food products in shepherding assemblages, yet they are almost inevitably joined by meat. At first, it may seem unusual for a work focused on the socioecological changes brought about by industrialization to dedicate an entire chapter to what many might view primarily as an ethical problem. However, since my account ultimately offers both a political and ethical stance on food production and ecosystemic reproduction, it is essential to address an aspect of food production as unavoidable as nonhuman death itself. Given the very nature of the argument I am trying to make here—namely, that more-than-human ethics and relations are both product and producers of their local environments, it is of pivotal importance to explore the local practices on nonhuman killing and, more generally, the ethics and notions that people employ and derive when looking at nonhuman death. It is for this very reason that I chose to change my food habits, after eight years of vegetarianism: if I was to understand how cosmologies turn to matter, and matter into cosmologies, I needed to participate in local, ethical discursive-material practices on nonhuman death. In any case, to discuss death and killing in Barbagia, it will be better first to construct a critical, albeit introductory, political-ecological framework for understanding nonhuman death as such. This chapter thus serves as an introductory exploration of the relations between nonhuman death, human ethics, and ecological reproduction; one that will be fully concluded in the next chapter.

I will employ three ethnographic accounts to tackle nonhuman death. The first section will be concerned with killing, butchering, and the possibility for nonhumans to understand death. I will thus offer an auto-ethnographic account of one of the many times I witnessed a shepherd killing a lamb, and then employ his mother's calling to problematize the terms by which we take for granted

nonhumans' inability to understand death. The second section will instead tackle local practices of nonhuman burial and corpse disposal. Hence, I will employ Deborah Bird Rose's (2011; 2022) concept of double death to underline both the ecological connectivities such practices entail and their capacity to act on death processes, thus allowing the reproduction of life itself. The third section will instead return on the more-than-human knowability of death and will do so by employing the ethnographic account of a shepherd witnessing powerlessly the death of one of his rams, painfully dying from food poisoning. In a way, all three sections will deal with interspecies mourning: humans grieving for humans, sheep grieving for sheep, but also humans grieving for sheep, and humans grieving for other humans, or themselves, through sheep. These accounts will finally be employed, in the fourth section, to produce an ethical and political reading of nonhuman life, death, and killing in the Barbagia di Seulo—one that will serve as an introduction for the last chapter, where I will tackle socioenvironmental reproduction. In any case, before delving into all these issues, I will first contextualize nonhuman death, beginning with ethnography to give a brief glimpse into the ethical complexity of nonhuman killing, and then offer a reflection on the ethical and ecological non-neutrality of nonhuman death. Let us start by meeting Francesco in his courtyard, where he is preparing to skin a lamb to eat for lunch.

When I first met Francesco, he told me he never killed his own goat kids, saying he didn't have the heart for it and instead brought them to another shepherd to do the "dirty job." Yet here we are, outside his home, sweating under a scorching March sun, and he is gathering everything he needs to butcher a goat kid he killed half an hour earlier. That day, I discovered his words were not entirely true—although this was the first, and one of the very few, times I ever saw him kill. After laying the corpse on a basket, he begins to rip away the skin and open the belly to remove some of the unwanted internal organs. «They always die like this, with their tongues out, poor creatures... it's because they scream when you kill them, you see?». The expression on his face conveys unease. He then grabs the goat kid's testicles and bladder and tosses them into the bushes in front of him<sup>76</sup>. «Eat it, cats! Eat everything», he exclaims, with clear sourness in his voice. But I also catch

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<sup>76</sup> All the interactions in this paragraph are informal interviews occurred on the 22/03/23.

something else; a faint flavour of helplessness. Some silent minutes pass, where only the sound of the skin being ripped off can be heard, together with the wind blowing in the trees and some birds singing. Then, we are briefly joined by Aurora, Francesco's twenty-year-old daughter. «Who killed him?!» she asks, with a slight worry in her tone. Francesco keeps doing his job, uttering no words. «Did *you* kill him?!». Silence. Aurora keeps asking this question, with increasing nervousness in her tone, until Francesco snaps and mutters «Obviously, Aurò». He seems almost ashamed. «But you said you couldn't!» she exclaims, now with clear shock in her voice. Francesco's anger seems to grow as he blushes, barely containing his rage: «bye Aurò, bye». That is his way to say “go away and don't bother me further”. She walks away, anger clearly expressed in her heavy steps. Francesco keeps doing his job in silence, only to ask me after some minutes: «what was Aurora saying? Eh, they soften me up, it's true». That was the day both me and Aurora discovered that Francesco indeed, sometimes, kills his own goat kids. And that he takes some kind of shame in it.

Nonhuman death is something you witness often in a rural society like the one in Funtanalba. This poses a stark contrast with urban contexts: it is far less likely to encounter nonhuman death in the streets, rather than in the fields. For this reason, during my first months of fieldwork, nonhuman death in Barbagia seemed to outweigh by far nonhuman death back home. But really, one needs to peel off a fragile veil to see that the contrary is actually true: urban contexts are soaked with death, especially nonhuman death, far more than any rural space. Even more, nonhuman death is one of the externalized processes that enable the functioning of our society, just as much socioecological dumps do in sociologist Marco Armiero's thought (2021). According to him, democracies need to create and maintain (usually far away) spaces for dumping waste, and to reproduce wasting relations to people and places in order to preserve privilege. Such mechanisms of extraction and concentration are fundamentally needed, for our political-economic systems. Similarly, their need to embed into the national territory comes with inherent and almost inevitable forms of ecocide—democracies need armies and railways and in Italy, as we have seen, they were both fed through Sardinian timber (cf. Caterini 2013). Of course, nonhuman death forms the basis of any society (and not only humans!): scale is what changes things. The fundamental

difference in industrialized settings is that nonhuman bodies are themselves *loci* of “dumping” practices. Let us think about what Hannah Landecker (2023) calls the industrialization of metabolism, and thus the abuse of nonhuman bodies in the intensification of the feed/drug regime to keep their bodies healthy, profitable, and to disallow their own death in a regime of intense exploitation and massification—what Lauren Berlant refers to as “slow death”, describing the «mass physical attenuation under global/national regimes of capitalist structural subordination and governmentality» (2007), and that Maria Elena García (2019: 361-ss) ascribes to nonhumans also. Nonhuman death soaks our drugs and food (Haraway 2008), but also road construction (Chao 2022b; Rigby & Jones 2022), and the general building of urban settings through sewers, electric cables, energy extraction, and distribution<sup>77</sup>. It is estimated that about 100 million animals, including dogs, cats, and mice, are killed in laboratories for experimenting, and the testing of drugs, food, cosmetics, and chemicals (PETA). The very concrete constituting the vast majority of cities is directly responsible for nonhuman death: in Australia, as we will explore better in the next chapter, heatwaves are decimating flying foxes (Rose 2012), and in Asia, the diffusion of Diclofenac in intensive breeding nearly led to the extinction of vultures (Van Dooren 2011).

Urbanization itself, then, at least as it is practiced in the global North, is almost inherently bound to disallow nonhuman lives. The dramatic increase in private urban spaces, with the corresponding decline of common green spaces, has profound impacts on the little urban wildlife that survived the expansion of our cities (see Goddard et al. 2009; Guglielmo 2023). While statistics may vary widely according to different voices, extinction rates are today between 1000 and 10.000 times higher than what scholars would deem natural (Kopnina 2017). Nonhuman death and harm are sewed inside our smart devices, computers, refrigerators, and the tiles and building blocks that allow Global-North-humans to live in apartments, skyscrapers, villas, and so forth. From public and private transportation (cf. Rigby & Jones 2022) to food production and biomedical care (Haraway 2019), anything in our lives is allowed by the death of nonhumans—and, often, the death and harm to other humans, especially those far from global-

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<sup>77</sup> It is also true that urban contexts may foster some nonhuman species, as I argued in Guglielmo 2023. However, I believe the proportion is mainly weighted against, rather than for, nonhuman survival and flourishing. I will further expand this reasoning in the next chapter through the concept of cosmoecology (Despret & Meuret 2016).

northerners' sight. However, such deaths are almost always removed from their consciousness, apart from when one encounters a dead pigeon, or a stray cat that managed to escape animal control only to be trampled upon by some shiny SUV on the highway, and briefly mourned by some sensitive individuals who stumbled across their body<sup>78</sup>. We already tackled the ecocide that roads require. Add that, for each nonhuman annually killed in scientific experiments, tens more are killed in American roads alone (Desmond 2013), and «over 1800 times the number of pigs are consumed for food» (Kopnina 2017: 339). Others have already done the math for us: to the present day, more than 9 billion farm animals are annually killed *in the US alone* to produce meat, dairy, and eggs (*ibidem*). But still, death is far, far removed from our everyday consciousness. Or better, as literary scholar Kate Rigby and cultural geographer Owain Jones write, «we become inured to animal death and suffering in a way that reinforces human exceptionalism and self-enclosure, eroding or impeding more bio-inclusive social relations entailing the recognition of cross-species kinship and the cultivation of care» (2022: 221). This becoming inured is what some authors consider killability, which «can be facilitated by rendering an animal invisible, in some sense choosing to overlook the visceral/material/living presence of the animal» (Robinson 2017: 7). I will fully explore the concept of killability below. For now, what I am pointing out is how urbanized societies take nonhuman death for granted to further their lifestyle: we don't *see* death happening, and we don't witness the stench of rotting bodies – the decay slowly merging skin and fur, melting eyes and gnawing meat, nourishing flies, bacteria, moulds, fungi, and all those who transform death into embodied life again. The circle of life smells badly.

These are old news, in academia as well as in the broader society. Emily Yates-Doerr and Annemarie Mol (2012) wrote about death's removal from meat products (see also Meijer 2019: 118-120); Val Plumwood (1995; 2008; 2012) argued instead how western societies tend to remove the human body's meatiness, and the fundamental fact that it exists primarily as a food source for other creatures. Thus, we either tend to bask in heavenism—the idea that we are in fact souls destined to reach some kind of elsewhere—or atheist materialism, and both views fundamentally remove the continuity between our meat and the

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<sup>78</sup> Let me stress again how concrete roads can enact a form of ecocide, severing multispecies relations and acting as a biopolitical force, allowing some assemblages while disallowing others. Cf. Chao 2022a; Rigby, Jones 2022. For a discussion on ecocide, cf. Higgins 2010.

environments we live in (Plumwood 2008). I will expand more on these issues in the last chapter; for now, what I want to point out is how, when one is an anthropologist who lived for all his life in urbanized and progressively gentrified cities, death's stench soaks one's nostrils, and one can do nothing but try and understand. Even more so if said anthropologist has been a vegetarian for eight years, changing his food habits to undertake fieldwork in a shepherding society.

This chapter will thus employ ethnography and auto-ethnography, primarily through the integration of field diary into the main text of the chapter, to tackle the issue of nonhuman death and killing in Barbagia. I produced little ethnographic interviews about death, and especially killing. I sensed from the start of my ethnography that such discourse would have been uncomfortable to my fieldwork friends, mainly because of representational issues: more than once, when I asked to photograph some butchering taking place, I was told not to do that, as "it's not beautiful", or because "what are people going to think about me". Sometimes, also the opposite happened: people would do the extra step and call me, inviting me to come and photograph some bull killing or pig neutering. In any case, Francesco's ethnographic story illustrated above may give the reader a sense on how death and killing, while ordinary, are a complex issue for my fieldwork friends, one mixing pride and shame, duty and bitterness, besides worries about their representation in a social environment that increasingly may depict them as cold-hearted killers. In any case, local discourses around death and killing will be fully tackled in the last chapter of this thesis, as they will emerge as fundamental tools to frame metabolic justice. Here, a more ethical framework is proposed instead, the one I developed during fieldwork to witness nonhuman death and killing. Thus, I employ moments of intimate and emotional reflection not only to testify to the profound effects that witnessing killing exacted on me, but also to provide the reader with stratified data about my own emotional and reflective processes, and to provoke an emotional response in the reader also. For this reason, this is the chapter that most of all will make use of emotional writing. In this way, I hope to challenge myself and the reader into noninnocent, yet deeply complex ways of dealing with nonhuman suffering, and to do the work of engaging directly with killing and dying, not forgetting, and to carry over the voices of the dead as a means to understand more-than-human justice.

As such, this chapter will deal with gargantuan ethical problems, and it will do so “incorrectly” on purpose: not through a distant, objectifying gaze, but through the very embodied materiality of ethnography and auto-ethnography. I will also try to show how more-than-human ethics, and thus more-than-human justice, are irredeemably bound to local contexts. I am now reminded of *koans* in Zen Buddhism: enigmas purposefully created to be impossible to answer. What is the sound of one hand clapping? What was your face before you were born? They do not call for logical explanation but aim to something subtler. Similarly, in a way, the aim of this chapter is precisely not to answer the questions it presents, but to conjure and explore the irreducible complexity and awkwardness of them. However, the answer to the ethical problems posed here will be fully tackled in the next chapter through the concept of metabolic justice; for now, it will be sufficient to try and figure out how death may take different shapes and shades in Barbagia.

Finally, if some (Kopnina 2017) criticize the emotionography often used in environmental and multispecies anthropology to describe moments of killing, others (cf. as ex. Garcia 2019; McLoughlin 2019) employ it as an inter-subjective stance considered capable of revealing not only human, but also animal agency in the face of violence, suffering, and death. Furthermore, as anthropologist Maria Elena Garcia writes, «multispecies ethnographic research is necessarily, if only partially, an engagement with shame, and against forgetting» (2019: 366). I agree with her when she writes that producing multispecies ethnographies is a way «to conjure up the shame or grief of the ethnographic encounter as a pathway toward recalling and challenging violence» (*ibidem*). Thus, «despite the continued, although possibly weakening, prevalence of human exceptionalism, many do care, and their stories, too, need to be told» (Rigby & Jones 2022: 123). This telling of stories is in itself political, together with the emotionality of writing itself: it will not be through aseptic lines that one responds to killing and mass killing. At the same time, my fieldwork friends contributed to giving an unexpected nuance to the idea of challenging violence: not through refusing it altogether, but through uncomfortable and ambiguous ways of attending violence in each context—what some (Haraway 2019) would call “staying with the trouble”.

## 1. About the eyes of the killed, and the (inhuman) capacity to understand death

It's not the first time I witness Matteo killing and skinning in the sheepfold. However, the hot temperature, even if it is just January, makes things worse. The stench of the innards spreads faster and stronger this way, and I can see some flies swarm towards all that remains from killing—skin, some internal organs, blood, and the faeces that often slip away as a result of the killing. He always positions himself away from the sheep's view. One time, when his thirty-year old son Armando came near us while taking them to pastures, Matteo swore: «he could have waited another two minutes»<sup>79</sup>, mumbling to himself. He says he doesn't know if sheep would really understand what is happening, if they ever saw it, but one never knows. One avoids them seeing the killing and skinning. «It's out of respect», he says.

The killing of lambs, I quickly learned, is the least painful to witness. Piglets and goat kids are much worse, as they painfully scream and squirm through the whole process. Lambs instead, they seem to accept it, and in the worst case, they kick a little, whining almost in whispers<sup>80</sup>. One time, a shepherd stabbed a piglet in the neck and left them on the ground to bleed, they were squirming and kicking so violently that they jumped up to my hip with a single kick, while being prone. They covered a distance two times their size with one single, pained, and terrified jump, blood still coming out of their neck. It is not easy to forget such a thing. But still, in each case, I resisted the urge to look away. It became easier with time, but it never became easy. I was constantly reminded of philosopher Donna Haraway's (2019) *monito* to stay in touch with the problem, and of (the imagined) indigenous philosopher Old Tim's commandment not to turn away one's eyes from the death of animals, especially those whom you kill (Rose 2011: 26). And, even if I was not the killer<sup>81</sup>, one has to witness to understand. Hence, I observe once again Matteo's methodical process of skinning and butchering under a scorching sun, almost

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<sup>79</sup> All the interactions in this paragraph are to be considered informal interviews carried out on the 19/01/24.

<sup>80</sup> I remember thinking that I could see why Christians employed the notion of the “lamb” of God – someone who readily accepts being sacrificed, or, at least, *seems* to.

<sup>81</sup> I was invited more than once, by my fieldwork friends, to try and kill a nonhuman myself. However, while I had no particular problem in helping them with skinning and butchering, I chose to never kill: that was the boundary I chose to set between observation and participation.

violently hitting rocks, hay, iron and wooden fences, and the old eucalyptus offering just a thin shade to our necks and shoulders.

After the lamb passed away, Matteo starts by snapping his toes and cutting them away, throwing them to the side or over the fences, for the dogs and cats and crows to eat, but also for the flies, wasps, ants and greens to consume. Then, he slips the tip of the knife in the skin over the ankle bone, creating a little space between the two; the knife is later substituted by a long and thin branch, which is used to further separate skin from meat and bone. Matteo grabs the lamb's leg, puts his lips on the opening he created, and starts blowing air with full force. In three to four blows, the corpse swells grossly, slightly deforming while the skin separates from the meat, and the lamb's other legs become stretched towards the clear sky as a result. Matteo pulls the legs to better distribute air in the body; then, the skinning and butchering starts. He cuts the lamb's lower belly, dividing his skin in two folds which he then starts to gently rip away by pushing his fist between meat and skin. I carefully watch the slow transformation from lamb to corpse, and from corpse to meat. His eyes seem still alive, while a whitish halo seems to take hold of their centre slightly. When the job is half-done, Matteo hangs the carcass sticking a metal hook onto a high, wooden fence. In this position, with the lamb's face pointing to the ground, both the remaining skinning and bleeding become easier. Finally, it comes to rip away the last bits of skin from the skull. They are the most stubborn pieces to rip away: the skull's shape makes it difficult, and they are not separated from the bones when one blows into the carcass as Matteo did. It is at this time that I notice: the lamb's naked skull seems to paint a sad expression on his face while Matteo pulls and pulls stronger its whole skin towards the ground. It almost seems like he doesn't want to let go that last bit of him, that last piece of individuality. The nonhuman person resists their transformation into food through the obligations they command in their killers. «Done!», Matteo exclaims. «Could you take the ladies to pastures?» he asks with a smile, and I nod.

I take another glance at the lamb's eyes, now the last vestiges of his past life, the last thing left on his body that still recalls life, that recalls an individual, not food. Everything else about that lamb's individuality has been ripped away during the processing of its corpse—his fur, skin, feet, sexual organs, everything that he could be distinguished by. His eyes are the last threshold between meat and lamb.

This is why, among all the meat I started to eat again in Funtanalba, heads were the most difficult even to handle, let alone eat. To grab one's knife and cut through ears, mouths, eyes, is a dramatically powerful reminder of the fact that you are indeed chewing on the body of a once-living, feeling individual. I now understand better Old Tim's commandment. You should not turn your eyes away from such eyes. You cannot eat a corpse and not be held accountable for it. Looking earthmates in the eye commands responsibility, and the shared culpability humans have on this planet when causing death and suffering. It is, as Haraway (2008) would say, a way to stay in the open, to inhabit the uncomfortable space where there is no clear-cut line on ethics and justice. We, as earthly beings, are killers. We cannot escape such fate. We can limit the amount of death our lives exact, we can externalize it far away, but we cannot avoid causing death to others. From here, we only have two paths to choose from: we either avert our gaze, and craft boundaries beyond which we feel allowed to do so (not pets; not mammals; not beings with a central nervous system; and so on), or we choose not to turn away our gaze from the dead, to stare at them, and hear what their whispers command us (cf. Rose 2011: 141-142). Both may be good, but they must be done and evaluated in context. However, I believe the latter is where Francesco's shame comes from. Unwilling to admit that he indeed is capable of killing goat kids, even at the cost of pain, and guiltiness, he feels shame. That shame, that guiltiness, is a great place to start journeying into raising, killing, eating, and taking responsibility.

I still cannot help but see some sadness in the lamb's eyes, even if I perfectly understand that this is an epistemic mistake, that I am anthropomorphizing an animal corpse. Still, I cannot shrug away the sensation that those eyes are asking something. I feel nothing but the sensation of being a little child. We are all children in the face of last breaths. This is nothing but an attempt at crafting ways to look the dead in the eye, of finding a key to understand how one can be the killer, carer, and life giver at the same time. My cultural background struggles with that. You are either the killer or the carer, to be both would be hypocrisy. It is probably this contradiction that makes it so difficult to look into the eyes of the killed. It is not just pity, or culpability. Contradictions are uncomfortable when you think through either-or logics, even if such unease can spark (more or less savvy)

pathways to solve them. But how does one speak about accountability when things contradict?

At first, the question those eyes seemed to express felt obvious: they were asking why. It took me a handful of seconds to doubt it. The dead do not speak after all—it is the living who converse with them, not the other way around. Or do they? After all, anthropologists documented a wealth of ethnographic examples of people talking with the departed in one way or another. To say that semiosis, and even dialogue, can occur in one direction only is nothing but a comfortable, albeit useful, reduction. It is one way to conjure culturally determined and hegemonic ontoepistemic claims, motivate them, and deploy them to understand, and indeed norm, our experience. Being able to speak with those gone may be a matter of learnt ways of attending the world—it may be something to think through the anthropology of perception, rather than of religion. Are we able to hear whispers from beyond that veil—is that veil real at all? Is there a separation between the living and the dead? I can see how this very separation may be a byproduct of heavenism (see Plumwood 2008) or, at least, the cultural assumption that those living are neatly separated from those departed. Such thought would need a more nuanced vision of the dualism between life and death, one difficult for me to enact still. If biology was not the end of it, but we couldn't resort to the idea of an individual soul, which ideas would we craft to understand death? Are we trained at all to lift that thin veil across meat, blood, bark, sky, and stones—can we even try? Where does life lie—where does it end?

I turn my eyes away towards the silent, jagged peaks looming around us, where dark clouds now amass, promising a desperately needed rain. They are tall, and strong, and heavy, and silent. They testify to the passing of humans, and they incarnate an admonition from beyond the veil. We see you, mortals, we know you, and we grapple and craft and chew your very bones as you walk among us. Let that be an inheritance. Let nothing not be an inheritance.

I shrug all these thoughts away. It's time to gather sheep.



*Fig. 17*

*The slaughter of a lamb taking place.*

As I reach for the pastures with the flock, I notice one sheep is walking slower. Sometimes she stops, glances behind her with me on her side, bleats, and then starts to follow the others again, trying to catch pace. I wait for her each time while the others reach the pastures—a lush, green field that exploded with vegetation in the last days. Now, in the vicinity of a big boulder, facing a valley of greens, she stops again and looks. She almost seems observant, almost as if she was admiring the view. But then, she bleats again, and then again. That's when I realize: this is that lamb's mother<sup>82</sup>. This sheep had her son killed some hours ago. Now she's losing the rest of the group, standing still in front of the lush valley, and she calls and calls again, looking back and longing for an answer that will never come again. She stops, and for a good minute. She looks at the vastness in front of her, almost savouring it, and calls, and calls again. She becomes silent for some moments, then calls another time, ignoring me right behind her. It is not every day that free-range sheep let people, and a stranger, nonetheless, come this close. Even more, it is

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<sup>82</sup> Or better, I imagined it. But when I told this story to Matteo, he immediately argued the same, and when I showed him a photo of her, he had no doubt: she was the mother of the lamb he killed this morning.

unusual that a sheep leaves the rest of the flock: when they hear the others go somewhere, they rush to follow instantly. But now, she's not bothered. Some moments pass, and I have all the time to reach for my phone and shoot a photo of her. She's still there, gazing at the hills, waiting for an answer that will never come back. It's a moment of unspeakable waiting, of understanding and not understanding. She calls again, then follows her companions, again trying to catch up with the rest of the flock. I am dumbfounded. I have to assume she does not understand her son has been killed, and thus she calls him as if he were lost. This would be already haunting enough: to look at a loss that we caused; a loss that the mourner perceives clearly, but is equally incomprehensible for them. But what if, winter after winter, she understood her sons are cyclically killed? In both cases, her weeping and calling would be her way to mourn. Her way to salute, one last time, that which is lost and will never return.

What this ethnographic encounter is asking us is to discuss, at least briefly, the issue of animal death, especially their capacity of understanding it. As human-animal ethics scholar Susana Monsó (2022) argues, the fact that nonhuman animals may lack the conceptuality of death is taken for granted by both those who argue that painlessly killing them does (e.g. Regan 2004; Bradley 2015) or does not (e.g. Cigman 1981; Belshaw 2015) truly harm them. And yet, such a premise «is usually offered without any empirical justification» (Monsó 2022), and is left as an unquestioned fact. Thus, for example, anthropologist Barbara J. King (2013) notes that animals differ from us in that they cannot anticipate death, do not perceive it as a future event, nor do they understand it as a concept. They know loss, and they do grieve, but they don't foresee their own death: «[a]mong animals, we alone fully anticipate the inevitability of death» (*ibidem*: 7). However, after my fieldwork and having lived amongst other mammals for more than one year, I mildly disagree. What are they running away from when scared—is it pain, is it just an evolutionary instinct? And what is an “evolutionary instinct”, and how does it fundamentally differ from our capability to portend our future death—what does «*fully* anticipate» (*ibid.*, emphasis added) mean? On which scale of fullness are we calculating the capacity of other species to portend death, and through which perspectives? In his last book, philosopher Bruno Latour (2021) argued against the nature/culture divide, not saying that everything is natural but, on the contrary, that everything could be said to be artificial, for anything has been built

by something or someone: the air we breathe and the excrements we expel, the houses we live in and the land we are lived by. It is just a matter of what agency means to us, and how much we are willing to grant it to animals, plants, stones, liquids, and gases. King, while arguing about our different capacity to portend death from other nonhumans, reads animal behaviourist Marc Bekoff and his answer to the scepticism he often encounters around the topic of animal love. According to Bekoff, we humans constantly grappled with the difficulty of defining love, and yet «though we don't truly understand love, we do not deny its existence, nor do we deny its power. We experience or witness love every day, in a hundred different ways indeed, grief is but the price of love. Since animals grieve, surely they must feel love too» (in King 2013: 8). Hence, «[w]hen an animal feels love for another, she will go out of her way to be near to, and positively interact with, the loved one» (*ibidem*). Further, do *we* understand death?

Ecofeminist Val Plumwood (2008) showed us how death can be understood dramatically differently in human cultures, and even in the same culture, and how different frameworks profoundly change what we portend death to be. Which framework do we choose to use, then, and why? Is it atheist materialism, in which death is just the stopping of one's heart beating? Is it heavenism? And which facts about death are we erasing with our chosen reading? We *interpret* death through data and feelings, but we do not know it directly. Not until it is too late to make science or poetry about it. Furthermore, as King already argues (*ibid.*: 35), it is misleading to talk about animals as if they were a coherent, self-identical category. Not even the *individuals* grieve in the same way, or grieve at all. Some horses do; others don't. Some sheep cry and bleat desperately when they lose their lamb and continue to do so for hours and hours on end; some others seem to just forget about them, they call them one or two times, and then they are back to their usual business. Some sheep, as the one who inspired this section, actively look for them, expressing pain and loss, forgetting about their behaviour as prey, herd animals. Sometimes, grief happens cross-species: goats may grieve horses, but not necessarily their other con-specific companions (*ibid.*: 111).

King also brings up the thorny issue of animal suicide. She asks us to consider bears held captive for bile extraction, a useful substance in fighting human liver disease, amongst other ailments. In Chinese bear farms, bears are held captive in conditions that one could only euphemistically call inhumane:

[e]ach bear [...] lies down, permanently, in a coffin-shaped, wire mesh crate for his entire life – years – able to move only one arm so that he can reach out for food [...]. Without proper anesthetic, drugged only half-conscious, the bear is tied down by ropes, and a metal catheter, which eventually rusts, is permanently stuck through his abdomen into his gall bladder (Poulsen in *ibid.*: 116).

King narrates the heart-wrenching story happened in one of these farms: as one worker was about to harvest one bear's bile, her cub cried out. Then, «the mother, distressed by her loved infant's pain, broke free, and squeezed the life out of her baby so that he would no longer suffer» (*ibid.*: 117). She hugged her cub with such force that she strangled them. Then, «[o]vercome by her own emotional pain, she ran, purposefully, headfirst into a wall, killing herself» (*ibid.*)<sup>83</sup>.

Then there is the story of a male gazelle whose companion «suddenly died from something it had eaten. The male stood over the dead body of his mate [...] then, suddenly making a spring, struck his head against a wall and fell dead at her side» (*ibid.*: 118). There is also the account of dolphin suicide, narrated by trainer and mammal-behaviour expert Richard O'Barry. While in her tank, the dolphin Katy «locked eyes with him, sank to the bottom of her tank, and stopped breathing» (*ibid.*: 120). The point is sharpened by a subtle difference between human and dolphin biology: humans breathe automatically, even in deep sleep, but dolphins do not. They are conscious breathers and «must focus on the drawing of each breath» (*ibid.*: 121). According to O'Barry, when «a physically healthy dolphin chooses not to breathe, she intends to bring about her own death» (*ibid.*). As King writes, we cannot have conclusive data on what happened in these cases and, most importantly, why. But such stories leave us in the open, haunted by the possibility that animals may grieve, and grieve so profoundly that they may even commit suicide. King readily offers us a much-needed specification: self-harm, even in humans, does not always correspond with suicidal intent. Pathologies such as depression may lead us to carry out acts that *favour* one's death, such as refraining from eating or inflicting self-harm, without ever explicitly

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<sup>83</sup> King offers two alternative versions of this story. The one the reader finds in the main text is the second, the one more influenced by the lessons she took in animal behavior writing in graduate school. The first one is more concise and neutral: «[s]omehow, the mother broke free, grabbed her cub, and hugged him with such power that he died of strangulation. Then she ran headfirst into a wall, and died» (2013: 116).

contemplating on *acting* upon suicidal thoughts. In the end, King doesn't answer the question about animal suicide, leaving it in the open, with all of its uncomfortableness. I will not either. But I want to loop back on the question about human and nonhuman animals being able to understand and portend their own mortality<sup>84</sup>.

What are we all running away from, if not unbearable pain, whatever form it may take? And what do we really know about what is beyond that jump? I believe it is a big stretch to consider humans as fully able to anticipate death. We imagine and discuss our own mortality, as the sole legacy of Western philosophy attests, let alone philosophical systems beyond the "West". But we are rarely confronted with it, if not when a loved one departs. And we never plunge into the full comprehension of it, albeit we do mourn, and know the skinning pain of loss. The concept of death itself should not be understood «in binary terms» (Monsó 2022: 121): possessing «a concept of death is not an all-or-nothing matter but rather subject to gradation» (*ibidem*). And this is true not only in cognitive terms, but also in a cultural fashion: human animals have crafted innumerable and wildly different discursive-material practices of death, and they all thematize never-neatly-overlapping aspects of it. In some cultures, animals may even be said to embody an omen of death (cf. as ex. Frisby 2015). Similarly, Monsó argues that while those inhabiting Western societies construe death in the abstract (unless one has a specific job or is extremely unlucky), for nonhumans in the wild (and humans in other societies), death is daily, tangible, and very material (*ibid.*: 118). Thus, «when animal ethicists describe the concept of death in terms as demanding as the understanding of "the possibility of the impossibility of one's being", they are using as benchmark the (educated) adult human concept of death» (*ibid.*: 122)—an operation that shows not only bias (*ibid.*), but also a degree of ethnocentrism<sup>85</sup> and speciesism. Thus, as Monsó writes, «[t]he concept of death

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<sup>84</sup> It is not my intention to address such legacy of discussions, as I do not possess the knowledge to even attempt doing so, and it could probably lead to a PhD thesis unto itself. This account of mine stems from a profoundly positioned perspective and, as such, is deeply limited to what I have understood both from fieldwork and bibliographical research in the complexities of death and killing in a more-than-human perspective. Thus, it aims not to provide a clear and definitive answer on the question "do humans know/portend death?"; rather, it is intended to provoke thought and discussion unto the complex, and mostly unresolved, comparison between humans and nonhumans facing death. For a general discussion on the topic of death, mainly tackled from a western philosophical approach, see as ex. Cholbi, Timmerman 2020; Stanford Encyclopedia of Philosophy 2021.

<sup>85</sup> Ethnocentrism is understood as the tendency of human cultures to understand their own culture as the "norm" for all other cultures. See as ex. Remotti 2012; 2018.

is something that evolves and acquires more complexity over time. It is, therefore, in principle possible for animals who have lived long enough to witness many deaths of conspecifics, to eventually reach, through inductive means, the conclusion that they will also die» (*ibid.*: 133). I am now reminded of my times in high school, and how much I loved studying Epicurus' take on things. In his *Letter to Menoeceus*, he writes:

[a]ccustom yourself to believe that death is nothing to us, for good and evil imply awareness, and death is the privation of all awareness [...]. Death, therefore, the most awful of evils, is nothing to us, seeing that, when we are, death is not come, and, when death is come, we are not. It is nothing, then, either to the living or to the dead, for with the living it is not and the dead exist no longer (2021: 67).

Death is nothing to us, says Epicurus. And while I do not enjoy the neat separation between life and death he offers, his words<sup>86</sup> help me here in making the point that death, ultimately, is not *fully* knowable for us. Thus, we cannot rule out (or in) the possibility of nonhuman animals knowing death much less than we ourselves do. And so, we must remain in the open, with the haunting question ever looming on our heads. Other animals feel grief; they mourn their loved ones. Other animals may know death to the point of committing suicide. This would make them hauntingly similar to us—knowing death just enough to frame it as one's only escape from unbearable pain. What do we do, then, with the massified deaths taking place in mass graves for living, feeling nonhuman people? Most importantly, is our answer always the same—are these deaths all the same?

As I reflect on all of this, I walk back alone toward the sheepfold, surrounded by hills, mountains, and vast valleys stretching like a green ocean as far as the eye can see, dotted here and there with small clusters of houses from nearby villages. When I arrive, Matteo entrusts me with the sheep's dead son, now chopped into small pieces for stew. I am to deliver it to a mutual friend who had asked for it. «Ale, it's 59€», he says with a serious tone as he hands me the bag. I nod, caught between pride and shame. That is the price—for his work, for the sheep's grieving, for the lamb's death. It's 59€.

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<sup>86</sup> It must be clarified here that Epicurus' point is wholly different from mine, as he's not arguing here about the *knowability* of death. In any case, I employ his words as they perfectly capture the point I'm trying to make.

Sometimes, as I walked alone through these hills and rocky heights, I felt the need to scream out loud. Often, some shepherds did this too, almost as a kind of play. It took me more than six months to feel the same need myself, and even longer to offer my own explanation for it. Then, it took me almost one year to give into that desire and to let out a scream into the valleys and heights around me. The first time, I was with Matteo, who had taken me to see a waterfall after leaving the flock to graze. We climbed dangerously close to the waterfall, where it loudly fell into a slippery, dark gorge. He screamed out loud, with his arms stretched towards the sky. I screamed too, and we were both smiling like kids. When we climbed our way back, he grabbed his *arresoa* (traditional switchblade) and carved our names in a cactus leaf just below the waterfall. It was a tender, childish moment we shared, and probably one of the few local ways to express male-to-male affection. The second time I screamed I was alone instead; I was returning to the sheepfold after having witnessed the sheep's grief about her lost son. Some could say this is the manifestation of a gendered, anthropocentric sense of human mastery over nature. I would not entirely agree. This is also, and incidentally, the only way one has to fill this vast greatness: to let their voice fly and echo, bouncing upon the rocks, the bushes, the trees, the waterfalls, and rivulets. It is but one desperate yet playful way to feel that you do matter, that you're not that minuscule, after all. That you do have a role to play in this loud yet silent expanse. But as soon as the echo settles down, you realize again that you don't matter at all. That anything you do does not matter, that the mountains are indifferent to your life, your struggles, your death. And then it comes: a smile creeps over your lips. You don't matter. And yet, you desperately do.

This section tried to deal with one singular question: do animals understand death? Yet, this question is often found split into two different ones: "*Can* (nonhuman) animals understand death?" and "*How* do humans understand death?". Both questions, however, are inefficiently imprecise: species and individual animals may have completely different understandings of death, just as human cultures and individuals may. Thus, we can either focus on case-studies, or try to collapse the dualism in favor of a more unitarian framework. Hence, through the example of one sheep, I tried to show how complicatedly nested is the answer to the question "do animals understand death?". The next section will,

instead, tackle corpse disposal in Barbagia, and how nonhuman funerary practices can reveal something about human values concerning death and survival.



*Fig. 18*

*This sheep stopped, called, and called again, while seeking her lamb in the landscape around us.*

## 2. To the boars and foxes: nonhuman burials in Barbagia

I am back in the sheepfold; this time, Matteo and I are joined by Armando, who is learning the family craft. We begin by deworming *is iderriadasa*, the group of sheep that have given birth and are now being milked by the two shepherds. My

task is to fill the needleless syringes with a dense, white liquid drug, while Armando and Matteo catch the sheep one by one and administer it into their mouths. Later, Armando and I move to the small shed Matteo built for *is angiadasa*—the sheep that have given birth and are still feeding their lambs, who jump all around, sometimes playfully, sometimes out of fear. There is a separate, smaller area in that shed, where he was keeping two sheep sick with diarrhoea. Armando herds all the others there to better control who received the treatment and who didn't. Amidst the grabbing and pulling and swearing among the recalcitrant sheep, having handed him every syringe needed, I see her: one of the two sick sheep is all cuddled up below a branch that Matteo left there—it's a cork branch, and he says it helps with diarrhoea. She is gently caressed by some rays of the sun, composing a rather delicate picture of a sleeping sheep. But then I notice her chest is not moving, not even a little. I fix my eyes on her, leaning on the wooden fence, trying to capture even the smallest glimpse of a movement. Nothing. Armando turns towards me while I'm looking at her: «is she dead?»<sup>87</sup>, he asks. I nod, clenching my lips: «I think so». He smiles; he already knew and was just testing me. Some awkwardly silent moments follow. «Now we'll have to make a funeral!» I joke, «Did you bring some flowers at least?». He laughs. I know now that this kind of joke works on him and his father, who shares with him this black humour. In the meantime, he picks her up rather unceremoniously, as if she were a hefty sack, and throws her corpse in a wheelbarrow. «Don't cry now, eh!», he jokes in return, while taking the makeshift coffin near his car. These jokes are a mystery to me. On the one hand, it seems a lack of care and respect towards her. But I know things just aren't this easy. Armando and his father work tirelessly to keep their animals healthy and well-fed, even in their leaving them somewhat free to eat what they want and when they want.

One time Francesco, another goat breeder, told me with pride that his goats were free to live; then, with more sourness in his tone, he added that they were also free to die. May it be for an accident or disease, his goats and these sheep are *allowed* to die outside of human control. The disappearance of the freedom to die is closely tied to the notion of killability. Such notion was first articulated by the philosopher Giorgio Agamben (1998), who linked killability with sovereignty: the

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<sup>87</sup> All the interactions in this paragraph are to be considered informal interviews carried out on the 25/01/24.

fundamental, originary act of sovereign power is, in his framework, the «production of bare life» (*ibidem*: 83), telling which lives can be taken without committing homicide or sacrifice. Later Donna Haraway, who considers killing as an integral part of life, framed killability as the production of nonhuman subjects as bare life and thus automatically killable (2008: 81; see also Buller 2017; Schrader, Johnson 2017). Then, anthropologists Bhrigupati Singh and Naisargi Dave, moving away from Agamben's work, framed their use of the notion of killability in the anthropology of ethics (2015: 232). During their fieldwork in India to explore the notions and practices of killability in slaughter and sacrifice, one woman, living in a rural village, told them that chickens were no more able to die—they could only be killed. This is a fundamental difference: it demonstrates that there are *contexts* of death that qualify death itself; there are structures and assemblages to death; there is difference. Anthropologist Deborah Bird Rose (2012; 2022) already ruled this out through her concepts of death and double death: if the first is a fundamental part of the reproduction of life itself, the second stems instead from the massified deaths brought about by industrialization, Capitalocene, and the sixth mass extinction, and it removes the possibility of life to reproduce itself though death. Double death entails the unmaking of mutualisms, symbiotic agreements, lineages and multispecies, generational work to keep life coming forth. It disproportionately occurs in contexts where the freedom to die is removed, such as in industrial facilities and mass killings: it occurs where the emplaced ways in which creatures live and die are twisted for some reason—may it be habitat loss, species eradication, or intensive animal farming.

[Double death] is made up of many small increments as well as great waves of devastation, and it impacts both on the balance between natality and mortality, and on the capacity of ecological systems to recover from devastating impacts. It is not that the whole biosphere is overtaken with death, but rather that death continues to pile up; renewal and resilience cannot keep pace (Rose 2022: 150).

Thus, a dead sheep is not just a loss of past and future money: it is a loss of past and future relations. Satta observed something similar with lamb killing: as the flock is both a symbol and a materialization of a shepherd's possibilities for survival, to "sacrifice" a lamb for collective consumption means to renounce what

the animal could have been (2001: 117-118). In renouncing a lamb, one not only is sacrificing an individual of great material and symbolic importance but is also renouncing everything that said individual could have produced, if butchering was delayed (*ibid.*: 118)—both in terms of meat, and of possible relations that said individual could have woven with their land. Thus, killing to eat, or to feast even, is one thing, to see underserved and unmotivated deaths quite another. And when these losses occur, my fieldwork friends sense that they are slowly losing themselves, even in a context marked by the freedom to die.

This happened to Francesco, when many of his goats died in rapid succession, and now he's waiting for the last dozen to pass away before stopping raising them altogether—may it be for disease, old age, casualties, or eventually transforming them into food. The same happened with his pigs, when health officials killed them all as a preventive measure against the African Swine Fever Virus, and amassed them in a mass grave using an excavator. He told me this story with a pained face, and said he swore he will never raise pigs anymore: too many relations had been lost that day. And thus, when the last one of his goats will die, he knows some parts of him will die with them. When the last one will die, his human-goat relations will die too. Thus, the reproduction of the flock is here profoundly tied with the reproduction of humanity: when one nonhuman dies, the flock loses one thin strand of a greater whole which, as a result, gets ever more delicate. Hence, one has to care for the flock if one intends to reproduce their own humanity, both biologically and symbolically; conterminously, caring for the actual flock is just one part of the process of caring for the flock. The paths that sheep walk determine their survival, not only the quality of their products, and so shepherds must weave the environment in a way that it is conducive for the flock, and thus themselves, and thus their community. There is a great deal of killing in such endeavour; but there is also a great deal of reproducing, caring, and propagating. Just like with any biotic factor that stirs Barbagia's lands, shepherds are part of a diffused metabolism dissolving and condensing bodies, relations, and environments.

This partly contradicts the too-often taken-for-granted idea that any animal, on any farm, exists only to produce organic matter. Geographer Henry Buller, for example, considers them to «exist to be killed, their lives are stage-managed to arrive at a pre-defined killing, usually when a desired level of

productivity has been reached» (2017: 11). However, while this may be true in mechanized, massified contexts, things are often far more nuanced than that. Anthropologist Megan Larmer, for example, showed how the contact with pastures and emplaced animal viscera could help chefs to ethically de-problematize meat through concept of «the goodness of the sheep’s life [...] and therefore the goodness of her death» (2019: 97), albeit in a landscape conformed «to colonial ideals of democracy–maximum individual freedom within a rationalized system» (*ibidem*). Still, this does not resolve any problem by itself: on-farm experiences (as free-range meat) are extremely limited in terms of their accessibility. They are only prejudicially considered to persuade people into ethical ways of producing and consuming meat. Furthermore, in such settings, «participants are targeted strategically to maximize an organization’s finite resources» (*ibid.*: 98); for these reasons, Larmer argues that such strategies are yet to be consistently re-examined «to have a meaningful impact on how animals are raised and killed for food» (*ibid.*). Conversely, anthropologist Eimear Mc Loughlin (2019) produced an emotionography of a slaughterhouse showing male ways of quenching the emotional toll of killing nonhumans: no matter the attempts, strong emotions did emerge, sometimes violently, thus dangerously unsettling both notions of masculinity and the naturalized assumption that animals exist to be killed for food.

Similarly, in Funtanalba, farm animals are not put down so easily when ill or injured. Their human companions persist in the hope of their survival; sometimes actively caring for them, sometimes simply offering food and shelter to such unproductive animals. Even killing for food is sometimes avoided, even if times have long been ripe, either in fear of losing too many lambs or because of one’s attachment to particular individuals. These facts are closely tied to the profound, pastoral roots of society in Barbagia. Of course, before loans and mortgages, flocks were tied with the survival of individuals and families: it is not by chance that, in Sardinia, the size of the flock came to indicate one’s wealth and social positioning (Satta 2001: 115). Thus, the flock was

the principal object of shepherding families’ concerns, especially poor families, which did not possess land or houses. It is said that husbands returning from months of transhumance, having greeted their wives with a handshake, would first of all discuss the flock, its conditions, its productivity. It is said that elder shepherds, to this day,

do not take a liking in killing their own livestock for eating [...]. The eldest shepherds still remember the time when eating meat was allowed only in the case of the animal's accidental death, or for the offering entailed by the celebrations of a big feast day (*ibidem*: 115-166)<sup>88</sup>.

Losing past and future care means slowly losing one's capacity for survival – one's food sovereignty, intended as the more-than-human capacity to live off one's land. Furthermore, it means losing those parts that make one human, a proper human, or simply a shepherd, in an age of continuous ecological unravelling and pressing sociopolitical trajectories disallowing their survival. Matteo and Armando are not running this risk: they have a massive plot of land, and more than one hundred sheep and goats. But still, a sense of loss and defeat is now sensible in the air, especially with Matteo. When Armando and I pass near him, with the dead sheep in the wheelbarrow, Armando slows for a second, seemingly to allow his father to take a glance at the sheep. Matteo sighs. «We'll throw her in the countryside, for the boars and foxes to eat», he says. Then, he turns his back and keeps walking towards the barnyard to collect some hay for his cows. One could say that this is way too little to qualify as a form of mourning. But is it really?



*Fig. 19*

*A shepherd facilitating a lamb's passing by extending their neck*

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<sup>88</sup> T.A.

During my fieldwork, I could witness how controlled the expressions of mourning were, even for human companions. In more than 12 months of fieldwork, many of my friends lost parents or friends, often to old age or disease. But whenever I tried to give my condolences, they were swift to dismiss any sad thoughts. It was with red, damp eyes that, having just lost a dear friend, one elder would ask me if I had fun going to my best friend's graduation party, and started cracking jokes about me being an anthropologist while sparsely giving a thought on their friend, on how he died, on how he was "stubborn as any Sardinian", not listening to any health advice, drinking and smoking his life away. It was tender, yet pain filled the air, together with the awkwardness of a young anthropologist trying to step as lightly as possible in such an intimate moment. Discourses and practices around death, I found, were minimal, especially for the many atheists who do not believe in any afterlife. Yet, those same convinced atheists would say about their dead friend, "now he's finally having a feast" with another, long departed common friend. Having already introduced *feste* (feasts) in the past chapters, I trust the reader will know how layered such an expression is for an elderly speaker living off the lands of Barbagia. Then, the very changing of discourse felt like an attempt not to converse with the dead, and to keep one's words for the living. "Let's head to the bar; I'll need to offer you some ten beers", he said. And so we did.



*Fig. 20*

*The sheep that died because of diarrhoea, cuddled up below cork branches.*

At the end of the morning, Armando and I load the sheep's corpse into his car and start driving toward the village. Before long, however, Armando stops, gets out, grabs the animal by its feet, and tosses it into the bushes. «Have you ever seen something like that?!» he asks me with a playful grin. «No, it's not every day you see something like this in Milan's city centre» I reply. In truth, though, I had already witnessed many similar burials in Barbagia. Such practices are a blend of tradition and practical necessity: on the one hand, people have always done it this way; on the other, my friends explained that proper disposal comes with a hefty economic cost. To do so, they would have to drive around two hours to Cagliari, spend money on fuel, and then pay additional fees for disposal—an expense they see as unnecessary. Their way, they say, is the “natural way.” And in this way, boars, foxes, and probably many other creatures get something to eat<sup>89</sup>.

All absorbed in my theoretical thinking amidst dirt, rocks, and an unceremonious coffin, I noticed before getting in Armando's car, that this sheep, all cuddled up below a cork branch, died while still ruminating on some straw. She was still chewing on some food when her consciousness slipped away—was she desperate, gasping for yet another straw, or was it like falling asleep? Sometimes

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<sup>89</sup> I will dedicate more space to reflect on such burials in the last chapter, where I discuss the concept of metabolic justice.

sheep die in this position, as if they know something is going to happen to them. But she was still eating, as if that lump of straw could bring her eyes to see yet another sun rise. I wonder if this proof that she couldn't foretell her own death. Instantly, I am reminded of all the wood that *tziu* (uncle) Erasmo, the almost-centenary father of one of my friends, left in his home when he passed away, still awaiting to be burned in the fireplace months after his departure. Is it different from this sheep's straw? We don't know when we'll say our last goodbyes. Thus, we cut and carry woods until that moment comes, and it is as if that moment will never come. That's the ode and tragedy that make us equal in the face of death. The Song<sup>90</sup> which, in Rose's eyes, sings about return, and «return sings up eros, sings up the world, sings up life and holds it strong in the face of death» (2011: 131). None of us will ever return. Yet we carry our woods until our last breath, until that wood has no use for us anymore, and it quickly becomes someone else's wood. That's how one becomes a gift for others (see *ibidem*: 89): we ruminate for ourselves, yet we can't help but ruminate for others, by others, and through others. That's the metabolic pathway reuniting fathers and sons, humans and sheep. "To the boars and foxes", says Matteo. From them to us again, says the Song, and from us to them again. That is our ode and tragedy, for any human or nonhuman animal. That is our return.

Now, having explored briefly how shepherds in Barbagia dispose of animal corpses, and the connectivity such practices entail, I can return again on the question posed before—do animals understand death? Most importantly, the next section will deal with spontaneous nonhuman death to discuss how people make sense of it. This will be fundamental to later understand the scope of concept of metabolic justice, which will be presented in the next chapter.

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<sup>90</sup> Rose here reads the Song of Songs, a biblical text attributed to king Salomon, and offers her poetics and reading of it. Quoting Bloch & Bloch, she considers that «the name of God does not even appear, and there is no opposition between human and animal, no hierarchy, no dominion [...]. [D]ivinity lies within the lovers and Earth» (2011: 121).

### 3. Witnessing death. Collective and individual mourning against powerlessness

After a longer-than-expected morning in the sheepfold, Matteo and I are finishing the last tasks before leaving—tying up loose ends like turning cheese wheels, packing food to bring back to the village, and collecting eggs from the chickens. I am hungry and tired, already looking forward to climbing into Matteo’s van and dreaming about the lunch I’ll cook for myself, followed by a pleasant hour of rest. «Have we closed the barnyard?»<sup>91</sup> Matteo asks. «Let me check,» I reply, heading toward it. I find it slightly ajar, so I push the heavy metal sliding door with my full weight, leaning to one side to shut it completely. I recall my first attempts with that door—how much I hated it, and how exhausting it was to open and close. Now, after more than six months, the task feels easier. I still hate it, though. After securing the door, I glance casually at the small shed Matteo built beside the barnyard, where *is angiadasa* are kept. This time, the shed is empty: the sheep have been freed with their lambs, and they walked towards the pastures some time ago.

I found myself doing this often—leaning in one part of the sheepfold, to take a glance of the nonhumans kept there, sometimes just to greet them, as my fieldwork friends often did. On this occasion, I did it as an automatic gesture, not even realizing we had freed them just some hours ago. But as my eyes accustom better to the shadows, I notice one ram was leaning on the wall, crouched on his legs. He seems just relaxing, but then I notice something is off: he appears to struggle breathing, slightly panting now and then. I focus myself on him better, and I notice some drops of blood coming out of his nose. I instantly turn around, intending to warn Matteo about what I just saw, but I find him right behind me, going to close some other fence. He knew that ram was not doing well: «I saw him before. That blood—that’s *ferula*, it does that to sheep». *Ferula communis*, or giant fennel, grows spontaneously and massively in Sardinia’s wilderness, and is reported to cause deaths to 5% of flocks that encounter them (cf. as ex. Landau *et al.* 1999). Sometimes, I witnessed shepherds scolding their sheep when they saw them overeating of it, shouting or throwing a stone in their vicinity to deter them.

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<sup>91</sup> All the interactions in this paragraph are to be considered informal interviews carried out on the 15/03/24.

In any case, as Matteo realized the ram's conditions were worsening, he entered the shed and led him to that same, enclosed space where the one with diarrhoea died. I followed him, and now we are both leaning over the metal fence, observing the ram and his movements. «Is there anything we can do?» I ask him; «yes, of course, I'll try to grab a medicine at my home to try and stop it», he answers, «but I don't know if it's already too late».

The ram pants, and pants again. He is standing on his feet, but his head is resting on a wooden plank, where some drops of blood are slowly dripping, coming out of his nose. He seems to be in terror, the kind of terror that freezes, leaving you incapable of doing anything. The ram pants, and pants again. Me and Matteo are close to each other, leaned over the fence: we both utter no words. The ram moves, going to the bottom of the enclosure, stopping only when his left eye can capture us. He pants, and pants again, he pants more and more frantically by the minute. The blood coming out of his nose seems to be much more now, while I hear a cat meowing, hidden away in the vicinity. The ram pants, and pants again. Me and Matteo stay close to each other, in silence. Then, after some seconds between one heavy breath and the other, the ram collapses on the ground, with eyes open wide, more terrified than before. He gasps quicker and quicker, his thick, black fur going frantically up and down. I hear rales shaking his body. He is probably drowning in his own blood, and Matteo and I are silent and still. At least, we are externally: inside I am stomping feet on the ground, burning with the pressing question of why—why aren't you doing anything? Why are we both here, standing and doing nothing? Why are you not running home to grab that drug and try to save this ram? Part of me wants to scream. Another part probably realized that Matteo understood we could do nothing at that point. Do nothing but witness and witness silently. Maybe there is wisdom in Matteo's choice. Perhaps he is purposefully staying still and silent, so that a young, city-dweller anthropologist may witness death, in its immensity and triviality. The cat meows and meows, more and more; it is infuriating. I imagine the cat looking forward to his new, exquisite meal, and I cannot help but get angry. I ask myself why and find the anthropocentric consideration that death should be respected—one should not be looking a dying, suffering one while salivating, thinking about your next meal. The ram gasps and whines though a raucous bleat that he throws towards the ceiling. Now, the blood is coming out from his back too, it is in his urine, while he coughs and pants

violently, splashing red rivulets onto the branches and feeders. He bleats again while his chest moves quicker, yet he is evidently struggling more and more to keep his lungs working. Then, after some instants of silence, interrupted only by the ram's heavy rales, he bleats again, and this time is more a scream than a whine. Silence. He kicks with full force while on the ground, almost as if he was trying to escape. More urine mixed with blood stains the hay on which he is dying. Another scream. His chest stops moving, but he keeps kicking frantically, caught in his last spasms. The last movement of his body burps away some faeces and more blood-mixed urine. Then there is silence again, this time from the cat too. I feel a boulder dropping in my stomach, it tastes like discomfort and discouragement. The ram has finally died.

«And that's it. You just witnessed death!», Matteo exclaims after some more seconds of silence. I nod, glancing with eyes open to mimic surprise—I feel so numbed that I am incapable of articulating any emotion really. «It also happens to people, doesn't it?», Matteo asks, «that kicking, and then you piss yourself. Sometimes people in car accidents lose shoes, you see them on the street, I think it's the same, with spasms and everything». I nod, but I am too shocked to really engage with what he's saying. However, I instantly pick up from Matteo's words his comparison between sheep and people. This is something that happens often in sheepfolds: animals are considered workers, prisoners, spoiled children, they get offended and protest and are frequently used as metaphors to reflect on human behaviour<sup>92</sup>. But I never considered this—that those metaphors for understanding human and nonhuman behaviour also extend to death. This is when a realization strikes me: Matteo *knows* death<sup>93</sup>. I look at him as if it was the first time, his face,

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<sup>92</sup> This kind of metaphors are common in anthropological literature, see as ex. Ingold 1994.

<sup>93</sup> The creation of (scientific) knowledge through witnessing death, and indeed directly killing nonhuman animals, has been described as a means to further protect the remaining creatures from the effects of the Anthropocene (Rundle 2017; cf. also Haraway 2008: 69-70). Here, something slightly different is happening: human actors learn to portend, and indeed foretell, their own mortality and death through their closeness with nonhuman companions. Of course, a major ethical problem is raised in both cases, even if they are substantially different: on the one hand, we have a purposeful killing aimed at preventing harm or death to others; on the other, we see accidental death becoming a way for humans to understand death, and probably their own closeness to nonhuman animals in that we share mortality with them (Singh, Dave 2015). Somewhat halfway between these two cases, anthropologist Veena Das, reflecting on ritual sacrifice in Vedic texts, argues that they do not convey the idea of «simply killing but of making visible and dramatizing one's own inevitable death» (2013: 32) Anthropologist Maria Elena Garcia (2019) further expanded on the ethnography of killing and witnessing killing through her fieldwork in guinea pig farms. In particular, she asks us to consider the ethical dimensions of participant observation in contexts of violence and killing made against nonhuman bodies: «[h]ow did the presence and suffering of guinea pigs affect the way that I could position myself in the ethnographic

his rugged hands that held so many killing knives. He understands death far better than me. He understands *human* death better than I because he has witnessed the deaths of other mammals so many times in his life. He is far more aware of his own mortality than I could ever be, because he knows far better than me how a human is not so different than a sheep, and sheep die all the time in a sheepfold. We all kick and spasm. We all are terrified.

«Bring him to the other side Ale, we'll put him in the van and leave him in the bushes. I'll prepare the van», he says. Bring him to the other side?! This time, there's no wheelbarrow in sight. And if some days ago a wheelbarrow seemed like an unceremonious coffin for a dead sheep, now I look for it as the sole way to manage to carry that body all the way to the other side of the sheepfold. But there's no wheelbarrow, and time is running out.

I grab the dead ram by one of his legs and start dragging him amidst hay, stone, and soil. It's even worse than the wheelbarrow, as a funerary practice, but one has to do what one has to do. I can see now how Matteo was still teaching me, even in asking a thin researcher to drag a corpse heavier than him. It is by dragging and pulling that I finally understand, at least in part, the lack of ceremony that I witnessed in the past; this is how I get a glimpse of the local attempts at taming death<sup>94</sup>. In Barbagia, bodies are heavy, time runs out. Bodies are dead. Ceremonies are for the living, not the departed. It is almost ironic that a society so capable of finding ways to survive amidst socioecological change still struggles to thematize death in both human and nonhuman contexts—let us remember the attempts not to converse with lost friends, but to celebrate their lives with the living. In any case, people understand themselves by looking at animals; they may even come to understand human death through animal death. And because humans understand their own behavior through nonhumans, how people understand human and nonhuman death has to overlap at some point. Thus, little ceremony is given to both human and nonhuman corpses. But things do not end here. The lack of ceremony, at least for humans, is very often complemented with *a ton* of discourse. How did they die? Most of all, *why* did they die? Who they were while being alive?

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encounter? [...] To understand the fate of the guinea pigs, I cannot save them. Is this the tragedy of multispecies work?» (*ibidem*: 365).

<sup>94</sup> The anthropology of death and funerals is an entire subfield of our discipline, and to delve in it now would unfortunately take us astray from our main focus. For an overview of this sub-discipline, see Engelke 2019; to have instead an account of the changing funeral practices in contemporary, Western societies, see Shimane 2018.

And then, there is remembering, which is one way to speak with the dead and hear their whispers—not only lost friends, but the people and spaces *we* were while they were alive. Who we were before those threads snapped, thus changing the whole web, requiring it to rebalance its knots, weights, and connectivities. It is the ghosts I wrote about in the first chapter; the ones Matteo and Francesco showed me by pointing to abandoned sheepfolds and empty orchards. These ghosts roam Funtanalba and its *sartu* (wilderness), and they have their own peculiar way of making one's life alive.

I arrive near Matteo's van, where he opened the large sliding door and made space for the corpse, which for now is left on the ground while he collects the last things to carry back in the village. Then, when I lower my back to grab the ram's leg again, I inadvertently stick my hands in a nettle bush, and quickly retract them with an expression of pain. «Be careful, eh, it does nothing to him anymore, but it still does something to you!», Matteo jokes. In pain, I lift the heavy body and bring it in the back of the van. «Ohé, you've grown stronger Alessandro!», Matteo exclaims. «Can I come with you? I want to see where you leave him», I ask. «Yes, if you want, but it's always the same, I'll throw him near the gate, where the bushes are»; «yes, I want to see it in any case». Ceremonies are for the living, not the departed. Thus, I sit near Matteo for some minutes while he drives up the hill; then he stops, opens the van again, lifts the body as if it weighted nothing, and throws it in a hole covered by bushes. «That's it. Now at least the foxes will enjoy eating him», he says. There it is, the ghost and the web they conjure. The way in which Matteo puts this loud death to rest is through a promise of continuance. He is happier this way, knowing that the ram he cared for will nourish the same foxes that, one day or another, will steal his lambs. There is no running away from it: either in life or in death, creatures cannot help but nourish others. This is Matteo's spell: to summon and collect ghosts that care for his land, one way or another.

«I have to take my car from below, I left that down in the sheepfold. Will we see each other tomorrow?», I ask; «yes, of course. Just, going down, double check that we close everything right». «Yep, of course. See you tomorrow then!». And so, he returns in the van and heads toward the village, while I walk down to the sheepfold again, surrounded by a sunny vastness of blue skies and jagged hills.



*Fig. 21*

*The ram just moments after his departure.*

The sky above me is crystal clear, tainted but gently by sparse cotton-white clouds while gusts of strong wind fend and push my body. For Matteo, it is a grim sight, for no matter how magnificent is the sea of land, mountains, sky and creatures surrounding us: “the place is sad”, he tells me, “It wants water”. A few steps later, the wind shakes the treetops, and cherry blossom petals start to shower from the nearby trees, whirling in spirals that descend towards the sheepfold, where pigs are lying on the rocks enjoying the morning’s satiety. They ate peels and leftovers from oranges, salad, bananas, tomatoes and grains—some of them grown at a distance of few meters, others produced in countries far away from Barbagia. Petals are still flying over the sheepfold, gently falling on the dirt road and natural and artificial birdbaths, landing on minerals and concrete, poop and mud, dogs and ashes, a ceramic sink and tall pine trees. Some of those white and pink petals quietly settle on traces of blood and skin, almost caressing them in their departure from a life’s last attempts to maintain itself. Another lamb was killed earlier this morning.

I take some time to recover from the shock, wandering around aimlessly. I am so shocked I have to check thrice if I closed the gates, the sheds, the barn, going

back and forth while digesting what I have just witnessed. I act by automatism while trying to capture my feelings and write them down on my field diary. Francesco's take on the freedom to die comes back at me. That is what it looks like, when nonhumans are free to die. It's not beautiful nor comforting. It is what it is, quite literally. It is painful and shocking. It is desperate and freezing. And yet, it just is, in all its mystery and triviality. Then, I rethink about me and Matteo silently witnessing this death, and I am remembered again of Old Tim's commandment. «'Thou shalt not turn thine eyes away from the death of animals'» (Rose 2019: 26). I sit in front of the main shed, where trees are whispering in the rising wind, and a poetry by the Italian poet Mariangela Gualtieri echoes in my head. She writes about war, but I find it strangely fitting for the situation, especially some of her last verses.

Here it is, the unadorned death. The great  
reshuffling of creatures. Do not forget  
this unmaking of bodies. The path for return (Gualtieri 2019: 36)<sup>95</sup>.

I feel the wind shaking the treetops, the trembling of my internal organs, my lungs' fatigue while I smoke and write. Do not forget this stench, the path for return. Do not forget this sound, do not forget the sun's heat on your flesh. I now realize I never saw someone die. I saw many lambs being *killed*, but I never saw someone die. Death and killing are different. When a shepherd kills, it is quick, and one has little time to mourn. More than anything, one knows that such death will nourish other humans, and the shepherd's family. Death is different, it is slow, creeping, and frantic. It is terrifying. I know that all of this is just my perspective on things: I doubt dying and being killed are that different for the dying one. But I can't help but remember the fear leaving the ram's gaze being switched for gracefulness, while I watched in freezing terror. It felt as if the dead was looking down on us. As if the dead had understood. I am trying not to see life as something that left his body, even if cognitive metaphors (cf. Lakoff & Johnson 1980; 1999) such as "exhaling one's last breath" are so powerful that are difficult to let go. Perhaps, I am trying to do so because looking at any individual dying or worse, being killed, is unbearable to me. I need ways to de-centre myself from individual bodies and

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<sup>95</sup> T.A.

look at the broader connections that enable both life and death, both dying and surviving. And, while the metaphor of individuality is also tremendously strong for one whose culture functions by it, I must also recognize that individuality is not a fact, but a social construct and an individual interpretation.

The anthropologist Tim Ingold writes that life «is not the deployment of a pre-existing form but the very process through which form is generated and maintained» (2018: 47)<sup>96</sup>. And that is true, but what I am trying to develop here is something even further. In Ingold's account, life is still a function of form, albeit processual and emergent. But what if life was not something that "left" this ram's body, as if it was contained within it and now is no longer? What if life was not a process inherent to forms, but to relations *between* (live and non-live) forms? Even more: is form so essential to define life? We know that life tends to maintain living structures and defend them from entropy and dissolution. However, lifeforms may be more or less flexible in their structures: human bodies tend to be tidier than amoebas'. And while boundaries are indeed helpful to define lifeforms (say, defining a cell through its external membrane), it is their very porosity that allows for the emergence and maintaining of life. Ultimately, life may be nearly impossible to define. But still, I wonder if it is possible to steer towards a more inclusive and relational concept of life, one in which life is not an essence that individuals have, or that pertains to individual organisms, but a relational, leaky process that individuals entertain with each other. Life is a spectrum in which seemingly individual organisms participate, and is always greater than the sum of the individual lives it contains. Life is not owned by shape; shapes are owned by life, and are defined by their constant contact and exchange. After all, it is this very capacity that death halts: the ability for living beings to connect, ingest, and transform their environment—namely, to be connected to it via metabolic, transformative, and diuturnal processes. It stops one metabolic agent, turning it into something that can only *be* metabolized, and is thus destined to dissolution—here, the similarities with mass breeding are striking, as nonhumans are packed in industrial facilities to disallow their capacity to become food-for-others and thus produce, as we will see, deaths that can never be turned back to life.

Still, this view of mine is inaccurate. As we die, the microbes that helped us digest food will start to digest our body instead, harvesting the nutrients that will

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<sup>96</sup> T.A.

become necessary for plant life to digest our body (De Bruyn 2023). Even here, then, relationality is severed only on one scale of magnification – that of the human organism; while, at any other scale, connectivity is constantly maintained. This is true also the other way around: what, on the microbial scale, may appear as the ceasing of relationality (death) for microbial communities fighting each other, on the organismic scale appears as homeostasis, and the reproduction of the individual with all their relational potential.

As the anthropologist Elizabeth Povinelli (2016) makes clear, the very distinction between life and non-life is a cultural way of ordering the world—one that justifies extractivism and colonialism, permitting us to rip and shred and excavate through earth's body with little regard. After all, soil is non-life, rocks are non-life, rivers are non-life. Others do not share this belief with us. In Australia, some indigenous groups «believe that specific features of the landscape such as Old Man Rock and Two Women Sitting Down are sentient, and equally important, that, as the human descendants of these still sentient sites, they are obligated to act on this belief» (*ibidem*: 35). They believe that these sites *listen* to humans (*ibid.*: 80). I am remembered here of Val Plumwood's dialogue with the balanced rocks in the Australian wilderness:

Balanced rocks were for me symbols of presence, symbols of balance, but also symbols of life's danger, of vulnerability that cut close to the bone: we can fall, we are balanced, our lives are kept open precariously. It is curious that these old wise rocks should so often take a form that recalls a shrouded animal or human head. This form is the sandstone's warning to all embodied individual life: It says, I am about to decompose and crumble, losing my individuality and organisation, but in the process creating others. In the same cause you, you living ones, must die, and since life is defined by its attempt to resist the inevitable decomposition, loss of form, you will finally have to surrender to something you do not want, that which of all things you do not want, to death (1999: 33).

As I look at the bright, blue sky above me, and rethink about the ram's last spasms before drawing his last breath, I try to see how life just ceased to linger there and is now oozing and expanding around. Life is liquid, and death is just a turning of the tide. Life is not something one has; life is something one participates to. Life, is such thing even exists, is in between bodies, not inside them. An eagle soars in

the sky above me; I imagine them having sensed the ram's corpse. Death is a guarantee for her cubs.

I then try to put myself in the position of a shepherd, as if the ram was one of my companions. I would be equally sad, I think, but about what? The economic loss must be a part of it. But is it all? His silent grieving seems far, far deeper, or maybe just different. It is a little bittersweet, as many things with him. What's that bitterness and, most importantly, what's that sweetness? Why is he mourning for a ram when he kills lambs every day? It may be that, on this death, he has no power, no saying. It may be helplessness towards a bad death and unnecessary suffering; it may be pity. Or is it the dreadful feeling of companionship with another mortal being? Is it really that, through the other's death, we portend our own? The bitterness in his smile tells that by looking onto others we peek into our mortality. The trivial, infuriating fact that we are nothing more than meat, despite all our imagined greatness—our knowledge, science, philosophy, love and hate, labour, fatigue, stress, and desire for warmth, care, and safety (cf. Plumwood 2008). It all boils down to being equals with a ram. It all boils down to us being nothing more than a sack of meat. However, Matteo's sweet smile is much more difficult to interpret. Is that sweetness coming from a feeling of humanism? Is it the feeling of superiority, of having the power and privilege to witness suffering, rather than feeling fear and pain himself? Or is it that this sweetness is cognate with the bitterness? May it be that, through looking at the way we mortals say our last goodbyes, Matteo was himself imagining the immensity and triviality of life and death? The sweetness in his smile is, indeed, the crumbling of human exceptionalism. It comes from envisioning the tragic yet idyllic fact that «there really is a world in which we are all food» (*ibidem*: 36), and that it is a world of «radical and startling equality—it is not unfair, it treats all the same way» (*ibid.*)<sup>97</sup>.

Remember that breathlessness, I say to myself, and the attempt to rip away another breath from the world. It will be your own, one day. As the world keeps singing, Carolina, a black and white goat I made friends with during my months here, sits not far from me. She is probably waiting for some more face and belly rubs—they became a daily habit as we got to know each other. The cat who was

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<sup>97</sup> Being immersed in such a world of radical equality, and employing nonhumans as a means to understand humans, my fieldwork friends could very well be crafting their notions of political equality and justice in relation to their experience of such ethical-ecological bundle. After all, often they would employ examples taken from farming to describe human situations, so why shouldn't their political view also be affected by that?

meowing the whole time through the ram's dying joins us too. We sit each from a safe distance from the other, but we sit together. Carolina seems to look at me with a questioning expression, tilting her head on one side. I smile, and it is bittersweet. She's growing old. Matteo says she won't make it to the next winter. I cannot help but see a meaningful attentiveness in her unwavering gaze, as she pierces me with full intent. It is not the first time she does that. She is still trying to figure out if she can trust me, and why I give her scratches and treats sometimes. Moments like this are peculiar: they really show you that you are in fact immersed in a world full of perspectives, of *persons*<sup>98</sup>, that you are the object of the others' attentive gaze. That nonhuman others are attentively and intelligently interacting, as subjects, with other subjects, such as oneself (see Rose 2013b). Only now I truly look at Carolina as a companion. We are not so different, you and me. We are both here understanding nothing. Don't forget her gaze, I say to myself. It's the path for return.

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<sup>98</sup> This idea, very commonly found in those worldviews considered "animistic" (cf. Descola 2005), will be fully explored in the fourth chapter, where I will present the concepts of methodological pluralism and philosophical animism.



*Fig. 22*

*Carolina looks at me with a strangely questioning gaze. Closer to me is the cat who was meowing during the ram's dying.*

#### 4. To have no reason. On instability, noninnocence, and the open

Where does one even begin to wrap things up, to attempt closure on such an immense ethical problem, even if approached from an extremely local and situated perspective? Perhaps by admitting that this closure can only ever be partial: the true ending to this story will come in the next chapter, where I reflect on the meanings and ecological effects of killing, burying, and eating one's nonhuman companions in the Barbagia of Seulo. Here, however, I will engage with anthropological and multispecies literature to make sense of the death and killing I witnessed during my fieldwork.

During the many months I spent in sheepfolds around Funtanalba—and especially in Matteo’s sheepfold, where most of my multispecies ethnography took place—I came to witness firsthand what it means to live with nonhuman working companions. Here I draw on the category of work (Haraway 2008; Barua 2018; Meijer 2019; Fair & McMullen 2023), as these nonhumans, much like those we live with in urban contexts, can be said to perform labour—not only metabolic and ecological, but also affective (see Barua 2018)<sup>99</sup>. What this means is that the sheep and goats I lived and worked with can be understood as performing labour: they modify and sustain the ecosystem around them through their own metabolism—the embodied capacity to provide nourishment to humans and nonhumans, emerging from the co-creation happening between bodies, feed, and environments in a rural society. Their degree of freedom is expressed on multiple scales. At the level of the individual and the flock, milk and meat are transformed, and the animals’ lifeways are significantly improved. On a broader scale, this freedom resonates with the local degree of food sovereignty. I will return to a fuller discussion of this concept in the conclusion. For now, it is important to emphasize that the freedom sheep and goats enjoy helps sustain both human and nonhuman food sovereignty. I argue that for free-range sheep, ecological and metabolic labour

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<sup>99</sup> Though I am not here explicitly arguing about nonhuman work, such category has already been widely discussed in environmental studies. Some exposed the colonial, gendered, affective, and physical exploitation of nonhumans as a means to accumulate value for reproducing our society (Mies 1986); others underlined instead the metabolic, ecologic and affective labour nonhumans endure (Barua 2018). Some proposed nonhuman work as quintessentially alienating (Fair, McMullen 2023); conversely, others warn us about the use of categories as anthropocentric as “work” (Haraway 2007), themselves often unable to see the nuances in the local declinations of human productive processes, which may often be incommensurable to wage labour (see Chakrabarty 2000). Some also differentiate human and nonhuman work through the category of will and volition: nonhumans are thus «not self-directed creatures exchanging alienable labour in the marketplace of their own volition» (Barua 2018) – let us think about Marx himself, who differentiated architects from bees, as bee labour was seen as one where «intention and functionality are immanent to the labour process, rather than the imposition of prior design» (in *ibidem*). However, this reading simply dresses concepts as “nature” and “instinct” in a fancier gown – the “imposition of prior design” being what really differentiates human from nonhuman workers. Conversely, ecofeminism underlined how the invisibilized subjects of extractive capital are “made to work” for the master, to the point that “labour” can be seen as a fundamental category to define the Other-than-the-master (see Barca 2022). In this way, to speak about nonhuman labour would be misleading at best, or an attempt at reducing into workers, and thus invisibilize, said subjects. What happens when nor the shepherd nor the flock can be reduced to wage labour? Finally, Silvia Federici defines the commons as «the gift of billions of years of *labourless* transformation» (2019: 30, emphasis added): past and present (and even future) commons have emerged not from wage labour, nor from work as we may understand it from the *perspective* of wage labour, but from innumerable generations of humans and nonhumans reproducing their own socioecology through (arguably) metabolically just configuration of mutual nourishment between the living and the non-living. For these reasons, I am still somewhat dubious in using the category of “work” to refer to human and nonhuman activities that further their socioecological reproduction.

are the same: it is by their ecological labour that they can provide metabolic labour; it is by being exploited for metabolic labour that they also perform ecological labour. Their metabolism *is* what performs ecological labour; their ecological labour is what creates the metabolism humans take advantage of. This is an important distinction, as the practical, contextual, embodied conflation of metabolic and ecological labour *does* something to humans also<sup>100</sup>.

During my fieldwork, I constantly had to gather sheep and goats, take them to pastures, or collect them from the plateau looming over the sheepfold, sometimes running behind them in the hopes of convincing them to follow the path towards the sheepfold. Success was never granted: more than once, they tricked me, changed direction, and followed paths impossible for me to walk on, ran back and forth in what I interpreted as an attempt to strain me, clearly manifesting their will to continue basking in the sun falling on the rocky plateau they called home. I cut my arms and legs, I fell and risked falling from deathly heights, I spent hours catching my breath while sitting on a rock; sometimes, I also gave up, as they had managed to strain or outsmart me. Each time, we were performing a dance in the Sardinian wilderness, a waltz in which it was never granted who was leading the steps. Were they free to roam? Yes, but also, no. Matteo's plots are huge, but not boundless. Thus, each time we performed our waltz, and each time I let them free and gave up collecting them, we were caught in a mutual exchange and negotiation between freedom and domestication. They were able to negotiate their freedom because Matteo's land is huge and harsh; I was able to "let them win this time" because Matteo's land is private, and a metal wire boundary encircles all of it—albeit, sometimes, the wire failed too, thus granting even more freedom to those nonhuman companions, and causing problems to Matteo: in a situation where land property is clearly demarcated, when your sheep trespass you find yourself indebted. And we had to run, more than once, all around the land, in steep climbs and descents, down and up and down again, straining ourselves to the bone following the wires, to find the gap and close it with the heavy tools we carried on our shoulders. Negotiations are also more or less possible depending on the flock and time of the year: while *iderriadasa* (those who recently gave birth) were kept in the coziest parts of the

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<sup>100</sup> Chapter II focused on the embodied, metabolic effects that such conflation has on more-than-human bodies. Here, I discuss instead the socioecological intra-actions engendered by it.

land, where it was easy to gather them and indeed they themselves chose when to come back, *s'agadiu* (those with no lambs and no milk) was instead left in the wilderness for days on end, and occasionally gathered back to the sheepfold just to check if one was pregnant, and that everything was right with them. This, of course, not to mention goats: if Matteo, most of the time, was somewhat able to recall and make them come back from the plateau, I was not. When I had to gather them, my only option was praying that they felt they wanted to come back that day, and that they fell for the offering of grains I carried with me to bribe them. Sometimes they decided that hey, actually the prospect of food, shelter and water was enticing. Sometimes, they decided that basking in the sun and headbutting in the greens was better, and I came back to the sheepfold empty handed, with Matteo and Armando laughing and mocking me, saying that “they outsmarted you this time too!”. Still, every time that the weather was getting more grey and threatening rain, the goats showed up autonomously, looking at us with their heads tilted. “Are you going to let us in already?”, they seemed to ask.

Such constant negotiation is what I would first relate to Donna Haraway's intra-action: «[p]eople and animals [in free range sheepfolds] are both subjects and objects to each other in ongoing intra-action» (*ibidem*: 71). The ongoing intra-action is the waltz we danced, it is the constant negotiation between humans and nonhumans, with no absolute guarantees of success. It is «ontological choreography» (Haraway 2008: 88). It is, fundamentally, the job of the shepherd: to know their animals, their feelings and desires, their individual capacity to respond to human needs, and their willingness to do so. Further, we were constantly caught in an instrumental relation between each other: if the (not-so-foolproof) wire encircling the land was instrumental to humans, the goats coming back demanding to be let in the shed during rain was instrumental to them, and humans *had* to meet their demands, even going against the immediate economic advantage. One lets goats roam free because this way they ruminate on the wilderness and consume no feeding; one has to let them in when they ask so because this way, they will have *a reason* to come back, even if this will cost grains and water that could have been spared. It was a game of fooling each other in structurally set (but constantly re-definable) conditions, it was negotiated instrumentality between individuals that knew each other in their individual needs and features—this crazy sheep who constantly strays off the path, this fool guy who

strains after some running around, and who seems to be prone to give us more grains if we make eyes at him. Such is the «result of remaining at risk and in solidarity in instrumental relationships that one does not disavow» (*ibidem*: 70)<sup>101</sup>.

This is what Haraway (2008: 88) calls cosmopolitics; it is what philosopher Vinciane Despret and ecologist Michel Meuret (2016) call cosmoecology: the ecology engendered by precise sets of multispecies relations, and human obligations, which thrive and permit to thrive to peculiar assemblages of nature-culture. According to Haraway, «companion-species approaches *must* actually engage in cosmopolitics, articulating bodies to some bodies and not others, nourishing some worlds and not others, and bearing the mortal consequences» (2008: 88). Such cosmopolitics thus permits the survival of a particular assemblage of humans and nonhumans, as I am trying to show through this thesis. Here is where death and birth, care and exploitation, go hand in hand; most importantly, it is where death enables survival, not of simple local practices but of entire assemblages where more-than-human communities eat each other and through each other, and hold each other in regard.

But does all of this justify exploiting and killing individuals for food? It depends on whom you ask. Anthropologist Helen Kopnina (2017) is adamant in her no and offers compelling reasons to motivate it. As she writes, «[w]hile there is a robust body of anthropological literature advocating for the rights of vulnerable communities, colonized nations, and oppressed minorities, human-animal oppression remains depoliticized» (*ibidem*: 339). Thus, opposing Haraway's account, she asks:

I wonder how nonhumans are to engage in cosmopolitics if they cannot speak our language, and would the inevitable choice of “nourishing some worlds and not others” fall upon those who can talk? By default, will not the “bearing the mortal consequences” be done by nonhumans? This muddled justification for not making a choice actually allows those in power to make it anyway. The lack of moral

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<sup>101</sup> Meijer, reading Donaldson and Kymlicka, offers a compelling argument about nonhuman sovereignty, comparing «human encroachment into the habitats of non-human animals to the colonization of the land of indigenous human communities» (2019: 141). Let us think, for example, how European settlers considered indigenous Australia as “*terra nullia*”, and how in the same way humans «see land where no humans live as empty land» (*ibidem*). This, in turn, offers interesting parallels with anthropologist Elizabeth Povinelli's (2016) geontology, or the mobilization of categories of Life and Non-Life to further extractivism.

commitment is exemplary of how multispecies anthropology deals – or rather refuses to deal with nonhuman suffering (*ibid.*: 347).

While I do believe that the mortal consequences fall greatly more on nonhumans, they are not the sole bearing such consequences. Not everywhere in the same way. Humans do bear their mortal consequences in Funtanalba. Here I am reminded of the many stories I was told about humans dying next to, or because of, their nonhuman companions. There is the story of a goat shepherd who, trying to gather them in the same way I did each morning, and not far from where I was, slipped to his death, falling down the mountains to the rivers below. His body was never recovered. There is the story of a young girl being violently pushed in a millrace by a goat, who ended up stuck between the rocks and risked death by drowning. There is the story of the shepherd being crushed by a boulder falling from the plateau, right next to his cows. And there is the story of one elder woman who fed her pigs for all her life, only to die in the piggery while bringing them food. One pig's tusks severed her femoral artery. No one knows if it was by accident, or if the pig reacted to his forced confinement and decided to kill her (*decided* to kill her? Was he portending death, then?). She was just found lying in a pool of her own blood. As I was saying before, there are contexts of death and killing, one cannot simply rule out what is right or wrong in a void, where no attachments, conditions, obligations, and intra-actions exist. Of course, nonhumans often bear the mortal consequences far more than humans do. Yet context defines death, not the other way around. Furthermore, it is not true that nonhumans do not engage in cosmopolitics either. As I (hopefully) have shown above, nonhumans have a saying in negotiating their own conditions, according to their own will. And they have a saying in which worlds to sustain, through their daily choices on what to eat or not to eat, where to rest and where to play. Furthermore, when we grant humans the ethical power to tell right and wrong, and thus extract them as something different from other species, we construe «the animal predator as simply outside ethics rather than an operator in a different ethical framework» (Plumwood 2012: 45). In this way, we do not eradicate speciesism, we just dress it in a nicer gown. Imagining carnivorous or omnivorous creatures as «ethical non-actors» (*ibidem*), like those we deem incapable of acting by their own will-children, and those «disadvantaged human categories we do not treat well»

(*ibid.*)—it is to re-instantiate the same speciesism that allowed us to consider animals as killable in the first place<sup>102</sup>.

Thus, one answer may be that to craft boundaries to separate that which is killable from that which is not: «[o]ne can refine the boundary by saying that killing can be acceptable provided that there is no suffering, and so on. There is satisfaction in such rules – one can know how to keep one’s hands clean» (Rose 2011: 142). But if we are to truly “treat nonhuman animals as equals”, we must consider the possibility that ecological justice and ethics may work very differently from human ethics. Again: I do not want to picture a utopian countryside where animals are all happy all the time, rainbow shining on the posh farm. Animals do get coerced, and obliged to renounce their bodily fluids and their own meat for the metabolic work shepherds rely on. Whether they like it or not, they are milked. They are hanged and killed, sometimes daily, especially the younglings. However, from a relational point of view, «purity is a delusional as-if. It is the refuge of those who do not want to face the fact that to live is to be part of it all: clear boundaries become an invitation to act *as if* there were a place of moral purity» (*ibidem*). But there is still a problem in that: as Rose contends, to refuse connectivity means to refuse responsibility, to refuse accountability (*ibid.*), and the strenuous work of keeping one’s in constant check, looking at each dying individual right in the eye.

What I am trying to point out is how arguing about “death” as a neutral happening<sup>103</sup> is the same misstep we fall into while writing about “animals”, overcoming species-specific affordances and, even more, individual characters. It is, to put it simply, the age-old gesture of metaphysical flattening, only changed in sign: instead of reducing complexity in order to control, we are doing so in order to protect. The underlying, lazy assumption, the human exceptionalism that says “animals are a coherent whole neatly and homogeneously separate from humans”, is never challenged. Similarly, it would also be «a misstep to separate the world’s beings into those who may be killed and those who may not and a misstep to pretend to live outside killing» (Haraway 2008: 79). And, while it is true that

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<sup>102</sup> Conversely, let us consider how in Middle Age Europe animals were considered legal actors, and were thus plausible defendants in court (Hribal 2010; Meijer 2019). As philosopher Eva Meijer writes, «[i]n order to be able to take non-human agency into account and develop new forms of non-human animal political participation, we need to reconsider ‘politics’ in an interspecies context and in interaction with other animals» (2019: 113).

<sup>103</sup> This point was also made by Haraway, who writes that «[w]ays of living and dying matter: Which historically situated practices of multispecies living and dying should flourish?» (2007: 88).

«extreme cultural relativity, in which it is possible to ignore major abuses of human rights, is an abdication of moral responsibility» (Caplan in Kopnina 2017: 348), in my eyes it doesn't follow that «[b]y the same token, ignoring the scale of nonhuman suffering in favor of case studies can be seen as abdication of moral responsibility to nonhumans» (*ibidem*). Not so directly. One must not fall into the trap of universalism to avoid relativism—they both play the game of pretending to be everywhere. «Relativism and totalization are both 'god-tricks' promising vision from everywhere and nowhere equally and fully» (Haraway 1991: 191). As Kopnina continues,

the anthropological rendering of wildlife killing is carefully crafted in terms of aesthetics or cultural practices. Anthropologists discuss poetics, language and interpretation, embracing the narratives of “mutual ecologies” [...]. These “ecological aesthetics” and “poetics of whaling” tend to obscure not only the point that [animal rights] activists are making but the very the act of violence and actual killing of whales by “social actors” [...]. Critics of conservation tend to conflate environmentalism with colonialism, while implicitly supporting colonial prohibition of headhunting as part of traditional ritual, or infanticide as part of traditional birth control. The very idea of “traditional practice” is thus selectively framed (2017: 344).

Thus, according to Kopnina, such double standard sets a «dangerous precedent in reifying “cultural survival” and economic livelihood at the cost of nonhuman lives» (*ibidem*: 345). We cannot ignore Kopnina's call not to hide ourselves behind romanticized poetics of cultural survival, thus reinforcing the prejudice of the good savage Rousseau was so fond of. Local populations may indeed destroy local environments—our society would not be the first to be wiped out by its socioecological folly. But neither we can fully dismiss local ethics and symbolic and material practices on which more-than-human populations relied upon and survived through during the last centuries, if not millennia. It is neither a yes or a no: it is a “let us look into this fully and try to better frame what is the real enemy”, for «[i]nstrumental intra-action itself is not the enemy» (Haraway 2008: 71); to the contrary, it is one of the very mechanisms that makes life possible through connectivity. «Unidirectional relations of use, ruled by practices of calculation and self-sure of hierarchy, are quite another matter». As I hope I will be able to demonstrate in the following chapters, food sovereignty (Via Campesina 1996; Federici 2019) and metabolic justice (see Chao 2023) are key elements in this

reasoning. For what local populations are going to feed themselves with, if we are to subtract the ability to sustain themselves through their land—as the World Bank and the International Monetary Fund are already doing so well (Federici 2019)? This is not like arguing against headhunting or infanticide, even if we want to grant animals the same exact rights we would grant to humans. Homicide is not the same as genocide<sup>104</sup>.

Ecological reproduction, sustenance, and restoration are processes with dramatically bigger connections and implications than the individual destinies of the more-than-human bodies that partake in them. It is not about individual deaths, it is about the continuation of the ongoing dance between Life, Death, Non-Life, and Life again. Conflating infanticide with the butchering of lambs in Barbagia and then with industrialized contexts would be what decolonial scholar Max Liboiron (2021) calls a scalar mismatch: we cannot act nor think in the same way when scales change. Which worlds do we want to nourish then, and which ones are we going to let die?

Animal deaths within a kinship system are situated within relationships of accountability. In the first instance, one is accountable to the human relations of the animal, for it is they who will take direct action if their kin are being wronged, by overhunting, for example. More widely, however, every decision to kill an animal takes place within a wider set of relations signaled by the term “good country.” The purpose of killing animals is to nurture humans; it is not to eradicate animals or to wreck country. Good country is a flourishing set of relationships – interdependent and mutual. The work that Aboriginal people do for life-in-country is embedded in ongoing relationships of care and nurturance. This is not to say that all actions are perfect, that mistakes are never made, or that individuals never run amok. It is to say that country is the living context in which past, present, and future are part of cross-species relationships of care (Rose 2019: 26-27).

Here, again, we turn to Old Tim’s commandment: the point was never not to kill, but to take responsibility. We must surrender to living «without the comfort of teleological purpose from above, below, in front, or behind. This is not some kind of naturalistic reductionism; this is about living responsively as mortal beings

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<sup>104</sup> Furthermore, the mass killing of humans, or the biopolitical disallowance of their lives, itself is often carried on hand in hand with ecocide: let us think about the systematic destruction of Palestinian environments (Pugliese 2020), or about the mass killings of buffaloes to favor the death of native Americans (Hatley 2022).

where dying and killing are not optional» (Haraway 2008: 74). It is not simply that «human beings must learn to kill responsibly» (*ibidem*: 81). “Human beings” do not exist; to use this category is the same problem we face when using the term Anthropocene, where the *Anthropos* is deemed responsible for ecological unravelling. As if all human beings were responsible in the same way; as if human beings were defined by species, and not by the socio-material and cultural conditions of their reproduction (see Moore 2016a). It is rather that well-educated, global-north, city-dwelling people must recognize that respect always existed, albeit complexly and unevenly distributed, among local populations, and that we grew accustomed to being inured-to or erased-from death and killing as both consumers and killers in an industrialized, massified system of global oppression and exploitation of humans, nonhumans, and environments alike. This is where multispecies ethnography and environmental anthropology can chime in, pointing towards different ways to imagine worlds to inhabit. This is where Garcia’s (2019) work of shame and remembering can put futures into practice, and the consequences of one’s bearing of suffering becomes material engagement and a world-making practice. But, most importantly, we must do that together.

The anthropologist Stuart E. Strange (2021), working with the Ndyuka people of New Guinea, investigated the concept of *kunu*, the avenging spirit which often generates from nonhumans being inadvertently killed during the burning of forests they practice as a means for survival. Ndyukas believe that unwittingly killing a snake will generate a spirit who will be restless until they exact their vengeance upon the whole family of his killer. This is because Ndyukas do not believe in individuality, but rather in dividuality: each (more-than-human) person is composed by the multiplicity of hereditary agents, both dead and alive. Hence, to negate one’s autonomy means to negate it to all actors implied in their presence (*ibidem*: 146-147). In this way, *kunu* forces humans to recognize they are not the only ones being aware of death (*ibid.*: 140). Furthermore, *kunu*’s vengeance takes the form of the extermination of one’s family lineage, or the transformation of those deemed responsible into animals themselves (*ibid.*: 143). In this way, it coerces humans into responsibility: through death, they equvalate human and nonhuman killing; through transformation, they oblige humans to suffer as nonhumans do. This is what Strange calls «pervasive relatedness» (*ibid.*: 157). Autonomy is not granted; stability is never conceded. Thus, humans partake in

rituals and prayers to appease such spirits—to ask for forgiveness, and to hope it will be given. The forgiveness that the *kunu* demands from Ndyukas asserts that they «have no choice but to grieve for others—life itself depends on it» (2021: 159).

Grief is consequently the opposite of respectful distance and the autonomy it ensures. To grieve is to succumb to relatedness. No one wants to grieve; people are forced to mourn because their relationship with the deceased forms part of them—because it is them. Whether with spouses, kinfolk, or unfairly treated enemies, relations are synonymous with death because they imply the intensified interdependencies that make grief inevitable. For Ndyukas, to be related is to mourn (*ibidem*: 157-158).

To imagine autonomy and separation between humans and nonhumans is to put oneself in respectful distance, to assert firmly everyone’s bodily autonomy. In this way, the concept of *kunu* perfectly illustrates how cosmologies and environmental management are really sides of the same coin (cf. also Mangiameli 2010). Similar ideas are proposed by Eva Meijer, who considers abolitionist approaches as not taking «the agency of domesticated non-human animals» (2019: 116-117). Her point is stimulating: what do we do with Matteo’s goats, who sometimes decide to stay in the fields, and sometimes *demand* to be let in—and enclosed—in the stable? Thus, she considers interspecies dependency as not a problem in itself and, more so, how «‘phasing out’ domesticated animals would again imply that humans need to make decisions regarding their social lives (and other humans’ social lives, as humans may also need other animals) on behalf of them» (*ibidem*: 117). Thus, for her, to end nonhuman’s oppression

does not mean ending all relationships; it means we should investigate what types of relationships they want with us and how we can improve those. This includes searching for ways to increase their freedom, and possibly also creating options for them to leave our communities [...]. [D]ependency is not a problem in itself: we are all dependent on others at certain points in our lives, and political institutions and practices are developed precisely to protect those who are vulnerable (*ibid.*: 136).

Respectful distance is a much-needed endeavour in some contexts. But it does a poor job at describing how ecologies work, how Life, Death, and Non-Life waltz together, dancing in each other’s existence. I do not believe my fieldwork friends should stop killing lambs. I am also profoundly convinced that Francesco’s shame

in front of his daughter, asking if he was the one responsible for the killing, is what I call living responsively. It is part of the very reason why I believe they should not stop the killing. Shame, as writer Jonathan Safran-Foer argues in dialogue with Walter Benjamin and Franz Kafka, «is the work of memory against forgetting» (2009: 37; see Garcia 2019: 366). To resist forgetting is to bear the consequences; shame is the feeling that cries for «a forgiveness we cannot exact» (Haraway 2008: 81). To cry for forgiveness is to be held accountable, to inhabit the open where one may have reasons, but never sufficient reasons (see *ibidem*: 89). It is not about forgiveness per se, with its too often Christian teleology; it is about its request.

To cry for forgiveness is to be response-able, where one may cause death but never double it. Matteo, who out of respect hides the corpses from sheep, is constantly inhabiting that space where one is held accountable. Most importantly, he lives with the haunting possibility that the others may indeed have a face, and with the daunting yet passionate realization that «meeting the look of the other is a condition of having face oneself» (*ibid.*: 88). To look the dying in the eye is the path towards responsibility and felt reason, which « is not sufficient reason, but it is what we mortals have» (*ibid.*: 76). Responsibility may truly be all we mortals have in a world which reproduces itself through birthing, dying, killing, and eating.



Fig. 23

*Nerina, one of Matteo's dogs, lies in the shed while happily eating the placenta of a just-birthed lamb.*

Indeed, I argue that the politics and ecologies of eating are what define environmental and metabolic justice. This is why this thesis sits at the intersection between the anthropology of food and environmental anthropology. Eating, implying «the appropriation, incorporation, and de-formation of a complex other [...] in preparation for their transformation into complex same» (Kass 1999: 26), is at the very foundation of the reproduction of (most) life. Thus, it is the best framework from which to tackle ecological justice and reproduction as dramatically nested with human and non-human health.

For this reason, this work first examined the changing of Sardinian subjectivities and how the industrialization of food production frayed the social fabric in Barbagia. It then explored how this industrialization reshaped Sardinian wilderness, shepherding practices, and more-than-human bodies in return. Later, I turned to the issue of nonhuman death, a fundamental part of shepherding practices and, coincidentally, also in the formation of shepherding subjectivities. Hence, I tried to produce an emotionography of death in sheepfolds, and conterminously craft ethical tools to interpret nonhuman killing in food production. For this reason, in the first section, I show the complexity of the question “do animals understand death?”. Then, through showing nonhuman corpse disposal in Barbagia, the second section dealt with the troublesomeness of killing. Finally, the third section returned on the issue of how (human) animals portend death, and showed a local way of making sense of it. Having shown the complexity of such a broad issue, the next chapter will try to frame what I consider both a political and ethical answer to nonhuman killing, food production, and environmental reproduction: metabolic justice, intended as the evenly distributed capacity of beings for becoming food-for-others. This, in turn, will lead me to frame food sovereignty as key to building a world able to sustain its own more-than-human reproduction. Such answers, as I will show, emerged directly from the interaction with local interlocutors and are based on the observation of their daily practices of survival. Let us start by discussing metabolic justice.



## IV

# Flies, Foxes, and Farmers. Metabolic Justice and mutual nourishment in rural Sardinia

Having observed socioecological change in Barbagia from three different standpoints – social withering, cheesemaking, and animal death, it is now time to bring this investigation to a close. This chapter therefore turns to the two main concepts that this work aims to propose: mutual nourishment and metabolic justice. I begin by introducing the cultural practice of *balentìa* (honour, valour), and its connection to local discourses on more-than-human freedom. Thus, in the first section, I draw on Matteo's description of wild animals feeding on sheep and lamb carcasses to understand how much autonomy is understood as central in ecological reproduction. The freedom of more-than-human communities to procure their own food, even at the cost of interspecies competition, is seen as a key factor for environmental reproduction. In this way, *balentìa* will be shown as a device to regulate interpersonal relations and, conterminously, a useful tool to understand more-than-human freedom.

The second and third section of this chapter will provide two examples of mutual nourishment, thus show its perils and promises. The first example I will employ will be that of a traditional, illegal cheese called *su casu martzu* (the rotten cheese), which cheesemakers craft through an alliance with *Piophilha Casei* (cheese skipper fly) larvae. These critters are usually eaten along with the cheese and may try to eat their eater's stomachs in return, engendering a process called myiasis. Myiasis will be the protagonist of the third section too, in which I will present another fly species, *Oestrus Ovis* (bot fly), whose larvae act as parasites of sheep, humans, and dogs—thus sealing the flock as a more-than-human community. These examples will be employed to provide a conceptualization of mutual nourishment—that is, a process of constant, mutual mastication between creatures that moulds bodies, relations, and ecologies. Such process will serve useful in the

next section, which will try to introduce the concept of metabolic justice in its original inception to then expand it to fit the epistemic framework I developed in the course of this work. Thus, if the concept of metabolic justice originally intended to pinpoint the powers dramatically jeopardizing the processes of mutual nourishment in local ecologies, my approach will broaden it to include cosmologies into the metabolic transformations of more-than-human bodies and communities. Finally, in the fourth section, this theoretical reworking of metabolic justice will be shown to offer a perfect bridge between more-than-human justice and political ecology, and also between monist and dualist approaches towards what some call the “metabolic rift”—the ecologically devastating separation of human activities from the “universal/natural metabolism”, engendered by capitalism.

In any case, by now, the reader should have gotten the gist: to start attempting to understand all these complex, buzzword-sounding issues, we will have to go bother Matteo once again. This is, undoubtably, one of the things I love the most about anthropology: to say something yourself, you must first attentively and extensively hear what others have to say, and conjure some humility in doing so. Good anthropology is always, and fundamentally, humble<sup>105</sup>.

## 1. To fare for oneself. *Balentia* and more-than-human autonomy

Matteo is back at it, butchering a lamb in the lush fields around us; the sun shining bright over the metal bleeding table on which he is violently ripping away the lamb’s skin. Our topic of discussion today is not pleasant, especially for me: we are discussing last summer, when I got fleas as undesired guests of my body and house, as I am trying to interview him about parasitic critters in Sardinia. It is funny: when I asked him if he ever had ticks, he jokingly answered “you’re asking *if* I had them? You should ask if I ever *didn’t* have them!”. Being exposed to tick and flea infestations was treated as everyday occurrence by people in Funtanalba, even by those who do not work the land directly. Matteo, however, has little interest in talking about them; instead, he comments on the task at hand, joking

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<sup>105</sup> This concept is partly shared by Remotti (cf. 2008; 2024), who considers anthropologists to usually be the last experts to speak in a room full of experts.

about how people might think he is some savage if they knew what he does. I take the occasion to jokingly say that, at least, he's not the only one eating, as ticks and fleas also often take advantage of him. As I say it, he stops for a moment, knife and skin still in his hands.

M: Eh, I believe that this fact of...of...well, of free-range sheep, in any case, it contributes to feed also...I mean, all...other beasts too, like a fox, an eagle, all those beasts that eat...that need these things, to eat, even if...for example, when a sheep dies, they also eat it. Otherwise what would they eat if...if free-range sheep weren't there, this...otherwise the bio...there will be no more of all these...all these animals, one would need to go and feed them [if sheep weren't out in the fields], wouldn't one? One should go buying meat at the discount [laughing] and bring it to foxes! While this way...they fare for themselves. Also at the expenses of the poor shepherd, who...who instead of eating lamb, it is the fox who eats it! Still, it is part of the...I mean, what can I say...it's a part of the whole sector. Of the cycle. Everything is part of the whole cycle. Otherwise...and in fact since they...now they – I think they're even proposing to kill some...they give you some opportunity to butcher something, *they are proposing* to do so-because otherwise then you bring everything in the butchery, and it remains there, rotting there, smelling there, and creating epidemics. Here instead, when a beast dies, in a period of...of two hours, or one night, a cow disappears.

A: Really?!

M: They eat it, yes.

A: Fuck, in just one night?

M: Eh! They go-first, foxes go there. Then the...the boar checks, if...when foxes are eating, they go, the boars, they send them [foxes] away and eat. Eh... [smiling] they manage themselves like this, when they have it certain, do you understand? It is what it is. And I think that everything-everything is needed. However, if you enclose cattle...eh, food for these [wild] animals starts to lack. And in fact, you see, boars are walking in Rome! Searching for trash, aren't they? Eh, what would you do [in their place]? They find nothing, you see... (16/01/24).

There is a lot to be unpacked here. Matteo testifies to a stratified knowledge about how the local ecology works, and his place in such an overlapping of creatures. Not only are his killing and butchering recognized as feeding a broader array of creatures, but his tending and caring for the flock also end up constituting food-for-others. But there is also more. He refers to the discount meat as a substitute for local fox foodways, which represents yet another slip between human and nonhuman creatures. Discount meat is a coloured food, and as you subtract beings from local relations of eating and being eaten, those beings start to depend on

discounts to survive. If we trace back for a moment, one may remember Carole Counihan's (1984) words about local social fabrics withering, and the substitution of inter-familial dependence with a dependence on the State and the market: changes in food regimes—on both production and consumption—change how more-than-human communities adjust locally to survive. Matteo is here talking not only about animals, but also about humans. “Fending for oneself” is thus a complex category, one closely linked to the issue of discount meat. As people in Funtanalba discussed autonomy, and the capacity to fare for oneself and one's family through one's work, especially one's work with the land, I could sense a kind of heroic individualism colouring their words. In any case, autonomy is an important symbol in local discourses, as it is freedom, for both humans and nonhumans. Such categories probably rest on some re-elaboration of the *balentìa* (loosely translated as worthiness), something that may be worth exploring briefly before returning to sheep and foxes.

*Balentìa* is a moral value in Barbagia, performed and attributed to those able to “autonomously provide for their family”, no matter the cost. It is an almost exclusively male quality, and may entail the enactment of physical violence, or the performance of socially coded, masculinized behaviours threatening the possibility of violence through their verbal and bodily expressions (cf. as ex. Angioni 1989). Conterminously, in building a precise version of masculinity, it inevitably ends up crafting femininity also: the mother, wife, or sister of the *balente* (the one who performs *balentìa*) is also expected to act in accordance with male *balentìa*. Such performance of masculinity is often seen as the basis of violent behaviours: truces could be a good example of this, where the killing of one's relative commands an equally violent retribution. It would, of course, be an exaggeration to read any male behaviour in Funtanalba through the explicit lens of *balentìa*: such value has changed so much that today it is difficult to see it enacted clearly, if it ever existed as a coherent entity. There is, of course, also the change in values between generations, in which industrialization played a role. It is far, far more difficult (while not impossible) to pinpoint behaviours connected to *balentìa* in older men, while younger people seem to enjoy embodying the myth of the *balente*, albeit elders often decry their mimicking. The shared set of values informing, legitimizing, and qualifying *balentìa* is now withered, and young men are often criticized by elders for their behaviour, which is seen as the performance of a bully,

not a *balente*. I suspect many different, concurring factors are at play here. Of course, the changing values during the 1960-2000s led to a shared, public condemnation of violent behaviours. And yet, elders not only decried young people for enacting *balentia*, but also for doing it *wrong*. This means that elders did share set of values around *balentia*, one that is as implicit as clear, for all of them, who were agreeing in how young men today are “just bullies”, not *balentes* (pl. *balente*). What might be the difference then?

My guess is twofold. On the one hand, bullying behaviours enact symbolic or physical violence for the sake of primacy and hierarchy—they say: I am stronger, so I am better. Conversely, *balentia* is first and foremost a device to *avoid* violence, as the shared set of values amounts to social rules people were expected to follow closely, lest they lose their face in front of the community. As such set of values provides the conditions legitimizing violence on a local scale, *balentia* was not much a means to regulate violence (which, when enacted, could be as cunning and ferocious as possible), but to regulate peace. Contrary to bullying, it is not enacted to establish hierarchy, but to preserve the social order by sanctioning righteousness and retribution, and the behaviours that construct masculinity as well as femininity. Therefore, while bullying only concerns itself with establishing and maintaining hierarchy, *balentia* is an all-round embodied prescription that regulates living in community. The example of the Sardinian *tziu* (lit. “uncle”) may be of use here. *Tziu* is a title that people in Sardinia gain through age, and is used for referring to older people to show respect. Generally speaking, a *tziu* is a respected and valued member of the community, and *balentia* would prescribe anyone to act accordingly. Conversely, a bully generally does not concern themselves with respecting elders; to the contrary, attacking and harassing older people may even be a way to assert dominance. As people shared a coherent, albeit indeterminate and always open to negotiation, set of rules that regulated violence, they knew which behaviours would have been decried as outrageous (e.g. stealing cattle, or killing family members), and thus knew what not to do in order to preserve inter-familial dependence, upon which each one’s survival depended.

Of course, this does not mean that people did not steal cattle, ever, nor that *balentia* did not imply violence. Truces may indeed be a good example of a cultural short-circuit (see Remotti 2008): to maintain one’s honour, one must kill in return, and so the killing is always on the brink of spiralling down, continuing indefinitely.

Both historical and recent examples are not amiss. However, I see another factor at play on the other side of this coin: connectivity. As we have seen in the first chapter, inter-familial dependence formed the basis of survival in Barbagia: to be immersed in a moral economy means to be linked to a tight safety net made of people helping each other as a way to further the circulation of indeterminate debts, which in turn keeps that same moral economy alive, thus multiplying the survival chances for individuals and families. Helping each other is then not much a matter of naïve kindness, but a deeply material condition for one's survival.

*Balentià* could function as a device to preserve peace, it was among the factors enabling moral economies themselves. There is jolly sharing, but there might also be retribution. Thus, *balentià* would serve not only to preserve the social order by regulating male and female behaviours, but also to allow for the reproduction of local moral economies and inter-familial dependency: as people share a set of rules on how and when to share food, tools, and time, they get bound in such a frame and keep each other in check. Hence, where bullying is seen as an anti-social, individualistic behaviour threatening the community by establishing arbitrary hierarchies, *balentià* is seen as a frame to preserve society and the moral economy. To be a *balente* then, to be able to “autonomously provide for one's family”, does not simply frame a mythical (male) individual who, alone against Nature and Society, heroically manages to survive. To the contrary, anyone working the land knows very well how no one survives by themselves: to be able to survive here means to be able to weave together Nature and Society, to negotiate with both sheep and humans, to keep pulling the strings and, most importantly, to keep holding them together. *Balentià* is more useful to shelter connectivities than it is to sever them.

Thus, albeit seeing the contradiction, albeit publicly decrying any form of backward violence, some elders sourly whispered about how most young men knew shit about *balentià*—about its violence, I guess, but also about its inescapable relationality. “Fending for oneself” is thus part of a broader concept of more-than-human freedom (let us remember about how free-range sheep produce better milk, cheese, and meat, or how sick sheep enjoy better degrees of freedom because “they know what they need”) and, most importantly, of a tight net of mutual dependencies—of connectivities. Animals are proxies through which humans apprehend their condition: let us remember Matteo reflecting on human death by

looking at a ram dying. Or let us ask Clifford Geertz (as ex. 2005), who observed how people in Bali struggled and fought for their status through betting unreasonable amounts of money on cockfighting. Of course they were not betting on silly games; they were betting on, and for, themselves and their social status<sup>106</sup>.

Shepherds depict themselves as heroic figures who manage to survive through their wits and stratified knowledge, restrained by the State and institutions and yet inherently free—“a little anarchic”, even, as some would describe themselves, with a smirk. As Heatherington already observed (2010), they constantly shift from representing themselves as oppressed Native Americans to rugged cowboys, fighting an unforgiving Nature for survival. They are free, and they fare for themselves—they need no one, only their arms and wits. This would frame them as quintessentially neoliberal individuals, modernist liberal individualists (cf. Plumwood 2008: 324) trying to tame and master not only Nature, but Society also, with its known attempts at destroying their cherished lifeway. And yet, they all know very well how their survival is inescapably bound to the survival of their broader socioecology—the foxes who steal their lambs, the shepherds who share their huts, as well as the weeds upon which their flock ruminates. “Everything is needed” for this autonomy to occur, says Matteo. So, is this autonomy at all?

Humans and nonhumans can fare for themselves only as long as they are connected to a broader environment of other selves fending for themselves. One could consider a closed system of individuals, where each one mind their own business, contributing to the overarching functionality of the system. However, what is at the basis for this cycle, at least for living beings, is eating: a process in which life metabolizes other life in order to maintain its structure (see Kass 1999). Eating one another is one of the fundamental acts through which creatures connect, intertwine, and sustain each other. Mutual absorption and transformations, and thus connectivity, are preconditions to forms and functions—not the other way around.

M: They go and...they make laws, they make laws but laws are created like this [badly], they first make the laws, “you can’t butcher in the countryside from now

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<sup>106</sup> For other ethnographic examples of how humans employ the nonhuman world to understand and indeed *produce* their own understanding of themselves, cf. as ex, Tambiah (1985); Mangiameli 2010 (esp. p. 109-111); Ingold 2024.

on”...eh...but the foxes, what do they eat in the countryside if you stop butchering? The crows...the eagle, what do they eat? For this reason they go into extinction. *Then*, after years, someone discovers that, they say, “eh but maybe it is better to butcher in the countryside, at least the birds that also...that also eat this stuff, at least they also have something to eat”. But what did they do instead? They [made you] take cattle to be butchered 100 kilometres away, and they only created problems because they *didn't even know where to dump those things*. And in the end...people will go back [to how they used to do]. I think everyone can butcher some cattle in their own sheepfold, I don't think it creates problems anymore, *to the contrary*...it is the contrary. It is good, because everyone benefits from it, and a little bit of everyone feeds off of it. Otherwise you have stables, so the lambs-the fox doesn't...they can't catch them, because they invented the stable too. Eehh...do you understand?! Then there are dogs also, they invented the Maremma [Sheepdog] that doesn't want lambs to be touched, so if you don't kill some of them and throw something like this...those ones [wild animals] would eat nothing (15/03/24).

Here Matteo is venting about the lawful obligation to bring cattle to butcheries, and highlighting their subtraction of animal corpses from their broader ecology of eaters. Scale shows up again here. I have already shown this process in chapter II through the example of cheese: as the production of meat and milk in Sardinia steeped up in the last fifty years or so, public health measures had to be taken to avoid epidemics, and to ensure hygienic standards for mass-produced foods. And while such measures are of key importance in industrialized, globalized settings, they also extract the creatures bound in production from their broader environment. Plantations also work like this: «they remove the love» (Tsing 2012: 148; cf. also 2015: 39-40) through massifying production, and generally disallowing plants to be eaten by a wider array of birds, insects, moulds, fungi, mammals, and so on. Similarly, intensive animal farming subtracts both living and dead animals from their ecology: they become sites of quick accumulation (of fats, proteins, etc.; see Landecker 2023) in which human food matter gets rapidly amassed, but whose ecological connectivity is severed. They can only take—everything they give away is a threat to profits, public health, or both. This, for Matteo, is connected to extinction: as creatures are prohibited from being eaten, others must be forbidden to eat in return. Local (socio)ecologies are like tapestries: you sever a thread, the tapestry remains. But with each thread severed, other threads loosen, and start to drift away. The very weave of the tapestry slowly begins to fall off. But tapestries do not adjust—socioecologies do. Maybe the brain

could be a better metaphor then: neural pathways change and organize around cell loss, and the role severed areas had may get taken over by new neural configurations. Loss is not a problem in itself. However, when loss becomes massive, the system's capacity to re-adjust becomes jeopardized.

To the contrary, free-range shepherding and its way of butchering «is good, because everyone benefits from it, and a little bit of everyone feeds off of it» (15/03/24). Connectivity comes back again, as does the sharing of food—again, a stratified human practice that served to reproduce society up to this point. Hence, again nonhumans return as a way to reflect upon humans: things are good when everyone shares a little bit of the killing—the humans and nonhumans to whom one is indebted. This ties back with the *festa* (feast) I observed in the first chapter, as they were the occasions to strengthen interfamilial bonds through the sharing of food, as well as with *ajudu torrau* (mutual aid), where people share the products of their work—pig and sheep meat, cheese and fresh hams. Extinction and *feste* will both return in my analysis, both in the next sections and in the conclusion. For now, to discuss metabolic justice, I first need to frame what I consider mutual nourishment—that is, the constant exchange of both social practices and bodily matter between organisms in a given environment. To do so, I will employ another cheese as an example. Or better: I will employ a lump of more-than-human matter weaving together the lives of shepherds, sheep, microbes, and flies—a cheese called *su casu martzu*. This cheese will also help me introduce the first fly species this chapter will discuss: *Piophilha Casei*, or cheese skipper fly. Subsequently, I will introduce *Oestrus Ovis*, or sheep bot fly, another fly species acting as a sheep parasite. These ethnographic examples will help me frame what I consider mutual nourishment, how it can signal a degree of metabolic justice, and why metabolic justice matters in the context of the Capitalocene and the sixth mass extinction.

## 2. When food eats its eaters. About cheese, maggots, and the thorny issue of eating

Usually, when one thinks about food and eaters, things are pretty straightforward: eaters eat, food gets eaten<sup>107</sup>. And yes, we do have a plethora of microscopic critters participating, or better, allowing the process of digestion, who may complicate the answer to the question of who is eating what. However, it is not every day that one considers the possibility that the food eaten may try to eat its eaters in return. Albeit rare, this possibility is made manifest in a particular traditional cheese crafted in Sardinia<sup>108</sup>.

*Su casu martzu* (the rotten cheese) is crafted by exposing Pecorino<sup>109</sup> wheels to a rather peculiar aging process, one that granted this cheese illegality in both national and EU norms on food hygiene, apart from a mention in the official list of Sardinian traditional products (Mazzette *et al.* 2010). After letting fresh Pecorino wheels harden for some weeks, cheesemakers apply some slight tweaks to them: a round cut on their top, creating an opening to the inside of the wheel (*su tapu*, the cork), or a little olive oil on their rind, to soften it. This is pretty much where human agency stops, regarding the productive process of *su casu martzu*: pre-emptive measures to invite the real cheesemakers to do their jobs. Or at least, this is what cheesemakers tended to answer when I asked them how they crafted this cheese: *they* don't craft it; flies do. The tweaks mentioned above, in fact, invite one particular fly, *Piophilha Casei* (cheese skipper), to land on it. These flies are pretty resourceful. They have been found on exhumed mummies, and humans ally with them to estimate the time of death of their kin's remains through forensic

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<sup>107</sup> This paragraph is, partially, a re-elaboration of a single-authored article currently under review for Environmental Humanities.

<sup>108</sup> The name of this cheese can be found transliterated in different ways (e.g. "*casu marzu*"), due to the recent systematization of written Sardinian language. Moreover "*Casu martzu*", while being arguably the most common term used to refer to this cheese, is only one among many used in Sardinia, based on their different areas of production. Other names include *casu modde* (soft cheese); *casu becciu* (old cheese); *casu gumpagadu* (cheese with worms), and many more. Similar products are found elsewhere in Italy and Europe: examples include *salterello* (jumpy cheese, region of Friuli), *cacio marcello* (rotten cheese, Abruzzo); *milbenkäse* (Germany); rotten cheese (Croatia) (see Mazzette *et al.* 2010: 45). Another, understudied relative of this cheese could be the *Gazta Ustela* (also called *Gasta-Beratua* or *Gasna-Galdua*) in the Basque Country, which also contains insect larvae and is crafted by mixing cheese, cow, and sheep milk. I owe this data to Laura Volpi, who conducted extensive fieldwork in the Basque region for her post-doctoral research. Pers. comm., July 24, 2023.

<sup>109</sup> In most cases I observed, the starting wheel was a raw milk cheese produced mostly from sheep milk, with some small and variable percentages of goat milk. Details in the productive processes could differ even at the household scale.

science: they are so methodical in their eating that humans can estimate how much time passed since a corpse was still, well, not a corpse (see Lewis, Kaufman 2010; Mazzette *et al.* 2010). Their larvae are then particularly fierce and stubborn. Cheese “Skipper” flies owe their name to them, who have the curious habit of flinging themselves through the air at distances of more than 20 centimetres—an astonishing skill considered their maximum length of 9-10 millimetres (see Lewis, Kaufman 2010; Mazzette *et al.* 2010). For the same reason, these larvae are called *umpaumpas* in Sardinian, at least in the area where I undertook fieldwork—a term evoking the idea of jumping, also used to refer to traitors and duplicitous, «as a politician who is with Forza Italia [a right-wing party] and then goes with the communists!» (Francesco, inf., 8/02/23). These larvae are duplicitous indeed: shepherds invite them inside and ally with them to craft *su casu martzu*, but flies might very well ignore the cheese wheels, instead laying their eggs in hams, salami, and any other foodstuff one might have left lying around.

In any case, when the process goes as shepherds hope, *P. Casei* flies employ the hard inside of the Pecorino as a food source, a marital bed, and a hatchery where to lay their eggs. Then, after hatching from their pearly eggs, *is umpaumpas* use the hard core of the cheese as a food source through mechanical and enzymatic actions (called proteolysis, the breakdown of fats and proteins into smaller portions): larvae are fundamentally different to us in this, as they digest food externally by bringing enzymes to it and only later proceed to swallow it. These enzymes could produce dangerous metabolites for human health; *P. Casei* larvae themselves can then act as a vector for spores of *Clostridium Botulinum*, a microscopic fungus that can be lethal to us (Mazzette *et al.* 2010: 46). In any case, the feeding practices of larvae writhing, puking, masticating, and excreting Pecorino, transform the hard inside of this cheese into a dense, spicy paste that people eat alongside bread and wine—and, of course, the live larvae still eating the cheese as one starts to masticate.



*Fig 24*

*A wheel of Pecorino cheese that was left aging with others. On the top-right part of the wheel, it is possible to see a fly squished by the shepherd, who did not want those wheels to turn into casu martzu. However, the softness of the rind made it easy for later pioneers who, as the two holes at the centre of the wheel testify, reached their goal of colonizing the aging cheese. As a result, P. Casei larvae can be seen writhing in the lower part of the wheel.*



*Fig. 25*

*A wheel of perfectly ripe casu martzu opened through su tapu.*

Through hatching, eating, digesting, and excreting, larvae contribute to the decomposition process that is inherent to all cheeses. This is why I consider this a process of cheese-remaking and not simply aging. If you ask my fieldwork friends, maggots are cheesemakers too: like humans, they exert partial control over the decay of fats and proteins. At the same time, they are also cheese themselves—eaten as part of it, blurring the boundary between live and non-live food, and between eaters and eaten. This idea echoes Harry West’s characterization of cheese as a living entity (West 2013: 333; cf. also Paxson 2008). He critically reads Alfred Gell’s (1998) theory of the agency of objects, in which objects have their own (secondary) agency moulded by the humans’ (primary) agency itself, which is absorbed and re-expressed by the objects they make. While not a living creature in itself, cheese is an amalgamation of life and non-life. For cheesemakers, it has agency beyond what humans “impress” on it: cheese communicates through curd and rind, revealing specific needs and qualities. Its agency, West concludes, is «rather more autonomous than Gell would admit» (West 2013: 333). In *su casu martzu*, this becomes unmistakable: cheesemakers must account not only for the agency of microbial communities but also for that of insect communities—an agency that, as we will see, can be difficult to harness. Are larvae cheese, or not cheese? Where does the boundary lie, and who gets to set it? Not only does this cheese have a metabolism, or breathes and can be suffocated far more literally than any other cheese (see *ibidem*; Paxson, 2008): its very paste moves through the movement of its inhabitants, themselves an integral part of this cheese. Moreover, one could say that cheese is never “done”: cheesemaking is never a process with clear boundaries. Heather Paxson wonderfully illustrates the swarming microbial life that constitutes cheese, and the instability characterizing it: «a cheese’s becoming is never completed. Teeming with bacteria, yeasts and moulds, cheese continues to ripen (or, from another perspective, to decompose) until it is eaten» (Paxson 2016: 271).

However, *su casu martzu* is distinct because of this process of cheese-remaking: its ripeness is reversed by the larvae’s enzymes that shatter all the work done by microscopic beings over months, almost curdling it again. Its becoming is indeed never completed: microscopic and macroscopic creatures partake in a unique, multispecies act of mutual feeding and eating to engender a recursive, fluid

becoming of matter. Thus, *su casu martzu* embodies the life processes of many different species: sheep, humans, flies, and microbes, all of which desire to eat, reproduce, and survive. It does so quite literally, as if we were to analyse the nutritional values of a wheel of Pecorino, then transform it into *su casu martzu*, and then perform the same analysis again, we would notice a steep increase in fats (Mazzette *et al.* 2010). This cheese was a valuable product for transhumant shepherds, obliged to forego life in human villages and families to partake in the long and strenuous labour of living, caring, and dying with nonhuman others for months and months on end: it offers more nutrition than Pecorino, but roughly in the same weight and volume. If we truly consider cheese as an object with fluid boundaries, we could also add to these nutritional values the proteins contained in the live larvae that humans eat when feeding on *casu martzu*. How truly invaluable could it have been then, to a transhumant shepherd?

What is more, the eating may not end here. When humans ingest young larvae writhing in cheese, the larvae could, in turn, attempt to feed on their hosts. Sometimes, as they get swallowed, they might end up alive in our guts, nose, or genitals, hanging in there and surviving for up to 48 hours—a reasonably long time when compared to *P. Casei*'s lifespan of about one month (Peckenschneider *et al.* 1952). This parasitosis is the result of a reproductive strategy used by many creatures in the order of *Diptera* (flies) engendering a condition called myiasis, a term coming from ancient Greek (*mya*, or fly), which indicates diseases contracted by both humans and vertebrate nonhumans and caused by fly, or dipterous, larvae, which use their hosts' tissues and body fluids as feed (Tamponi *et al.* 2022; see also Zumpt 1965)<sup>110</sup>. In this case, it is called accidental myiasis, because *P. Casei* generally prefers foodstuffs or corpses to live tissues (Lewis, Kaufman 2010). Symptoms may include diarrhoea, intestinal cramps, and blood-mixed dejections—the result of the larvae's mouth hooks, chewing live human flesh, striving to survive yet another hour.

This is an example of mutual eating: humans consume maggots, and maggots, in turn, consume humans. In this way, *P. casei* larvae blur the line between food and eater: they are simultaneously eating and eaten, feeding themselves and nourishing others, acting as both cheesemakers and cheese,

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<sup>110</sup> While accidental myiasis performed by *P. Casei* has been observed in humans and other mammals as a result of eating infested foods, scientific literature lacks cases specifically associated with *casu martzu*.

decomposing and being decomposed. West captures this dynamic when he describes cheese as what I like to call a “fractal food”: microorganisms feed on milk so that humans can, in turn, consume cheese (West 2019b). In doing so, he echoes Leon Kass’s reflections on eating: «Eating comprises the appropriation, incorporation, and de-formation of a complex other [...] in preparation for their transformation into complex same», such that «to preserve their life and form living forms necessarily destroy life and form» (Kass 1999: 13). For Kass, this process of creation through destruction is inherently paradoxical. But is it really? This question calls for an essential discussion on bodies, and their inherent property of being food for other beings—the bloody, tender, painful, and loving matter that embodied life is made of. Probably, the ecofeminist Val Plumwood would have lots to say about this process of mutual eating that constitutes life itself: she was rafting in the Australian wilderness when she was attacked and almost eaten alive by a crocodile, who chewed on her body until she was able to free herself from the hungry hold, and to reach the nearest ranger outpost. Her terrifying experience gifted us with some of the best narratives of what being embodied life is about: «[w]e are food and [...] through death we nourish others» (2008: 324).

Plumwood observes Western approaches to death and finds them leaning either towards modernist-atheism or Christian monotheism. We either think that the end of human life means absolutely nothing—the termination of simple chemical and organic processes; or that we are souls destined to reach some kind of heavenly elsewhere. Significantly, she argues that both traditions «inherit the human exceptionalism and hyper-separation that propels the environmental crisis» (*ibidem*). In her opinion, both views propose a fundamental alienation from the earth community that enabled our life up to that point. Thus, we build coffins intended to fully separate our meat from other beings: not many of us would be happy with the idea of seeing the corpse of a loved one being eaten by wolves, bears, maggots, or crows. Plumwood considers this to be a way of trying to «cheat the earth community, to take nurturance from others but not to give it back» (*ibid.*: 327; see also Mol 2021: 138-140). What is so outrageous in the fact that what some may imagine as the greatest accomplishment of nature—our human body and embodied experience—is ultimately nothing more than foodstuff? Modernist liberal individualism taught us that «we own our lives and bodies» (Plumwood 2008: 324): we are sovereign individuals, owning nothing to anybody, and we may

grab anything on Earth to our own advantage. For Plumwood, this is precisely why the idea of another being preying on humans is so monstrous and unacceptable to many: it is no coincidence, she notes, that some people are quick to seek vengeance against predators that attack and eat humans. For this reason, she urges us to look longer at the corpse—or, I would add, at the living body—infested with writhing maggots.

These views on death and human separation are, in fact, culturally produced. The anthropologist Thom Van Dooren, for example, might ask us to consider how vultures and their feeding practices are conceived in different cultures. He invites us to think about the *Iliad*, where vultures are understood to undermine «both the sanctity of the dead and the supposed civility of the tale’s heroes» (Van Dooren 2011: 78): it is not by chance that Achilles revels when, standing over the dying Hector, tells him that his body will be left to dogs and vultures. One can only imagine Hector’s desperation in knowing that those creatures feeding on him would both defile his corpse and deprive him of proper funerary rites, thus condemning his soul to a rather sad yet eternal afterlife (*ibidem*). The fear of having one’s body defiled by animals through predation and ingestion was deep-seated for people in Ancient Greece. Yet, as Cicero reminds us, even among them not everyone had the same ideas: the philosopher Diogenes supposedly asked his students to throw his corpse in the fields and, when they showed concern about his body being devoured by birds and wolves, he sarcastically added «then throw my corpse with a stick so that I may defend myself» (in Hume 2008: 34-35). Admittedly, both the students’ reaction and the fact that Diogenes himself was the one defending this idea may give us a sense of how ingrained this separation was for Ancient Greeks.

Conversely, Van Dooren asks us to consider also those who have employed vultures to mediate the exchanges between life and death. In the beliefs of the Zoroastrian Parsis, bodies are left to vultures in the circular towers called *dakhmas*, or “towers of silence”, to avoid polluting fire and earth with them (Van Dooren 2011: 62-64). Thus, vultures are free to land over the corpses of loved ones and feed on them. Similarly, Tibetan Buddhists in the Himalayas historically used a funerary practice called “sky burial”: they lay human corpses in a foetal position and cover them with cloths, to later invite hungry vultures to feed upon them (*ibidem*: 67-70). Both traditions stress the reciprocity entailed in their funeral

practices: Parsis consider it an act of charity to sustain vultures, and Tibetans refer to their sky burial as *jhator*—«giving alms to the birds» (*ibid.*: 70). Thus, if vultures are thought of as opportunistic and vile creatures, and some use them as a metaphor for despicable categories of people (*ibid.*: 53), and if the idea of gifting the body of a loved one to their hunger appears unacceptable to Western thought, others see in this offering an act of mutualism that returns what we have taken to the earth community.

This is one reason why *su casu martzu* can be so disgusting to imagine or eat: through the ingestion of live larvae, it exposes the meatiness of our body—the core of Plumwood’s hyper-separationism—suggesting that human beings are, ultimately, nothing more than meat sacks for other creatures to consume<sup>111</sup>. Swallowing live, macroscopic mediators of decay we open ourselves to the possibility, even if temporary, for our body not to be our own, but a simple chunk of meat in a food chain. In this way, it also suggests the idea that our body is far more porous and vulnerable than we might like to think, again unsettling individualistic notions about human autonomy and freedom.

Autonomy and freedom: these are not things that people thematized just because they felt that way. Cultures do not function in this way. As the anthropologist Francesco Remotti contends (cf. as ex. 2008, 2012, 2013, 2018), societies instead do quite the opposite: humans tend to believe their symbols, categories, and hierarchies to be an independent reality; they do so to both function in the world and to shelter themselves from its precarity—the precarity of a world always exceeding their material and symbolic attempts at taming it. Thus people tell stories, and the world starts to look alike those stories<sup>112</sup>. The discursive practices around autonomy and freedom in Barbagia are not coherent self-descriptions; to the contrary, they exist primarily as a cultural thematization of their inescapable precarity and connectivity, their biologically fundamental indebtedness towards others. People in Barbagia are nor free nor autonomous, but

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<sup>111</sup> Another reaction beside disgust, and seemingly opposite to it, is fetishization – foodies may be attracted by such an exotic, strange, and supposedly dangerous food. However, both cases show how our culture has difficulty in normalizing the idea of humans being devoured by nonhumans.

<sup>112</sup> Or, as Kohn writes, context «is an effect of the symbolic. That is, without the symbolic we would not have linguistic, social, cultural, or historical contexts as we understand them. And yet this kind of context does not fully create or circumscribe our realities because we also live in a world that exceeds the symbolic» (2013: 38).

they wish they were. Their very wish contains here the recognition that no one, ever, can survive without others, «that others enable our lives» (Rose 2012: 110).

This, to Deborah Bird Rose, is an «embodied, life affirming, mutually giving and receiving, historical and future-oriented» (*ibidem*) ethics offering us «a great and seductive lesson: to be for one’s self one must always, also, be for others» (*ibid.*). She locates this ethics in the kiss between flowers and flying foxes: as they drink nectar through their tongues, flying foxes get covered in pollen, which gets dispersed and allows for the reproduction of their whole local ecology (*ibid.*). I didn’t see many multispecies kisses, apart from the one time I witnessed a sheep grooming a cat. But I did see a ton of biting and nibbling each other, in both mammals and insects. This future-oriented, embodied, multispecies ethics is as life-affirming as it is life-devouring, and passes equally through the teeth of placid sheep (cf. Despret & Meuret 2016) and the mouth hooks of hungry larvae. This ethos of connectivity is of pivotal importance: as we will see in the next sections, it engenders an embodied relationality that not only connects bodies and socioecologies together, but that fosters also the transformation of life and non-life to reproduce them both. The inside of bodies depends on their outside; eaters, as such, take up the responsibility of making the world move through them (Mol 2021: 49).

Flies do indeed work, and not just through cheese<sup>113</sup>. Their masticating sews tapestries; their bodies grow disembodied brains of connectivities. Most of them are unpleasant, if not lethal: think about *Clostridium Botulinum* getting carried by flies to larvae, and from larvae to cheese and human guts. Still, all of them biologically connect flies, sheep, shepherds, plants, microbes (the list may go on) to one another through a red string with physically embodied consequences. Fly life processes get weaved into cheese and then humans, as both cheese and larvae weave human bodies in return. Plant echoes reaching human tongues through sheep bodies and microbial communities, human keepsakes reaching chicken beaks through flies and larvae: the environment was never a place; it always has been a perspective. Myiasis, as one of the processes that show the constant overlapping of eaters and eaten, is thus an excellent starting point from which to reflect on metabolic justice—its “perils and promises” (Chao et al. 2022).

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<sup>113</sup> Or, following the reasoning on human and nonhuman work I was making in a previous note, I could say they *don’t* work: it is indeed reductionist to focus on flies only when they are on cheese, thus reducing their role as service-providers for the shepherds.

Flies have lessons to offer us still. For this reason, the next section will deal with another companion fly species whose reproductive processes, contrary to *P. Casei*'s, require them to make tasty mammals—both human and nonhuman—their preys.



*Fig 26*

*This multispecies kiss, while being extremely cute, probably happened because the sheep was searching for her missing lamb, killed by the shepherd some half-hour before. In any case, interspecies proximity, and even care, is something you can witness fairly often in sheepfolds where nonhumans are relatively free to roam around.*

### 3. Becoming food together. More-than-human flocks and their tiny predators

It is a sunny, warm day in Funtanalba's *sartu*: the looming plateaus around Matteo's sheepfold seem almost to shimmer under the golden hue of a March's sun, and the wind is far hotter than one would expect given the season and altitude. It has been a fairly tiring day. Due to some gaps in the enclosures around the land, some of Matteo's donkeys had run away: we had to find and close the gap by walking all around the borders, carrying heavy tools on our shoulders up and down from steep, rocky hills. Now Matteo is milking sheep, albeit it is already late in the morning for it. The rusty stable where they are kept was left with its big, metal doors opened, and the sun is filtering through walls and hay, drying and warming the whole place amidst bleating sheep and jumping lambs. As soon as I hear a sheep sneezing, something clicks in my mind and I promptly ask Matteo if he ever happened to find small worms in their noses. He instantly turns his head towards me, eyes wide open, expressing something I had yet to see on Matteo's face. It is fear, unmistakably. «Why do you ask this?!» (inf. 16/01/24)<sup>114</sup>, he says with the tone of someone suddenly realizing imminent danger, eyes darting all around his flock. In more than twelve months of fieldwork, I have never seen such expression on Matteo's face, and it never happened again. I tell him the truth: I chatted with an entomologist friend who, knowing my interest in insects and sheepfolds, advised me to look into a very special fly that shepherds may have met in their lives. *Oestrus Ovis* is their biological name, but in Sardinian, they call it

*sa musca de ghettai* (the throwing fly)<sup>115</sup>, which is the worst thing – I think – for a shepherd, when they go...they go...when the shepherd gets them. When they get on him. She goes to your eyes, or your throat, or the nose even, it is a fly who sprays the

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<sup>114</sup> All subsequent interactions in this ethnographic section, when not otherwise specified, have been audio-recorded on 16/01/24.

<sup>115</sup> Identifying *sa musca de ghettai* with *O. Ovis* was not straightforward, and has been a nice exercise in ethnobiology. First, I had to study *O. Ovis*' most evident symptoms in humans and non-humans, then I had to translate them into practical examples that could ring some bells in my fieldwork friends' heads. Then, as Sardinian, differently from Italian, is not pronounced as it is written, I had to compare their own spelling of this fly's name (originally pronounced as “*sa musc'è 'ttai*”) with other subregional spellings, coming to the conclusion that Matteo and others were referring to what is generally known in Sardinian as *sa musca de ghettai*, and that *sa musca de ghettai* is indeed identical with *O. Ovis*. I thank prof. Marilena Marconi for suggesting me to inquire into *O. Ovis*, and prof. Francesco Bachis for helping me identifying the original subregional spellings with the biological taxon.

little worms when...when you are milking, when...usually, when you are with sheep. Eh...one thing I can tell you, the first time it...it happened to me, one time – we were in a sheepfold where shepherds were, and goat-herders, there were sheep...we had sheep, but another goat-herder was also there. A great goat-herder. And what happened? I was milking, [I was] 14 year-old, something like that. I was all alone that day, not even my dad was there. And I felt this thing going down my eye. And there was this little fountain we used to wash ourselves, in the countryside, so I go to that fountain and start washing my face...and then this goat-herder comes, he told me “*itta tenisi?!*”, what do you have? And I told him “eh, a holm oak leaf must have gotten on my eye, because I have it shut”. “*Nooo*”, he told me, “go immediately! Run immediately in the village because this is *sa musca de ghettai*, you run and have the worms removed!”. I *start*, from there, maybe it was a couple of kilometres away, I go down [the mountains] running until I reach the village [...]. Running, until I got in Funtanalba! I ran, at the time I was young [giggling], in any case I immediately arrive in the village, [so I went] to this neighbour’s house, she was herself a goat-herder’s wife, and she was amazing at pulling out...[she said] instantly, “come! Come! Sit here”, and she sat me under the sun, the sun had to hit you, if it hit you in the eye it was easy to see [the maggots], besides she [the fly’s larvae] tends to start walking as soon as the sun hits her. And [this woman] pulled them all out, one by one, with a...with a leather strip, because she slides it [near your eyes] and [the maggot] grapples to the strip. And she cleans it with a towel, and then starts searching for the others. She put on her small glasses, *as soon as* [the maggot] *passed* she hit lightly, she had a great hand, didn’t she?! As soon as she saw it, *tac!* She lightly touched your eye and she did it, she grabbed them. It was needed; it had to be a *quick* thing before the eye got swollen.

The situation he found himself in was one typical of *sa komunella*: shepherds and goat-herders got together and helped each other in milking and watching over cattle, often alternating between those who were in the countryside and those who stayed in the village, to rest and prepare the food supplies for the sheepfold’s pantry. This is a self-evident example of the moral economy engendering the circulation of goods and support (*ajudu torrau*, mutual help) between families. However, this tale adds a further element to such circulation: the practice of ethnomedicine, specifically through the application of local knowledge on how to care for myiasis. More importantly for the discussion at hand, it qualifies *sa musca de ghettai* as intimately known, and deeply feared, not just by shepherds but by the whole community in Funtanalba: as the other shepherd mentioned its name, Matteo instantly ran away to reach Funtanalba, as if he knew what he was talking about. The symptoms of their infestation are, in fact, famously harsh. As Matteo

continues, even if the larvae were removed, the eye would nevertheless get swollen, but

at least you didn't have the trouble of...the trouble.

A: Of these worms...?

M: Of these worms walking in your eye, it's not that... [he giggles sourly]. That is one case. But then, [the fly] can...it can spray your eye, or it sprays – it sprays the little worms in your nose, or in your mouth. If it sprays them in your nose, it gives such an effect...erm...it's *devastating*. It makes you – for 20 days, one month of...well, of suffering. It really...if [the worm] goes into your throat, it starts nibbling it [putting his hand in front of his mouth with thumb and index facing forwards while arching them and snapping them, mimicking a bite], grappling to it – it feels like it's *grappling* to it [turning his nose in disgust], do you understand?! And you can't...you can do anything. The only solution is [to use] just a little olive oil, which drowns it I think, just a little oil, it probably makes it slip and it can't [grapple] – but as soon as the effect wears off it starts grappling to your throat *again*...ah [turning his nose]...it's too ugly of a thing, it takes – some 20 days, it depends on how many [larvae] it sprays inside of you. The last time I got it...now, as an adult, it lasted...eh, it lasted one month. I didn't know if I had asthma, I didn't...*really*...it got me – because it creates a ton of...eh, alterations, do you understand me, this thing [I just described], it alters everything, it – it can also give you fever. It depends, there are more delicate people, less delicate people, but...it makes you go crazy. And shepherds sometimes, usually, when they were milking, they used to put...well, sometimes they smoked a cigarette. In this way, the smoke [helped] a little...they putted a cigarette in their mouths so that...or a little piece of wood, eeh...and [the fly] sprayed there. In any case these tiny worms seek instantly for humidity, so if [the fly] sprays there [pointing to his lower eyelid], *off they go!* They run inside to – they dive-bomb [moving his index towards the back of his head], do you understand, they go in humid places. And it is the same for the mouth. They go towards the throat. When [the flies] spray [one's] nose, they usually manage to go in the throat too. And then it becomes [opening his palms and lifting them near his ears while shaking his head] – the head becomes...boh, what can I tell you, [it becomes] like a balloon, you don't understand anything [...].

A: And can't physicians...

M: *No!* Mmm... [pausing] now I've heard that there is...ah, yes, ivermectin<sup>116</sup>, which is a...a medicine...but I don't think it is the case to...in any case it is some kind of poison, they give it to sheep to kill all parasites, can you imagine, you put that in your throat, I don't know...but I believe someone does it. Someone puts one drop of it and says that...it is something I've heard lately, they say that – but I don't know...

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<sup>116</sup> Upon subsequent research, I suspect Matteo was here referring to ivermectin, a drug employed in the treatment of sheep oestrosis (Gracia *et al.* 2019: 96).

A: You never did it, is this what you're saying?

M: *No!* I don't know to what extent, well, it is a right thing to do.

A: Well, seems reasonable enough. You would still be drinking poison, wouldn't you?

M: Fuck, it's still poison, it may be one drop, they say "it probably does nothing to you", but what do you know. It's still poison in any case. They use it *to deworm animals*, eh [...]. [Physicians, on the other hand], they give you something, but it's all a play, it doesn't do shit, it does nothing.

A: What is it? Is it like, some kind of antibiotic?

M: Eh, they give you something, but it doesn't... [he puffs] something to make it a little lighter, but it doesn't...it's nothing. *No!* There is no medicine. *There is no medicine!* [...] I was 14 years-old back then, now I am [past my sixties], how many years have passed? 50 years have passed? Eh...it means there is nothing, it doesn't exist one thing [to cure it]. It doesn't exist. You have to keep it nice and warm [laughing], hoping that it doesn't damage something!

I wasn't expecting the reaction Matteo had: his fear conveyed an undesired yet extremely tight closeness with this aggressive critter. Entomologists know *O. Ovis* flies as parasites of sheep and goats, as their larvae need to infest their noses, mouths, and throats to develop (see Scala *et al.* 2002: 652). Their ways of reproduction, in any case, are incredibly fierce and smart.

To reproduce, the «female fly deposits larvae in or around the nostrils of the host sheep» (*ibidem*), reaching up to 500 first instar (first-stage larvae) sprayed during her lifespan (Gracia *et al.* 2019: 92). Individual sheep have been observed hosting up to 86 larvae in their cavities (Scala *et al.* 2002: 654). In this way, the «newly deposited first instars enter the nasal cavity and attach to the mucous membranes. Later they migrate to the frontal sinuses before molting into second instars» (*ibidem*: 652). Then, they move again towards the frontal or maxillary sinuses to mature into third instars, and then «reenter the nasal cavity before exiting the host to pupate under the soil» (*ibid.*). Amidst all this crawling, there is also a great deal of eating. *O. Ovis* larvae feeding methods are similar to *P. Casei*'s: they secrete enzymes that facilitate the external digestion of their host's upper mucosal substrate (Gracia *et al.* 2019: 92)—they start to digest their food well before they start to chew. Thus, as a result of oestrosis, hosts experience «severe clinical signs including rhinitis, frequent sneezing, nasal discharge,

breathing difficulty and emaciation» (*ibidem*: 91)<sup>117</sup>. The head of the larvae's host, whether human or nonhuman, essentially becomes a mucous and oftentimes purulent and bloody mess that third instars employ to reach their final stage of development: as they get propelled out by their host's sneezes, coughs, and fluids, they reach the ground to pupate, and become adult flies ready to emerge from the soil, group together and copulate to produce the next generation of first instars (Zumpt 1965; Gracia *et al.* 2019: 93). Growing fly larvae also partake in a dance with unclear rhythms: few stage-three larvae develop at the same time, and the larvae's slowed development allows for parsimony, avoiding the overcrowding of the host's cavities. This rhythm makes it so that, in most cases, hosts will show a great deal of stage-one larvae, fewer stage-two, and even fewer of the chunky stage-three, that take up a lot of space (more than 20 times bigger than the 1mm-long stage-ones) as they prepare to get expelled, complete their life cycle and reach their last stage of development (Zumpt 1965; Gracia *et al.* 2019: 92-93). One can only wonder which kind of chemical pathway sets the rhythm of these lives moulting in stages; but in doing so, one can not avoid seeing a pulsating pattern that is of life itself—nodes and pulses, chaotic yet orderly blips that emerge from a dense field that is life itself (cf. Rose 2022). Insects are tidy examples of how life acts on the macroscopic scale of animals: gifting and consumption, becoming meat and becoming ancestral (*ibidem*).

The interesting fact is that, as *O. Ovis* larvae reach this stage and emerge as flies from the ground, their new fully-formed bodies lack functional oral mouthparts: at this stage, they are completely unable to feed (Gracia *et al.* 2019: 92fig.1). This means that the mucous insides of vertebrate animals are the sole food intake they will ever get: they feed on humans and nonhumans to grow and transform numerous times, only to reach a final stage where sex, and more generally reproduction, is all that matters. We call them flies, but really the fly stage represents only a small fraction of *O. Ovis*' lifespan. For the vast majority of their lives, they are what we call larvae, and it is as larvae that they are able to take in and metabolize their surroundings to grow and survive. When they finally turn

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<sup>117</sup> In this case, the quoted study refers specifically to ovine hosts. However, if we are to believe Matteo's words, human symptoms are hardly dissimilar, except maybe for emaciation. It must be clarified, in any case, that nonhumans suffering of oestrosis may even die as a result of the interlocking consequences of the infestation – reduced grazing and general malnutrition, lung abscesses and, for heavily infested hosts, even ataxia and vertigo (Gracia *et al.* 2019: 96). The worst symptoms observed in humans, on the other hand, is mucopurulent conjunctivitis (*ibidem*: 97).

into flies, it is but a last exploit of life, their newfound form but a vessel for life's attempt to reach continuance. We define *O. Ovis* for its last stage of life, and the briefest nonetheless, in which they exist for a handful of days only to secure the next generation of larvae—and, probably, to finally enjoy sex, as at least male flies have been observed to find a great deal of pleasure in it (Zer-Krispil *et al.* 2018)<sup>118</sup>. Mortal beings all participate in the giftings of life: the life that is received, the life that is created, and the life that gets bequeathed (Rose 2011). *O. Ovis* also follows this fundamental rule, even if its ways may be stricter than mammals'. As larvae, they can only receive life, and all their attempts are towards continuing to eat, grow, and transform. At this stage, they *cannot* create life, nor can they bequeath it, lest they slip from their unfortunate host's nose to be picked up by some bird. They can only eat. Pleasure may play a great role here too: flies have been observed to have a gut-brain feedback loop that grants them serotonin when they successfully feed, and the better the food, the more serotonin they get (Schoofs *et al.* 2024). Larvae may become happy with a full belly. They become so happy in fact that researchers suggested serotonin may play a role in hardwiring living creatures (mammals included) to complete specific motor functions essential to their survival, such as swallowing food (*ibidem*). Life trains life to perpetuate itself.

In any case, creating life is an exclusive aspect of their last stage, when they mature into flies and stop being able to feed. In their crazed rebirth, once-hungry larvae change their appetites. They can chew no more, ingest no more, metabolize no more. They can receive no more. The time of taking has passed; now it is the time of giving. Thus, as they crawl back from below the soil with only some days of life left, they urge to meet and have sex, and to deposit their younglings into new unfortunate hosts, so that they may continue the chewing and eating, the moulding and sleeping, the loving and the dying. Maybe it is for good, after all, that we call them flies, not larvae, or worms: in this way, we qualify *O. Ovis* by the stage of their life in which they gift themselves, rather than the one in which they consume others.

There is a strange wisdom in the flies' ways. It is one of parsimony and crazed consumption, one of feasting hard on their more-than-human companions, and of giving themselves back through ungodly amounts of eggs and tasty bodies, brimming with nutrients that soon enough will nourish others. *O. Ovis*'s last form

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<sup>118</sup> The quoted study was conducted on a different species of fly, called *Drosophila*.

exists only to give back what has taken away, and to grant continuance to the taking and the giving. They hastily participate in consumption, both as subjects and objects, and thus put into embodied action a process that grants life its own reproduction. In this way, they show how life forms emerge as pulses (cf. Rose 2022), shimmering centres of conversion of life, non-life, and death. The wisdom of the flies implies to consume with the same regard with which one is consumed; to know you are entitled the world just as much as the world is entitled to you; and to never forget you are never the only eater—and that for the eating to keep going, one has to make space for the hunger of others.

I will return to this wisdom in the conclusion of this work. However, before exploring the metabolic relationality *O. Ovis*'s larvae engender, I would like to return on the question about nonhuman predators as moral actors. How do we define bot flies and myiasis—do we define them at all? Is it moral, for flies, to devour their living hosts from their insides? This sounds like a rhetorical question, and in part it is: of course, it would be hard to argue that flies are immoral. But if our answer is yes, I would like to hear the motivations, and how much they entail a strict separation between humans and nature—which, in its essence, it is hard to disentangle from human exceptionalism and speciesism themselves. This is one reason why killing and eating are not sufficient reasons to simply tag local practices as unethical. We cannot dismiss any killing as fundamentally bad; we cannot consider any killing as rightful either. This is why metabolic relationality is a better key to understand relations of eating and being eaten between creatures in local environments. To start framing it, it will be better to return to Matteo's words, as he describes the unexpected multispecies alliances that may emerge from the mammals' fear of this fly. As we keep discussing, I remember that he mentioned the fact that he got infested less frequently as he grew older, so I ask:

but weren't you saying that it happened more often when you were a kid?

M: Yes, yes, when you're younger you're less attentive. Then, you didn't have [surgical] masks back then, people didn't use glasses, eeheh...

A: And you didn't even smoke [laughing]!

M: [Smiling] yes, I didn't smoke cigarettes...eeeh...well, the elders were more...they were more attentive, eh! Let's say, they knew it [the fly], my father had his hat, as [the fly] passed he noticed instantly, if it was...if there was the fly, do you understand? As the fly passed he instantly knew it, he used to grab his hat and...squish it. Sometimes he killed six of them, or seven... [laughs] [...]. He instantly

saw it! Because in any case it flaps around, it's a little slow eh, for a...it is not a fast fly. It is a little slow, it either lands somewhere or goes around, so [when my father] entered [the stable], he checked thoroughly [mimicking an attentive glance with eyes darting all around], like this, then when he got near the sheep he grabbed his hat and *bom!* And he killed it. But even he got them [was infested]! Even if he was attentive. Instead, I tell you – instead, *the goat*, in any case, the goat, they...they mark it, they make you understand where it is! *The goat is* [with a bright smile]...the goat is so scared [... that] it starts [doing]: *prrrr-prrrr*, making these ugly noises, and stomping feet on the ground upon seeing [the fly] [...]. Eh, when there are goats, when they act like this it means that there is *sa musca de ghettai*. Eh. Eeeh. The dog instead, the dog doesn't [know about this fly]! The dog, when it is passing, he catches it [clenching his fist as if catching something mid-air, laughing], and chews it with...he catches it! And as he crushes it, he remains *all summer* with this *ccchrrr-ccchrrr...*

One interesting thing I've learned by studying these critters is that oestrosis is considered a collective pathology, «usually affecting a high number of individuals in the flock and this aspect differentiates it from the main upper respiratory tracts pathologies, which are more commonly individual» (Gracia *et al.* 2019: 96). This definition is extremely prudent, as often good biological definitions are. However, oestrosis affects so much more than just individuals inside a flock. Sheep and goats compose different flocks, and yet they may share pasture and stable space from time to time, the same space sheep share with shepherds and their dogs. This pathology does not simply affect flocks: it affects entire more-than-human assemblages, linking together at least four different mammal species gravitating around sheepfolds and pastures. And while the epidemiological features of this parasitosis are yet partially unclear<sup>119</sup>, it is already considered a zoonosis in scientific literature (Scala *et al.* 2002: 652): medical entomologists are very aware of the possibility of dogs (Lucientes *et al.* 1997), farmers, and tourists (Tamponi *et al.* 2022) to be infested with *O. Ovis* larvae. Sardinia, then, is an especially critical spot in Italy, as 58.2% of conjunctival myiasis in the past was reported to happen here (Pampiglione in Scala *et al.* 2002: 652). Humans, sheep, goat, dog: they are all food for *O. Ovis*, and they all know it and fear it (except, apparently, for jolly dogs), to the point that goats enact interspecies communication as a defence mechanism of the entire (more-than-goat) flock. Thus, *O. Ovis* and its parasitism allows us to see flocks as a multispecies collective bound together by feeding

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<sup>119</sup> For an epidemiological study of sheep oestrosis in Sardinia, see Scala *et al.* 2001.

relations that are never unidirectional. Goats<sup>120</sup> train shepherds into recognizing *O. Ovis*'s presence for the best interest of all mammals involved, engendering an unexpected alliance between companion species that help each other, take advantage of each other, or are just commensal with each other. Commensality does not come just from eating together here: in this case, it is being eaten together that makes these mammals companions. But commensality goes both ways: shepherds, who are food for flies, inevitably share their own dish with them—they both eat the sheep and goats that, in turn, try to communicate the danger to shepherds for their own interest, but to the advantage of the entire flock.

Furthermore, as Matteo testified (12/05/2025), such infestation was even more ubiquitous when he was a kid, and the common use of the land was employed: as land boundaries were not marked, shepherds had to constantly follow sheep and thus used to milk them later in the morning—when the temperature was hotter, and thus the possibilities for parasitosis were greater. This testifies the socioecological scope of labour formations, and helps me relativize the detrimental impact that privatization had in Barbagia: commons had their problems too, and they emerged as well from the naturalcultural adjustment between humans and nonhumans, society and nature—from the peculiar more-than-human relationality engendered by the common use of the land.

In any case, as I will show in the next section, such relationality engenders a process of mutual nourishment between species: by partaking in the processes of eating and being eaten, individuals nourish themselves, their species, their ecological niche, and the very possibility for such broader process of mutual nourishment to keep expanding and folding unto itself. This is what I will aim to show through the concept of metabolic justice which, in turn, may be our best bet against the Capitalocene and its metabolic rifts.

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<sup>120</sup> The behaviors Matteo described are well documented, see as ex. Gracia *et al.* 2019: 93-94.



Fig 27

*Free-range shepherding inherently entails multispecies proximity. Food, as well as pathologies, are easily shared. Here, la Vigilessa (“the She-cop”), one shepherding dog, is happily bringing back sheep from pastures.*

#### 4. Mutual nourishment. Of coloured foods and metabolic justice.

While the concept of metabolism has already been employed in cultural anthropology to tackle the interconnectedness of living and social systems (Malinowski 1944: 91; Bateson 2000: 409), and in medical anthropology to observe obesity in India (Solomon 2018), its casting in terms of (in)justice has been recently conceived by anthropologist Sophie Chao (2023) during her ethnographic research among the Marind people of West Papua<sup>121</sup>. This population has, in recent years, seen the unstoppable rise of state-mandated monocrop plantations that, in the eyes of the institutions, serve as a means to “modernize” Papua New Guinea. As a consequence, Marind people witnessed the progressive shrinking of their forest, and thus their increasing inability to feed from what they call forest foods, substituted with the ever-growing presence of

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<sup>121</sup> Recently, it has also been employed to analyse sheep fetuses employment in experimental contexts, cf. Thompson 2024.

rice, instant noodles, snacks and fizzy drinks—something they call, in turn, plastic foods (Chao 2019; 2022a). As I have introduced in chapter I, the category of “plastic v. real food” is culturally ubiquitous. Furthermore, as I have argued in chapter II, food is able to intergenerationally change the organic conditions of its metabolization, so that differences in diet may very well result in embodied transformations both ontogenetically and phylogenetically. However, beyond the health of individuals and individual species, such transformation is also able to change the metabolic conditions in which whole more-than-human assemblages flow and transform. It is for this reason that Marind see hunger «as a human experience but also an attribute of cash crops, material infrastructures, state and corporate actors, and diffuse regimes of capitalist power. Its meaning and morality vary depending as much on what is eaten as who is eating» (2019: 3).

As I showed in the first chapter, my fieldwork friends also attach moral values to foods and food circulation: as food and its production are bound in a close net of inter-familial and intra-village moral economies, practices such as *su cumbidu* (“the invitation”, the offering of food/wine) effectively weave, reinforce or sever social ties and the mutual help they entail. Similarly, «withholding food constitutes an important means through which Marind communicate their discontent to others, who in turn must find ways to remedy the underlying conflict or dispute» (*ibidem*: 5). It could be argued that any food may be charged with symbolic value and thus inserted into webs of moral economies, and that would be true, at least partially. As we have seen, monetary and non-monetary values often overlap in Barbagia: the village’s bar is a perfectly fitting example of that. Still, as I hope to have shown sufficiently, while money itself can be and is indeed included in local moral economies, its proxying features have cascading effects on those social ties: while practices such *ajudu torrau* rely on the continuation of indeterminate debts that keep generating themselves, money produces precise debts that are needed to survive in market economies. Most importantly, by proxying foods and labour, it de-attaches values from local ecologies, so that survival is not granted by local ties of mutual help in producing and distributing food, but by either state-mandate institutions or private companies. This is the nexus where metabolisms show their relatedness: human structures literally coming to craft more-than-human bodies and communities. It is then for both moral and biological reasons that Marind distinguish between “good” and “bad”

hungers: good hunger for forest food is being increasingly substituted by bad hungers, for money, plastic foods, and even one's own kin's flesh (*ibid.*). Thus, «[u]nlike the reciprocal and morally valued forms of consumption animating forest foodways, the hunger for flesh and money together entail a destructive and uni-directional form of consumption» (*ibid.*: 8)—one in which humans symbolically feed off each other while abandoning forests and their mutually nourishing ecologies.

However, Chao adds a further nuance on plastic foods and their socio-environmental effects. This nuance will help me in linking moral economies, food production, and metabolic justice together. As she writes, the experience of satiety for Marind

also encompasses the nourishment that they themselves provide for their other-than-human kin. For instance, the sweat of villagers sustains the growth of vegetation when it comes into contact with branches, leaves, and twigs. Human blood becomes fodder for hematophagous critters such as leeches and mosquitos. Hunters intentionally scatter fruit, nuts, and sago at the site where they capture their game, in exchange for the life of the animal taken. A portion equivalent to an adult male's intake is always left behind for animals, usually left atop a mound of soil or wrapped in banana leaves. Marind continue to nourish their other-than-human kin after their death when their bodies are buried in the forest and decompose to feed the soil, its plants, fungi, lichen, and insects, as well as the mammals, reptiles, and birds that prey upon these organisms (*ibid.*: 4).

As we have seen with local practices of animal killing and butchering, preparing to eat someone inevitably entails making someone else eat: Francesco scattered the inedible parts of a lamb all around him, explicitly calling on cats, while both he and Matteo used to leave dead nonhumans in *su sartu* (the wilderness), as their death was understood to nourish a broader set of nonhumans such as eagles and foxes. These nonhumans thus appear as both enemies and companions: as Matteo was lamenting before, their feeding activities often come to the detriment of the “poor shepherd”, who is nevertheless ready to accept, albeit with sourness, that their lambs may become preys. At the same time, scattering their organs all around means both to appease the predators' hunger and to nourish a broader lifeway: to have free-range sheep means to accept this risk, while keeping together the inexorably severing threads of a withering world. The very fact that shepherds and

goat-herders such as Matteo and Francesco are willing to accept this risk, rather than seeing their animals enclosed, attests their attempt at keeping alive not themselves nor their flock, but the assemblage producing bodies, relations and environments. Their labour is bound to nourish others, and they are more than willing to accept it, as nourishing others is what keeps them living the life they value. For this reason, to accept with sourness that animals are free to die means to accept that animals, both human and nonhuman, are also free to live. It is important to stress that, for both the Marind people and the shepherds in Barbagia, the considerations about mutual nourishment in local ecologies are fundamentally interwoven with local lifeways and, most importantly, local discourses around humans, nature, and extra-nature: the ancestral relations Marind people entertain with forest creatures is inextricable from their desire of becoming “good food”. Similarly, as I will show in this and the next chapter, the local understanding of metabolic justice is profoundly tied with local notions of gift and debt.

In any case, while they produce food for others or themselves, shepherds too constantly become food for other beings. Being immersed in a complex, harsh environment, means to be exposed to bleeding, sweating, falling, spitting and breaking, not to mention becoming food for ticks, fleas, and bot flies. Thus, shepherds are constantly bound in a process of becoming food-for-others *while* producing food for their kin: it is again a process of mutual nourishment in which eaters and eaten con-fuse each other. Sheep eat grass and shrubs that get transformed into milk for their kin; their milk is then appropriated by the shepherd and transformed by mediating its becoming-food for microbial communities. Then, as cheese starts to age, shepherds also mediate the flies’ hungers, as they lay their eggs and their maggots digest Pecorino to transform it into *su casu martzu*. Then, as shepherds offer food to other species in order to have their own food, both they and their flocks may be chewed by bot flies: in this way, both sheep producing milk for their kin and shepherds producing cheese for theirs would be transformed into food-for-others *as* they transform living or non-living matter into food for themselves. To be the eater or eaten would thus be not a matter of actions, but of perspective. No one eats to avoid being eaten. Quite the contrary: everyone eats and can’t avoid being eaten in return. Everyone eats *in order to* be able to become food (Plumwood 2008), and in order to have food one *must* also become food, as

one's nourishment depends on the nourishment of others. Becoming food then is not necessarily an event bound in time (say, the moment in which the zebra gets predated by the lion): to the contrary, and for the vast majority of the time, living creatures become food for other beings by the sole fact of being alive and immersed in an environment. Life is leaky: creatures can't help nourishing other life as they ingest, breathe, and excrete. Creatures become food far more often while living than after death. They are enmeshed in a mutual mastication that Chao (2023) would call metabolic relationality.

As an expression of more-than-human metabolic justice, becoming food for others thus entails participating in chains of eaten and being eaten within a more-than-human spectrum whose collective wellbeing depends upon the ability of every organism to inhabit and shift across multiple and interlinked subjectivities – as feeder, fed, and food (*ibidem*).

Such relationality thus signals a process of mutual nourishment between species, one in which the ability of each singular species to either feed or become food is enmeshed in a spectrum of eaten and eaters (*ibid.*) that is greater than the sum of its parts. By partaking in the processes of eating and being eaten, individuals nourish themselves, their species, their ecological niche, and the very possibility for such broader process of mutual nourishment to keep expanding and folding unto itself. Here, Rose's concepts of death and double-death come in handy again. As she explains in the context of dingo poisoning as a means of State-mandated pest control, poisoned baits made so that «death itself was perverted, since an animal that had been poisoned would become food for other animals and would poison them as well» (2011: 87). Thus, she described poisoned baits as instigating waves of death in which the very possibility for death to be masticated back towards life was threatened (*ibidem*). In processes of extermination and extinction, and especially amidst the sixth mass extinction brought about by the Capitalocene's cascading effects, life possibilities, «for all of us, become fewer because life is being deprived of future generations» (*ibid.*: 106)<sup>122</sup>. For this reason, Rose's call to ethics does not ask us to stop killing, but to start nourishing, for «[t]o live in the world, to live in connectivity, is always to be living in proximity

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<sup>122</sup> Or, as Kohn writes, «there are many kinds and scales of death. There are many ways in which we cease being selves to ourselves and each other. There are many ways of being pulled out of a relation and many occasions where we turn a blind eye to and even kill a relation» (2013: 18).

to death as well as to life, to cause death as well as to nurture life» (*ibid.*: 142). Living beings are «always enmeshed in a shared moral domain that is dedicated to life's becoming» (*ibid.*: 87): in Rose's paradigm of connectivity, the moral compass does not centre itself on individuals nor species; rather, it is solidly anchored to life's becoming—that is, the connectivity that binds living creatures together through processes of both killing and nourishing, of grabbing and letting go. Killing and eating may be either good or bad: the actions themselves matter far less than their impacts on the possibility for life to keep coming forth.

Thus, as creatures masticate, they *get* masticated too. This is true not only in a literal sense, as I have shown with the examples of hungry flies and foxes. Here, Margaret Lock's situated biologies (Niewöhner, Lock 2018) come in handy again. Let me trace back for a moment. As I showed in chapter II, her reading of epigenetics makes it so that the environment can no more be treated as a background acting on human bodies: to talk about the environment is to assume a perspective according to which other entities can be said to be environment. Thus, carrots act as environmental pathways for lamb gene expression, while lambs act as environmental pathways for carrot gene expression, and both mediate epigenetic, cascading effects in humans. We may take this reasoning further, stepping away from biology to plunge into non-life's domain: water, soil and lamb are environment to humans, as humans, soil and lambs are environment to water. Connectivity does not leave non-life outside, but joins it in the loving embrace between life and death. What this means is that life's becoming is closely bound with mutual nourishment and metabolic relationality: for life to keep coming forth, creatures must keep masticating and getting masticated, where mastication may or may not include literal predation: it is moulding and absorbing (and their passive), but not necessarily through eating. The biosphere itself emerged through its own moulding, enacting self-creating loops: Earth's biota regulated chemicals in the atmosphere, mean temperatures of the planet, ocean salinity and PH (Rose 2022: 131). «The effect is that life itself has been working to create the biosphere so that it is favourable towards its own thriving. These circular, synergistic, life-giving relationships are thought by some scientists to call for a concept of 'active fitting', meaning that biosphere's parts are patterned and (in the long term) synergistic» (*ibidem*: 131). As a result, creatures masticating here ripple through life's becoming, influencing creaturely mastication there.

«Animals and minerals, plants and animals, and photoautotrophs and chemoheterotrophs are exstimates – each is external to the other only if the scale of our perception is confined to the skin» (Povinelli 2016: 42). In this way, the metabolic relationality engendering patterns that craft and interweave life with non-life offers us a stimulating question: what if life was a byproduct of metabolism, and not the other way around? If metabolisms precede individual lives, that means that individual lives emerge from chains of mutual nourishment and, thus, the birth of individual bodies is allowed by the metabolic justice preserving the system. This, as I will show in the conclusion of this work, is a pivotal point: in a world where ethics precede individual lives (Rose 2022: 65), justice and biology are difficult to disentangle.

However, what happens when the processes of mutual nourishment, enacting a degree of metabolic justice in a local environment, get jeopardized, and indeed interrupted? Here is where the concepts of metabolic justice and the metabolic rift become relevant. As Chao writes,

To frame justice in metabolic terms draws attention to the dynamics of absorption, ingestion, and transformation that alternately sustain or undermine organismic wellbeing across individuals and collectives. As a distributed mode of connection, metabolism brings into the fold the bodies of the eaters – their organs, cells, and tissues – and the bodies of those eaten – the plants, animals, and ecosystems whose own metabolic activity makes food for humans possible. It conjures an embodied process, distributed across foods, environments, and bodies that are themselves historically constituted, socially shaped, symbolically charged, and affectively mediated (2023).

These dynamics of absorption, ingestion, and transformation are what mutual nourishment entails: beyond literal acts of mastication between individuals, more-than-human collectives maintain themselves through their very metabolic relationality, in which the transformation of living and non-living matter answers to always locally positioned selves and collectives. This is why, as Anna Tsing writes, plantations could work only through extreme control. «[T]hey remove the love» (2012: 148), and to remove the love means to remove the mutual dependency between creatures feeding off each other—it means to remove connectivity for the means of accumulation. This is the embodied process Chao hints to when framing metabolic justice: mutual nourishment rests on the

possibility for living matter to keep being transformed into non-life, and is the very process shaping the emergence of situated bodies in situated environments. Thus, when regimes of massive extraction start to take place, the metabolic relationality between creatures and non-creatures gets shaken, and starts withering. Intense cultivation jeopardizes the way in which grass metabolizes cobalt, so that sheep become unable to take it up from plants; sheep, in turn, become prey for others (Krzywoszynska 2020: 240-241), and thus local socioenvironmental conditions start to ripple through ecosystems of living and non-living entities. This is at the heart of the current ecological unravelling: a disruption of the metabolic relationality masticating life and non-life in local ecologies and, thus, a regime of metabolic injustice in which racialized, politicized bodies are disallowed to feed from and become feed for their environment so that other bodies may take in and consume to their heart's content. This is the creation of wastable people and places that engenders Marco Armiero's Wasteocene (2021), and that is at the very basis of what political economists Ulrich Brand and Markus Wissen (2021) call "the Imperial Mode of Living".

To reflect on metabolic justice means then to recognize a process that is embodied yet collective, one that has already been hinted to in shepherding contexts. Philosopher Vinciane Despret and ecologist Michel Meuret (2016) coined the term cosmoecology to account for the naturalcultural modifications brought about by more-than-human flocks in France. They start their investigation in the 1960s, when processes similar to those I showed for Barbagia happened in France also: rational fenced grazing, cultivated grasslands, selective breeding for more efficient animals were all measures implemented to see a steep increase in meat and milk production. However, just thirty years later, this system broke down. Lamb prices dropped considerably while feed price for livestock increased dramatically. It wasn't economically sustainable. Thus, «[b]reeders went back to the practices of herding, and sheep went back to hills and mountains, to rediscover cheap grasslands, abandoned fields, scrubby rangeland, and undergrowth» (*ibidem*: 29). However, neither humans nor sheep had any idea of how all of that worked. Shepherds had to learn how to herd and lead the flock and how to indicate edible foods to their companions; sheep, in turn, had to get accustomed to a much wider and complex world. Shepherds slowly started to feel and talk as parts of their flocks: they «did not become sheep, but they did begin to

talk with them and for them—they became with them, and they now form a flock» (*ibid.*: 31). This is another way of seeing flocks as more-than-sheep: a flock is not just a collection of sheep, nor a simple juxtaposition of people and sheep. Rather, it is an integrated whole that is greater than the sum of its parts, and engenders a co-becoming binding humans and sheep together, but also the environment which they both masticate and get masticated by.



*Fig 28*

*The daily task of taking sheep to pastures connects more-than-human attentiveness to the environment – searching for food, or inedible plants, or places to sit and rest, or sings of the passing of other agencies, both human and nonhuman.*

A flock is «a consistent entity. To achieve that consistency, each member would transmit, generation after generation, the places where they sleep, where they eat,

where they drink, where they find shelter [...]. In this way, the flock is a memory of the land» (*ibid.*: 33). We have seen this with Matteo pointing towards empty hills and abandoned sheepfolds, remembering about lost ponds and forgotten paths into the wilderness. I showed this in his words, when he told me that back when he was a kid, it was sheep who used to decide where sheepfolds had to be built, not shepherds or concrete roads. This is why he looked with sourness at the dead sheep his son and I found: to lose future care means to lose connection with the memory of the land and, conterminously, to see the withering of the possibility for that memory to become future still. A missing member may not impact the flock, just as a missing remembrance may not impact memory as a whole. But as members start to become fewer and fewer, those who remain are lessened (see Rose 2011). An entire lifeway, for both humans and nonhumans, becomes ever paler as absences pile up. This is why Despret and Meuret think about extinction not by starting from species, but from worlds: it «begins when the world to which an animal was associated is reduced to nothing, or almost nothing [...] when the ways he or she makes a world exist, according to the ways his or her ancestors had created it, have disappeared» (Despret, Meuret 2016: 28-29). This is what Elizabeth Povinelli considers meta-extinction, occurring «when Life itself become extinct» (2016: 176; cf. also Hatley 2022). Extinction, meta-extinction, double death: these are all terms that consider Non-Life, instead of Death, as the opposite of Life. They account for the fact that Life cannot be found if not in the metabolic mastication of living creatures, in their diuturnal, partial transformation into food. In doing so, they acknowledge the pivotal role death has in ecologies. Extinction is not Death's family member; it is a relative of Absence instead. Matteo's words become clearer now, as he states that *because* shepherds are disallowed to kill, those species participating in the shepherding assemblage end up starving. He knows that being a shepherd means so much more than milking and feeding sheep. He knows about the metabolic relationality engendered by more-than-human flocks, and he knows that such relationality is what keeps him living the life he values. The shepherd swears as he notices a lamb was taken by foxes. But the looming realization that eagles are not soaring in their skies anymore is far more preoccupying to him. Death was never a worry. Absence is.

Thus, no shepherd, in France or Sardinia, would consider their role as reducible to the issue of lamb weight. «To make them beautiful, yes – they

mentioned this often. No one talked about kilos but, rather, about beauty [...]. To eat, and to raise sheep for eating, was not just about producing meat; it was, rather, part of a larger crafting of beautiful relations» (*ibid.*: 32). This is in no way a naïve take on shepherding: the point is not that shepherds do not think about profits but, rather, that profit-thinking is itself sewn into a broader set of ethical and practical frameworks that fundamentally alters it. As beauty is part of one's survival, that is where cosmoecologies reveal themselves also as *cosmoeconomies*. As beautiful relations get masticated by land, that is when a cosmoecology emerges:

During the period when sheep were largely kept confined, many of the sites they had previously used disappeared, becoming developed, overgrown, or inaccessible. As lands lost their meaning for the sheep, the meanings they had with the sheep, these lands lost some of their ways of being, some of their modes of existence. The memory of the flock, in some ways, gives to the land a part of its existence. By the concrete memory of the mouths, the eyes, the guts, the bodies, the legs, and the feet, the flock multiplies the ways lands, paths, bushes, springs, and rocks exist (*ibid.*: 33).

Hence, the shepherds' aim to create something beautiful ends up contributing to the emergence of a precise more-than-human assemblage: wolves returned to pastures soon after the flocks, and wildfires were reduced drastically. At the same time, boars were not so happy to have less forest vegetation in which to hide from hunters, and wild birds, already threatened by many predators, likely wept for their lost eggs crushed by sheep hooves (*ibid.*: 34). Scale, as death and its double, are again relevant here. As long as deaths are able to get masticated back into life, they contribute to life's becoming. In this way, Despret and Meuret compose a call to ethics that grounds itself into «attentiveness to the infinite ways of being affected and of affecting, where no one may know ahead of time the affects one is capable of or the kinds of forces and entities that will constitute landscapes and worlds with us» (*ibid.*: 35). The authors offer yet another take on metabolic relationality and mutual nourishment: it is through mouths, eyes and guts that sheep compose the world, and compose with the world, and it is through the power of being obligated by others that worlds emerge. This is one way to link metabolism with justice: more-than-human collectives compose worlds through each other; local moral economies mediating food production and sheep agency into choosing foods are equal parts of this metabolization. Care and killing play an equal role in this dense expanse, as care may very well kill relations, whereas killing

may allow them to continue (Kohn 2013: 218; cf. also Mol 2021: 103). Creatures emerge from processes of mutual mastication between the living and non-living, between symbolic and material stuff, and the ways in which such mastication happens matter for interspecific and environmental reproduction. Mutual absorption and transformations are preconditions to forms and individuals – not the other way around.

Bodies, souls, pastures, steppes, cosmos, humans, sheep, dogs, horses, gazelles, and wolves are entangled in a net that connects the sky and the earth: ecology and cosmology are knotted in a common story, forming a cosmoecology of multiple beings, gods, animals, humans, living, and dead, each bearing the consequences of the others' ways of living and dying (*ibid.*: 25).

The net Despret and Meuret talk about is what I mean by mutual nourishment: living and non-living things move, emerge and transform through each other, and this process joins molecules with species, gods with organisms. Furthermore, as I argued elsewhere (Guglielmo 2023), the underlying, metabolic functioning of cosmoecologies—the mutual nourishment masticating matter and creatures—is at work in any context: cosmologies and ecologies always join up together. Let us think about pigeons and gulls, who take advantage from urban configurations to the point of proliferating uncontrollably, obliging cities such as Rome or Venice to adopt policies to limit their spread. To the contrary, the extreme fragmentation of Australian spaces caused by the expansion of industries and agro-industries transformed them into «islands of starvation» (Rose 2012: 110) for flying foxes, who are unable to find flowers and vegetation to feed properly. Flying-foxes love the Myrtaceae plants with whom they coevolved, but «the clearing of native vegetation and its replacement with commercial fruit crops has left them little choice but to go for the fruit. Evidence shows that the level of crop damage correlates with extinguished native foods» (Rose 2022: 168). Plants, in turn, find their capability of reproducing threatened by the absence of flying foxes, as their mammal companions die in the cities' heat, or starve to death, or experience multiple miscarriages of unknown origins (Rose 2012: 110; 2022: 162-165). Habitat loss, persecution, and climate change interlock to harm flying foxes, and harm done to flying foxes ripples through the Australian ecosystem (Rose 2022: 43). «On the one hand humans were building their homes in areas that attracted

cooling breezes. On the other hand, flying-foxes were being driven out of areas where they had once been safe» (*ibidem*: 162), and this is the process that joins cosmologies and ecologies, as this framework was introduced by precise humans, that is, settler Europeans with their own ideas about the world and their place in it. As a result, during the heatwaves that affected Sidney in 2013, 15.000 flying-foxes died in just a handful of days (*ibid.*).

The notions of mutual nourishment, metabolic relationality, and cosmoecology are all necessary steps to frame metabolic justice in the context of the Capitalocene, as it allows us to

interrogate critically what powerful forces dictate what goes into which bodies, what counts as food, when food means life, and who or what becomes the eater and eaten. It demands that we center impurity and non-innocence as defining factors of contemporary food systems and attendant regimes of nutritional structural violence. And it calls on us to collectively fashion foodways that are grounded in the premise and promise of more-than-human metabolic justice (Chao 2023).

When we turn towards the powers dictating what goes into which bodies, we are drawn towards plantations and intensive animal farming, in which the metabolic relationality of creatures is progressively severed to maximize production, and metabolism is specifically targeted for fast growth, fast deaths, and quick profits (see Landecker 2023). We are equally drawn to global economic structures of racialized violence that sever people from their land, substituting their dependency from kin and land with dependency from markets and institutions, who start to enforce regimes of industrialized feeding for both humans and nonhumans not to reproduce life, but to further accumulation. Thus, Chao frames «extractive colonial capitalism itself as a form of out-of-control, self-destructive metabolism, driven by the logic of limitless growth and inequitably distributed surplus» (*ibidem*). In this way, metabolic justice can be read both as a feature of socioecologies and as an epistemic frame. As a socioecological feature, metabolic justice is a product of mutual nourishment, the constant mastication of bodies that makes embodied life come forth. It emerges as a consequence of the balancing between creatures constantly feeding and becoming food for others through metabolic relationality. Conterminously, metabolic justice may also be employed as an epistemic frame to assess the capacity of a local socioecology to reproduce itself.

When Annemarie Mol tried to frame eating as a form of relating and kinship-making, she turned her gaze towards those nonhumans one does not eat directly, but are «nevertheless implicated by my eating» (2021: 104) as competitors – they were competing for the same resources, but also as casualties – those whose death was a byproduct of nonhuman farming, whether animal or plant. «It is possible to say that our relations boil down to a fight. But here is the problem: I may win and win again. But taking without giving is erosive to all life. Hence, if at first the loss is only theirs, in the end it is also mine» (*ibidem*). It is an elegantly simple concept:

[w]e fight over food and I win. However, if I keep winning, and winning again, in the end I am left alone. For my winning does not just harm those who are defeated. It also harms those that depend on the defeated, as well as those that depend on them, and so forth. Hence, if the human eating *I* keeps taking without giving, receiving without caring in return, then, via the detour of all kinds of cycles, mediations, and spirals, at some point, it will be game over. [...]if the *I* destroys the conditions of possibility on which countless others depend for their life, this is inevitably self-destructive too (*ibid.*: 124)<sup>123</sup>.

The Capitalocene is, in fact, defined by the disruption of the metabolic processes sustaining life on Earth: we have seen this with pasteurization and the loss of relationality in sheep lives, but the same effect was mirrored in shepherds' lifeways; cheese and pig fats changed in sync with more-than-human bodies and socioecologies. Industrial farming requires precise control, while free-range shepherding *relies* on unpredictability: in this way, the first disregards natural processes of regeneration, while the second directly depends on them, and thus has to ensure their reproduction. Double death comes in handy again here: when extractivism takes hold on living and non-living entities, their metabolic relationality is jeopardized, and thus the capacity of the whole system to reproduce itself is progressively weakened. This is what the concept of the metabolic rift entails, and why metabolic justice may be an excellent bridge between environmental anthropology, multispecies ethnography, and political ecology. Let us start by looking into the concept of the metabolic rift.

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<sup>123</sup> Rose found a similar reasoning while discussing colonial conquest with her Yarralin interlocutors in Australia: «when the cost of winning is disablement, everybody loses» (2000: 191).

## 5. Metabolic rifts and methodological pluralism

Framing capitalism as engendering a global metabolic rift is a project with deep intellectual roots—so deep that one could dedicate an entire work only to trace the evolutions of this concept. The thought of Karl Marx is historically central to it, but it has been reinterpreted, rediscovered and reimagined multiple times since. Without any pretence of being exhaustive, scholars such Georg Lukács (1975), Paul Burkett (1999) and John Bellamy Foster (1999, 2000) further developed Marx's own concept of metabolism (*Stoffwechsel*), so that by the late 1990s metabolism rose to be considered a conceptual star by some (Fischer-Kowalksi 1997), leading to the contemporary emergence of both a monist (see as ex. Moore 2000, 2016a, 2017) and a dualist approach (see as ex. Saito 2020, 2021, 2022).

The works of Justus von Liebig, a German chemist who looked into plant absorption and large-scale agriculture, and his theory of metabolism, probably played a great role in Marx's own theory of metabolism. It was in fact Liebig who showed how essential nutrients for plants, such as phosphorus and potash, are «limited in terms of their naturally occurring quantities in the soil because the weathering process that disperses these inorganic substances [...] takes quite a long time» (Saito 2022: 24.). He wrote about respecting a law of replenishment, and decried modern extractive agriculture for aiming solely at the maximisation of short-term profits, which made it so that nutrients were extracted with no regards for their future replenishment (*ibidem*: 24-25)<sup>124</sup>. Notwithstanding their opposite philosophical approaches, I believe contemporary scholars would all agree that, in its most essential and historically faithful description, the «metabolic rift is the material disruption of cyclical processes in natural metabolism under the regime of capital» (*ibid.*: 24). As a concept, it «illuminates the rupture in nutrient cycling between the country and the city in historical capitalism» (Moore 2000: 124),

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<sup>124</sup> As Landecker points out, the word *Stoffwechsel* «refers more narrowly to the chemical process of nitrogen turnover in muscular tissues than does the later term *metabolism*, which has come to encompass many more substances, tissues, organisms and processes. Only after the end of the nineteenth century and after a synthesis of input-output physiology, cell theory, and fermentation studies (enzymology) in the rise of the new discipline of biochemistry is *Stoffwechsel* typically translated into English as *metabolism*. The word *metabolism* does not occur in English translations of Marx until the twentieth century. Marx could not have had the broader biochemical understanding of metabolism in mind that contemporary authors tend to read back into his work» (2023: 79n.1; cf. also 2016).

according to which food produced in the countryside was amassed into cities, and its waste was never returned to the soil. Thus, «[n]utrients were pumped out of one ecosystem in the periphery and transferred to another in the core» (*ibidem*; see also Saito 2022: 181). In this way, the «subjugation of the natural cycle that exists prior to and independently of the formation of the capitalist cycle ultimately disrupts and destroys the universal metabolism of nature» (Saito 2022: 22). Unfortunately, this is where the agreements end<sup>125</sup>, at least for two of the major contemporary scholars arguing about metabolic rift.

According to Kohei Saito, Marx maintained “labour” as the mediator of a certain metabolism between humans and nature: humans, in any circumstance, have to transform their surroundings in order to survive; they do so through labour; labour thus constitutes a pathway for the metabolic transformation of natural elements into means for survival and reproduction. This is an existential condition for humans: they «can never escape from being a part of the ‘universal metabolism of nature’» (*ibidem*: 19). However capitalism, «driven by the insatiable desire for profit-making and constantly increas[ing] the productive capacity» (*ibid.*: 21), «inevitably creates a great chasm in these [metabolic] processes and threatens both human and non-human beings» (*ibid.*: 23). He argues that the

environmental problem emerges precisely because natural laws exist objectively and independently of social ones, and because a particular way of organizing social metabolism based on the massive consumption of fossil fuels greatly diverges – that is, creates a ‘rift’ – from the conditions of sustainable production prescribed by nature’s biophysical processes (*ibid.*: 123).

Taken as it is, this view is hardly debatable. However, Saito agrees with Marx in maintaining metabolism as an interface between humans and nature – a strategy he calls “methodological dualism” – to the point of being convinced that «we cannot conclude [...] that nature is ‘built’ as a social construct» (*ibid.*: 108). As he writes, the «social and the natural are deeply intertwined in reality, and pristine nature does not exist anymore [*sic*], but it is nonetheless necessary to distinguish between

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<sup>125</sup> Things are, of course, much more nuanced than that, as Moore reminds us that although «metabolic *rift* today is widely understood as a metaphor of separation, the original argument [by J. B. Foster] seemed to suggest something different: rift as *reconfiguration and shift*» (2017: 296).

the social and the natural analytically» (*ibid.*: 249)<sup>126</sup>. However, as a wealth of anthropological literature demonstrates, “Nature” itself is an extremely rare concept for humans, if we do not look at demographic relevance, but at cultural distribution: very few cultures, historically speaking, had a concept of nature as we understand it<sup>127</sup>. Still, Saito holds that

Marx emphasized the *uniqueness of human metabolism with nature compared with that of other animals*. This is not necessarily outdated anthropocentrism. Since Marx insists that only human labour under certain social relations produces *value*, the category of value in Marxian economics is inevitably anthropocentric (2022: 120, emphasis added).

This is because the «production of value is tied to commodity production, and Marx argued that ‘private labour’ as a unique form of social division of labour necessitates the category of value» (*ibidem*: 121). Thus, Marx contended «that not all human labour produces value, distinguishing productive from unproductive labour» (*ibid.*). For this reason, «[o]nly private labour produces value and provides the products of labour with an economic form determined as the commodity [...]. Compared to non-capitalist societies, value brings about an historically specific dynamic of social and natural metabolism» (*ibid.*). This view, however, simply employs dualism to ascribe “non-capitalist societies” and their labour to Nature. It says: “pre-capitalistic (read: ‘natural’) humans have a good relation with nature, capitalists (read: ‘artificial humans’) don’t”, because “natural humans” don’t think about abstract value, but about use-value<sup>128</sup>.

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<sup>126</sup> To Moore, this reasoning is caught in a profound contradiction which he calls a «double yes» (2017: 292): «[a]re humans part of nature? Yes. Can we analyse human organizations as if they are independent of nature? Yes» (*ibidem*). While I don’t see an inherent problem with this double yes – if we are to argue for methodological pluralism, we could also stretch towards non-western ways of deploying logic, which may hold the principle of non-contradiction as more or less relevant – I am still convinced that, in the perspective I am deploying here at least, a loosely monist approach is more fruitful. But then again, my analysis is focused on the socioecological ripples and echoes between humans and nonhumans, nature and society: such perspective is not the “most true” nor the “most important” – it is just a way of (ad)ressing the problem.

<sup>127</sup> Here, it may be important to stress how evolutionary concepts of human cultures have long been abandoned by anthropology: cultures do not “evolve” neatly as species do, and thus the validity and usefulness of a given cultural theory has to be evaluated case by case, and always in connection with the broader cultural horizon in which it emerges. Thus, it is not that our concept of “nature” is more evolved or refined than others – it is simply useful to our culturally defined ends.

<sup>128</sup> See as ex. p. 21: «Capitalism is driven by the insatiable desire for profit-making and constantly increases the productive capacity. In contrast, pre-capitalist societies production was conducted for the sake of satisfying concrete [*sic*] needs, and correspondingly the aim of production was use-values tied to the fulfilment of finite wants». As I hoped to have shown through this work, the

Furthermore, it is difficult to empirically defend the idea that somehow human metabolism with nature is ontologically different from the rest of all the metabolisms that all and any species engender with their environment. What makes sparrows and jellyfishes so similar to one another, but all so dramatically different from humans<sup>129</sup>? Have we thoroughly investigated each nonhuman-environment metabolism to come to that conclusion? If that was the case, why are we considering dyadic relations (humans-world; sheep-world...), and not, say, groups of species? Why is human-to-nature more important than, say, human-to-tick-to-nature? Even more importantly, I ask: who are these pre-capitalistic humans, and how do they see the world? Are they the same humans he sees as «aiming to overcome what *they have created themselves*» (*ibid.*: 124, emphasis added), that is, the contemporary ecological collapse? These people look dangerously similar to that same *Anthropos* implied in the concept of Anthropocene—a universalizing and thus homogenising concept that he himself recognizes as erasing both the responsibilities of rich people in the Global North and the unequal effects on poor people in the Global South (Saito 2022; see also Barca 2020). If repairing the Anthropocene is an exclusively “human affair”, I ask, about which humans are we talking about? To which one method should they all subscribe—and who would be tasked to explaining it to them? Furthermore, is the Anthropocene an exclusively human affair at all? One could say it surely is, in that it was created by (some) humans—but what about its reparation? I believe the solution, as I will try to show below, rests in the hands of the forces of reproduction—those more-than-human subjects all fundamentally opposed to Master narratives (cf. Barca 2022).

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situation is hardly so clear-cut. Societies may show different degrees of integration and/or subaltern acceptance of capitalist modes of production, to the point that it becomes difficult to draw a line where capitalism starts and “traditional culture” ends, especially because such things do not exist in themselves. “Abstract” and “concrete” needs are addressed in both capitalistic and non-capitalistic societies; even more importantly, there is no such hard distinction between these two types of society. This is of course not to say that there are no self-evident differences between, say, lifeways in rural Nepal and lifeways in New-York; however, it is commonly much more a matter of shades than it is of neatly-packaged colours.

<sup>129</sup> I am not stating here that there is absolutely no difference in human and beaver dams; however, granting epistemic primacy to such difference tends to overshadow all the other differences, similarities, and investigative routes. Furthermore, if we hold that *all* humans *inherently* disrupt, while beavers don’t, we are again recurring «to a view of nature as pristine and essentially ahistorical, one in which human use is impossible to distinguish from capitalist formation» (Moore 2017: 299). Or worse, we are reproducing the colonial logic of considering some humans as “natural”, and some others as “artificial”, “cultural”, or whatever the term we want to use to justify how Nature is inherently different from Society, and especially Capitalism – we are thus falling once again the trap of cultural reductionism and metaphysical flattening.

While Saito attempts to show Marx's interest in what he calls "pre-capitalistic" societies, he glosses over how his approach thoroughly ignores cultural specificities. In his view, Marx «attempted to carefully study each [sic] society in order to discern how the contradictions between the universal law of capitalist development and its particular constellation» create both a «degradation of the conditions of sustainable human metabolic interaction with nature» and a «possible rupture with the capitalist system» (Saito 2022: 192). Thus, Marx called for the need of «Western society [...] to learn from non-Western societies and integrate the new principle of a steady-state economy» (*ibid.*: 208). I admit I am a little envious of Marx, as he was apparently able to pull off what no ethnographer would dare to even dream of—*carefully* studying *each* human society. But while a steady economy and a sustainable reproduction were taken for granted for those non-Western societies<sup>130</sup>, Saito glosses over the cultural environments that allowed for such sustainable reproduction, and quickly resorts to dualism instead. This operation is dangerously close to a form of cherry-picking of indigenous sciences that would reproduce those colonial powers benefitting our vision (and ordering) of the world. We take what we need (a pragmatic system to sustain our life on this planet) and leave aside all the rest (that folk chit-chat about spirits, nonhuman agency, ancestors, and dreamings). What about spirits? Where do they fit in Marx's acknowledgment of the merits of "non-Western" societies? What about African sorcery, what about shamanism in the Amazon? Do we just rob Sardinian shepherds of their past commons, glossing over their invocations to God Almighty to free their animals from parasites, their consideration of flies as cheesemakers, or of nonhumans as workers? Here I join Elizabeth Povinelli (2021: 35) in asking: do Indigenous people have a right to make their view the norm? Or is it their role to simply «attach a small spigot in the larger pipeline of late liberal approaches to geontology» (*ibidem*)—or, for what is worth, on our practical, empirical, and epistemological tools? We need caution in choosing the tools with which we want to "change the world" (see Saito 2022.: 122). Are they the usual, colonial tools of ordering the world (of others), top to bottom? Are they the same

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<sup>130</sup> I am not convinced that is the case. Not only sustainable reproduction occurred fairly often for people in the West (see the commoners in England or Sardinia): unsustainable development could arise also from non-Western societies (see ancient imperialisms, constantly needing new lands and people to enslave).

tools through which the masters taught us that Land was just land, so that they could extract (indeed, *create*) more value?

On the other end of the metabolic spectrum we find Jason Moore, who contends that metabolism «is not an exchange between quasi-independent objects (Nature/Society) but rather a process of life-making within the web of life» (2017: 288). Such an approach, he holds, does not blur «the specificity of ‘social’ relations» (*ibidem*: 289), but rather helps us to better grasp their specificities. In his view, we cannot fully understand, say, modern racism, without resorting to discussing the conquest of the Americas and the creation of sugar cane plantations, which ferociously produced «biogeographical transformations» (*ibid.*). Similarly, the Industrial Revolution «cannot be reduced to ‘coal’ and ‘colonies’» (*ibid.*: 302): such transformations were instead «bundled with (and within) nature at every turn» (*ibid.*), and with its social production through cataloguing (of both minerals and “natural humans”)—for this reason, «capitalism not only occupies, but produces, space» (*ibid.*: 307). He recognizes how the Cartesian divide had a pivotal role in shaping global capitalism, with innumerable, material-symbolic, cascading effects on naturecultures: «the transformation of landscapes, the restructuring of village and family life, the production of scientific knowledges, new cartographies and map consciousness, innovations in production and exchange, the emergence of new forms of state» (*ibid.*: 299). Even more, he sees global capitalism as inherently needing to expand its «capacity to appropriate uncaptialized natures—including unpaid human work» (*ibid.*). Thus, he contends, rift investigation today is heading towards a sterile ground:

[r]ather than follow part-whole movements in successive determinations and juxtapositions—through which the ‘whole’ in question (the Rift) undergoes qualitative transformations—Rift arguments have pursued a ‘general properties’ approach [...]. Rift arguments have morphed into a *generalizing narrative* governed by a general abstraction: ‘a disruption of the interchange between society and nature’ (*ibid.*: 301).

For this reason, while he accepts the metabolic rift on a descriptive level, he sees its power weakened when employed to universalize a particular moment (say, soil fertility and depletion) (*ibid.*: 305). Thus, he shows, agro-ecological fixes are plastic: a model that may work to illustrate English agricultural revolution may be completely inappropriate for describing the Dutch or the American revolution.

Thus, «the American agro-industrial revolution, as world-ecological fix, cannot be chalked up to differential fertility as such» (*ibid.*: 306), but must be observed at the intersection of interlocked, global revolutions that highlight how «‘soil’ and the organizational apparatus of ‘capital’ and ‘state’ were moments of a singular metabolism» (*ibid.*). Capitalism is thus inextricable from the web of life, as it produces it as much as it is produced by it (*ibid.*: 307): hence, Moore sees a much more fruitful approach to reconceptualize the metabolic rift «through capitalism’s *longue durée* reconfigurations of human and extra-human natures» (*ibid.*: 311), all propelled by and inherent to the web of life itself.

A singular metabolism underscores not society’s subsumption of nature but its opposite: the limited capacities of human organizations to control and dominate nature [...]. Marx and Engel’s argument about the urbanization of the countryside—a process unfolding through successive historical determinations—underscored how capitalism’s relations of production, class, and accumulation enter into specific geographical forms [...]. These historical-geographical crystallizations do not produce a social metabolism that subsequently confronts a natural metabolism; they are co-produced through a singular metabolism in which humans—and human organizations—participate. Metabolisms are always geographical. Capitalist relations move through, not upon, space, which is to say through, and not upon, nature as a whole (*ibid.*: 312-313).

By reading this work, it is probably clear that I am much closer to Moore’s view than to Saito’s: through the past chapters, I attempted to show how human and nonhuman bodies, environments, social organizations, food matters and more-than-human relations came to echo one another as a form of singular adaptation towards the deployment of capitalist modes of production. Some of these adaptations wholeheartedly embraced market exchange and private property; others came to violently challenge those same modes of production. Some of these adaptations produced positive effects, some of them were dramatically detrimental; but most of all, they were all interlocked shifts that fluidly and relationally adjusted to capitalism and to one another. HACCP hygiene procedures are bound with both public health and ecological biopower, and they may both save lives and erase the situatedness of bodies and their microbial variability. Even more importantly, human adaptations have no precedence over sheep adaptations, as well as the other way around: they are, all, simply echoing shifts

emerging through the changes in the web of life. Such changes are not happening in a vacuum: there are precise and identifiable, mostly human, powers that are today shaping the ecological collapse and the sixth mass extinction.

Thus, if Moore proposes metabolism as a singular entity, albeit «internally diverse and geographically uneven» (*ibid.*: 288), Saito proposes a methodological dualism contending that, while humans *are* part of nature, this epistemic stance leads to a generalization that hinders analysis. This is why I see metabolic justice as a cross-road concept, able to meet the specificities of both approaches without resorting either to universalization or dualism. Instead of accepting one methodological primacy, it invites a methodological pluralism: it positions itself strategically where it is useful for it to be positioned. In this way, it becomes possible to both pinpoint the global powers dictating famine and death in New Guinea, and to take seriously the Marind people's consideration of forest entities as *dema* (ancestors). Thus, methodological pluralism allows for culturally diverse perspectives while avoiding the universalistic traps that both relativism and universalism engender—the so-called God-trick of being everywhere without actually being anywhere (see Haraway 1991). Furthermore, it recentres the discussion towards justice, that is, ethics, but moulded to include a variety of actors, both human and nonhuman, whose voice are silenced, but who are disproportionately suffering the consequences of decisions taken far away from them, from powers as disinterested as unseen. It thus refocuses our arguments towards the embodied debt (Salleh 2009) we owe to those entities—what Stefania Barca (2020) calls the forces of reproduction, or those invisibilized subjects that make the reproduction of life possible today. This is how metabolic justice joins together environmental justice and political ecology: by acknowledging the agency of more-than-human assemblages and communities to embody and express sociopolitical inequalities and structural violence.

The metabolism I envision does not cause a rift between two neatly separated entities (*a là* Saito), nor is it a singular entity that makes any rift thinking necessarily awkward (*a là* Moore). Rather, it is more similar to a hole in a weaved tapestry: it is the severance of thousands of tiny strands that, when looked at from a particular scale, appear as a singular hole in a singular piece of cloth. The cloth (and the hole) does not exist *per se*—the cloth is a matter of perspective. This by no means makes the cloth irrelevant, or non-existent: it makes it a matter of

positioned objectivity (Haraway 1991). I am dressed in cloths, but cloths could be described in tens of different ways, each true from a particular perspective. I don't need to see the hole in my shirt as the severance of tiny strands to apply a hot patch on it; however, I might need to do so if I want to sew it back together. We can indeed observe the Rift as separating human and natural metabolism, *but that is not the only Rift*, nor the only one that matters. The Rift is also between human and human, between animals and nonlife, animals and animals, nonlife and nonlife. There is a Rift in the metabolic processes that allow life in the Global North while disallowing it in the Global South; there is a Rift between sheep and the minerals they are able to intake and metabolize; but it is also between sheep and their fox predators, or the scrubby vegetation they may or may not masticate. Finally, the Rift is also between nonlife and nonlife, as chemical discharge gets inserted and metabolized by Earth's systems, and industrial waste flows through dirt and rivers. This is why I struggle to understand why, according to Saito, we don't need monism, but we absolutely need methodological dualism (see as ex. 2022: 133 n.15). We don't need monism *per se*, but we don't *need* dualism either. Hammers and screwdrivers may be useful in completely different contexts, and they may both be completely useless if the task at hand is to iron clothes, rather than to fix a boiler. Thus, and for this very reason, if some approach is really needed, that is methodological pluralism—the ability to understand that hammers and screwdrivers may be good or bad tools, but never revelations into the true nature of reality. It is, to put it simply, the ability to remain humble in front of the irreducible complexity of the world, and to ask others what they think about such complexity. In this way, we may end up taking seriously both microscopes and ancestors, laughing-with and laughing-at both of them (see Bettini *et al.* 2024).

This is why I find Val Plumwood's philosophical animism to be a perfect fit for metabolic thinking and methodological pluralism: it is a term drawing «a stance that would take western peoples into the critical rethink she was calling for» (Rose 2013b: 96)—a rethinking of the mind/matter narrative through an ontoepistemic stance where «matter and mind are mutually informing» (*ibidem*: 95)<sup>131</sup>. Thus, she aimed at dispelling the cultural concept of the world's

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<sup>131</sup> Rose is quick to state how the category of animism, produced in early anthropological work, sought to «demonstrate an evolutionary hierarchy within the human family such that primitives could be defined in ways that radically distinguished them from civilised folks. It was, in short, another structure marked by hyperseparated dualism» (2013b: 96). It was, thus, a way to «denigrate and dismiss Indigenous knowledge» (*ibidem*) – who would ever think that “primitive

mindlessness «not through a logical account of mind, but through the experience of being one amongst many in a world already replete with mindfulness» (*ibid.*; 97). Her proposition is grounded on one hard anthropological fact, based on innumerable ethnographies—something our discipline found to be extremely widespread in Indigenous cultures: «that humans are one kind of person among many, that persons (of all types) are wilful, interactive, sociable and communicative» (*ibid.*: 99)<sup>132</sup>. Rose employs the example of the concept of country, developed by Australian Aboriginal people, in which birds are said to have their own ceremonies and, most of all, where all is culture, all is sentient, all is relational: «[c]ountry is both the context of life and the emergent result of life being lived. Country exists because of the living beings who participate in the life of country, and country flourishes through looped and tangled relationships» (*ibid.*: 100). It is a place where silenced entities speak and communicate intentions and stories, albeit never too clearly: earth may suggest paths to avoid broken legs (see *ibid.*: 105), or talk about its inhabitants through tracks and cracked twigs; goats may try to impose their will on you; cooked meat may “desire” more lard or salt; cheese may “want” a drier place to sit. In reality, as Povinelli reminds us, the question is not even whether geological and meteorological entities play a part in the unfolding of human life, as «[c]learly they already do, economically, politically, and socially. The question is what role has been assigned to them as they emerge from a low background hu, to making a demand on the political order» (Povinelli 2016: 142-143). To be on the inside of country (and one can never be outside of country) is «to know that one’s knowledge does not encompass all the others; to know that country exceeds the knowing of any given knower» (Rose 2013b: 104). Hence, I argue that it will be impossible to build a liveable world while excluding the knowledges that, for the vast majority, made the world liveable to us.

To be sure, I fully agree with Saito in considering how the process of enclosure of common lands

dissolved the commons, commodifying lands and expelling the people living on them. Nature was devastated after the expulsion from the land of peasants who had taken care of it. Capitalist farmers sought only short-term profit without taking good

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humans” could have anything useful to say, after all? For early anthropological categorizations of animism, see Tylor 1889; for contemporary views on it, see instead Harvey 2006.

<sup>132</sup> This is true also in the contexts of veterinary care, where flying fox caretakers address their companions as persons (Rose 2022: 53).

care of the soil. [...]he most fertile lands in Scotland were totally laid waste after the enclosure. These lands were actually intentionally left wasted for the sake of a more profitable usage [sport activities of rich people] [...]. Apparently, this transformation of land usage had an immense impact on the daily life of people in the countryside, as seen in the general impoverishment of people's living conditions through the second enclosure in the 18<sup>th</sup> century (2022: 223-224).

However, what I am trying to point out is how this process had many, interlocked effects even beyond the production of a subject, the landless city-worker, the peasant who lost access to the commons and «could not acquire basic cooking skills at home or during the festivals and ceremonies of the farming villages, where they were served free and luxurious meals» (*ibidem*). The immediate cause of the undoing of the commoners' social class was not simply economic exploitation and subalternity: according to Karl Polanyi «the disintegration of the cultural environment of the victim is then the cause of degradation» (2001: 164); «it lies in the lethal injury to the institutions in which his social existence is embodied» (*ibidem*)<sup>133</sup>. It derives that the true «catastrophe of the native community is a direct result of the rapid and violent disruption of the basic institutions of the victim» (*ibid.*: 167)<sup>134</sup>. It is of extreme importance, today, to remember these stories: «[l]oss of memory makes for a silent environment in which our struggles have little chance of success, confronted with the cacophony of paid-up media and political lies under military protection» (Federici 2019: 81). It is important to stress that the commoners of Europe were dispossessed into personal possession, as Povinelli puts it<sup>135</sup>. They were dispossessed of the commoning institutions that enabled the reproduction of their naturalcultural environment up to that point, and effectively tricked into private possession the way we understand it today. They were dispossessed of their symbolic horizon, their cosmologies: from there, to take away the lands also would have been a child's play. At the same time, the

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<sup>133</sup> He goes on to saying that «[t]he conditions of some native tribes in modern America carries an unmistakable resemblance to that of the English labouring class during the early years of the nineteenth century» (Polanyi 2001: 165).

<sup>134</sup> Polanyi is here describing predominantly sociocultural institutions. For example, «Indian masses in the second half of the nineteenth century did not die of hunger because they were exploited by Lancashire; they perished in large numbers because the Indian village community had been demolished» (2001: 165). However, as I hope I have shown sufficiently in the past chapter, it is easy to presume that the «Indian village community» did not die alone – a whole socioecological assemblage had to go with it.

<sup>135</sup> Povinelli discussed this idea in her seminar «Relational Ontologies|Relational Materializations» at our Laboratory of Social Anthropology (LAS), University of Milan (05/03/2025).

destruction of subjects paralleled that of their land uses. As Polanyi writes, «[t]he economic function is but one of many vital functions of land. It invests man's [sic] life with stability; it is the site of his habitation; it is a condition of his physical safety; it is the landscape and the seasons» (2001: 187); and yet, the transformation brought by capitalist markets *required* the disallowance of these function for profit maximisation. «Through land enclosures, these socioecological functions of soils were cleaved [...a]t the same time, land labour was cleaved from the reproduction of dwelt landscapes, and became linked with the reproduction of capital» (Krzywoszynska 2020: 233). At the same time, the enclosure of the commons disproportionately affected nonhumans also: animals can negotiate their position with the land's becomings, but not with private property – they can kick and disobey, but they cannot buy or fence lands, even when they are free to roam (Meijer 2019: 209). These effects did not take place in Nature because of Society: to the contrary, as I hope to have made clear through this work, more-than-human collectives plasticly moulded themselves, responding to each other, without questioning about any real or theoretical separation between human customs and pig fats: they were all reinforcing and echoing one another.

I showed these symptoms over the course of this work. The first, unforeseen effect was that, to create a subject, another subject had to be substituted, that same commoner. And, with them, a whole cultural horizon had to go away. This is something I tried to tackle in the first chapter, dialoguing with elder shepherds about habits lost to time. What did their worldview (and world-practice) look like, some two or three generations ago? The answer can never be singular, nor straightforward, as the answer about the subject that was created in the wake of such transformation. The commoners of Barbagia are not reducible to the commoners of England or Latin America. The way in which Marind people say that forest beings are ancestors (cf. Chao) does not neatly overlap with the way in which Karrabing people say that sacred sites are ancestors (cf. Povinelli), and neither of them is reducible to the way in which many shepherds told me they were “born of a sheep”. But at the cost of operating a gross generalization, I will say: probably, those subjects were not organizing the world in neatly separated categories; for sure, not all of them were. But still, always and inevitably, as indigeneity and belonging shifts, new cultural configurations get crafted, and older ones may be lost to track. My fieldwork friends have a clear sense of this, and as I

will try to show in the conclusion, they stubbornly try to get something to survive—be it a simple chit chat under the shade of a tree, or the lending of a tool to be returned later along with some wine and cheese attached.

The second effect was, as I tried to show in the second chapter, a transformation in the situated biologies of humans and nonhumans alike. Creatures came to embody socioecological transformations in both fat and pathogenicity, muscles and social relations, so that pig, sheep, goats, chickens, dogs, humans, they all changed the way in which they metabolize the world, as the world they were metabolizing started to change. It is only a matter of perspective if I started my investigation from cheese: food is one of the epigenetic pathways linking creatures and environments to one another, and thus represents a good starting point from which to follow the threads of changing multispecies bodies and microbial collectives. The production of the landless city-worker cannot be disentangled from their increasingly situated—or rather, globalized—biologies, nor can it be divorced from the industrialization of metabolism of nonhuman creatures caught in industrialized production.

The third effect was that, as biologies changed, so relations had to change<sup>136</sup>. Multispecies collectives had to adjust together to the changing bodies and moral economies: this is something I tried to show both in the third chapter, showing local practices of animal killing, and in this last chapter, by discussing multispecies connectivity as a matter of metabolism. We may even start from *Non-Life*: the

key to the massive expansion of capital was the discovery of a force of life in dead matter, or life in the remainders of life: namely, in coal and petroleum. Living fuel (human labour) was exponentially supplemented and often replaced by dead fuel (the carbon remainders of previously alive entities) even as the ethical problems of extracting life from life has been mitigated. Capitalism is an enormous smelter, shoveling into its furnace the living and the dead (Povinelli 2021: 167).

However, the smelting process not only dissolves materials onto one another: it also solidifies new ones, through new configurations and encounters. Bronze solidifies as copper and tin dissolve. Creatures constantly masticate and get masticated, they become food-for-others for the vast majority of their lives, after

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<sup>136</sup> At the cost of being repetitive, I will stress that the inverse is equally true: as relations changed, so biologies had to change.

death, and even as they are eating, or gathering, or preparing food, so that becoming-food emerges as one of the fundamental, and most importantly, constant processes by which life keeps coming forth. As this core, metabolic rule is transgressed, things start to unravel. And thread after thread, snap after snap, the whole tapestry becomes weaker, leading to a place where no «longer is life making and unmaking itself in country. The unmaking is taking over. Rather than death being turned back toward life, it is amplifying» (Rose 2011: 87). Humans and microbes, foods and relations—they are all adjusting together as a dense fluid. You cannot change pig fats and expect people to stay the same. You cannot amass life and require death not to react. You cannot fence lands and presume the rains will not respond<sup>137</sup>.

«[T]here is no one at a time. Rather, a reticulated web of interactions shaped by human social life knits together the sequelae of multiple interventions: the metabolites of excreted antidepressants in the waterways drive antimicrobial resistance, the fine particulate matter exhaled from the engines of the food supply chain suppresses human fertility» (Landecker 2024: 3).

Creatures take in the world, they transform it, and then they expel the waste. Most of the times, other, tinier creatures allow them to do so; but always and inevitably, both the waste and the body that get created by eating becomes food for other creatures. Hannah Landecker refers to something similar when she writes about anthropogenic biology, intended as «a set of phenomena consequent on the industrialized effort to control vital processes» (*ibid.*: 4) directly leading to «an Anthropocene of the cell as a distinctive sociohistorical domain» (*ibid.*: 6-7). This is not a situation where an overwhelmingly powerful structure, capitalism, simply messes up with organisms. As I argued before, the tapestry is able to respond:

plants are able to take your glyphosate and stuff it. The scale of biocidal death is answered by the scale of novel biocide metabolism. This does not mean that either plants or bio-burdened humans remain the same or persist unscathed or feel perfectly well. In fact, what grows back as the living aftermath of herbicides is historically and

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<sup>137</sup> See Povinelli 2021: 136, where she describes the changes in wind and fog that situate themselves «below technologically unmediated human modes of perception. But other modes of existence register these changes even if we do not»: emplaced ways of attending and listening are able to capture what meteorology can't, even if they are stretched ever more at the brink of extinction by the processes of subjectivation I described in the course of this work.

evolutionarily [...] different than in other historical periods, taking the specific form of an excrescence of modernity (*ibid.*: 12).

Landecker stresses how «the molecular biology of endocrine disruption does not nest within the global models of climate change; there is no neat micro-macrocosm mirroring» (*ibid.*: 22). But neat borders sit at the opposite spectrum of Rose's connectivity and Chao's metabolic justice: it is, instead, the very porosity of bodies and environments to allow such dynamics of contact, absorption, and excretion. If we agree with Karen Barad (2003), matter is not a passive background awaiting history and culture to shape it: it is instead responsible for its own process of materialization. Matter responds to history, and history has to adapt to matter. Maybe this point will become clearer and clearer, as the ecological unravelling deepens. But as matter responds, so foods and bodies communicate—if bodies are mindful (Schepher-Hughes 1987), meat and blood must be reminiscent at the very least. And as meat comes into contact with other meat, a kind of semiosis occur (see Kohn 2013): they share information about the world through microbes, molecules, genes, and hormones. Thus, such semiosis composes bodies and relations just as much as bodies and relations determine the emergence of both the meat that is metabolized and the meat that is metabolizing. In a way, this mutual reinforcement and communication is akin to Gregory Bateson's (1979) idea of the mind—a unified whole composed by a myriad of agents, both physical and symbolical, that situate themselves well beyond the boundaries of the individual brain. He offers the example of DDT proliferation: once a glorified product in industrial agriculture, now a ubiquitous threat as insects started to develop immunities, and the animals eating those insects started to die from poisoning (Bateson 2024: 414)—again, a materialization of the regimes of massified, human-made death that Rose (2011; 2022) called “double death”. Humans deploying chemicals, chemicals interacting with insect bodies, insect bodies that bridge poisoning to mammals, and then humans. In such a framework, the one who thinks—as the one who metabolizes and gets metabolized—is not “one” at all; rather, it is «this very system of reciprocally involved humans and nonhumans» (Mangiameli 2010: 41). Thus, metabolism can indeed be seen as preceding individual life: it is not the property of seemingly bounded organisms, but a non-scalable yet tightly nested set of relations between creatures—one that is able to

continuously mould its subjects, and to create the conditions for its own perpetration.

To be free to die, then, is to be free to become food-for-others—to return nourishment to the web that once sustained you. This is a good moment to return to Pratt’s (2019) reflections on becoming good food: if becoming-food is so fundamental, then regimes of structural intoxication extend their reach precisely through this process. Let us turn back for a moment to meet the vultures again. Like fly larvae, vultures mediate decay: they tend to the dead so that these bodies can become gifts for others. They package the meat-present, so to speak. However, as intensive breeding intensifies, biopolitical regimes disallowing nonhuman death start to take place: Diclofenac, an anti-inflammatory drug employed in intensive breeding, soaked meats and provoked unforeseen effects on vultures feeding off carcasses. Inflammation, painful swellings, renal failure, death: millions of vultures died because of Diclofenac, to the point that in India 95% of them have disappeared, making them an endangered species (Van Dooren 2011: 138; see also Moreno-Opo *et al.* 2021). Now, through the concepts of cosmoecology, metabolic justice, and relationality, it is easier to see the wider tragedy: as vultures disappear, which threads are severed? Where does the tapestry need to adjust—and will it be able to do so? Pack life all you want: death will soon respond. This is a semiotic process that occurs without a human audience, and between creatures<sup>138</sup> across the realms of the living, the nonliving, and the spiritual. The connectivity implied by metabolic justice perfectly shows how «nothing stands alone, everything, at pretty well every scale, depends on others through flows of energy and transformation» (Rose 2022: 13). Deborah Bird Rose employs the example of Australian Aboriginal tellers, «those who provide information» (2013b: 103): «[w]hen the cicadas sing, the figs are ripe and the turtles are fat» (*ibidem*); or «[w]hen the march flies bite, the crocodiles are laying their eggs» (*ibid.*). As she writes, «while march flies may not be telling us to dig croc eggs, any more than they may be telling crocs to lay their eggs, those who understand the teller and act on the message, are putting themselves into the story. They are interacting with the patterns of country, and so they too become part of the patterns» (*ibidem*: 104). Thus, «others do call, and [...] whether or not

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<sup>138</sup> Here it might be useful to stress again the use of the term “creature” I make here, which I draw from Deborah Bird Rose’s (2013a; 2022) account: it does not refer to a prior act of “creation”, but underlines instead their participation in a constant life-creating process.

these calls are specifically addressed to us (and most are not), many of them do indeed concern us» (Rose 2022: 65). Methodological pluralism challenges us to include those underrepresented voices that kept the world alive. Thus, recognizing mutual nourishment as a semiotic process between more-than-human, agentive entities, we open ourselves to completely different ways of understanding earth's patterns, and weave ourselves in them.

In this work, I started from elderly shepherds lamenting the changing of society, then moved to food and food production to show their mutually echoing and reinforcing effects. Severances in the social fabric mirrored and crafted those in local webs of lives and lifeways; conversely, the embodied modifications in both humans and nonhumans were echoed in the social fabric. Finally, I linked these changes through the concept of metabolic justice, trying to show it as a key tool to critically understand the ways in which global settler capitalism penetrates bodies and relations, inevitably spiralling down towards its own delayed phagocytising. In this way, through the concept of metabolic justice and methodological pluralism, I tried to rethink the metabolic rift, and to disentangle it from dualism. In this way, the Rift appears as a hole in a cloth, prospectively shifting from being a singular entity, and an emerging framework engendered by the weaving of innumerably plural threads. The cloth and the hole are both singular entities, but their severance takes place in the swarming relationality of thousands of strings. All of this is obvious to my fieldwork friends—scary, but obvious. So obvious and pervasive that they had to find something with which to survive. Theirs is the cunningness to tell when and where to talk and act; theirs is the generosity to keep life coming forth, unscathed by the many extinctions they witness daily (see Rose 2011: 141). This will be the last lesson my fieldwork friends will teach us, at least in the course of this work.



Fig 29

*Just outside one sheepfold, there is a scattered forest full of shrubbery where dead goats and sheep are thrown. It is not unusual, here, to encounter corpses or, as in this case, shiny-cleaned bones and skulls. Here, a goat skull rests on the grassfield; near it, some sheep feces lay and, from between it, the edible mushrooms locally called cardulinu 'e pezza (mushroom of meat) is sprouting, providing a splendid sum of mutual nourishment and metabolic relationality.*

## Conclusion

This work began through the ethnographic analysis of a dialogue between three elderly shepherds. Their words were chosen because they are highly representative of broader discourses around socioecological change in Barbagia. The same conversation has been repeated countless times, with different actors but in a similar tone.

Thus, I examined the notions local people draw on to understand and confront such change. Elderly shepherds, in particular, recognize a withering of their social fabric, which they describe as “becoming city-dwellers”—the rise of a sociopolitical and cultural subject with its own material-discursive practices. This shift is deeply connected to the spread of wage labour and, with it, the transformation of local moral economies, including their inter-familial dependencies and systems of circulating food.

Mutual reliance, in turn, was shown to spark an incomparable degree of social closeness. *Ajudu torrau* (returned help), for example, was described as a device to orchestrate common efforts towards individual needs, but for this very reason also to enliven the local social fabric, upon which each family depended. I showed the changing in the *feste* (feasts), the atomization of social relations and their increasing privatization in response to the commodification of feast days. Indeterminate debts were showed to be at the core of the surviving mutuality: through the exchange of food, work, money, and care, people keep themselves in a relation of constant indebtedness towards each other. The indeterminate nature of such debt makes it so that people are constantly indebted and, thus, in relation with each other—a relation that can never<sup>139</sup> be severed *precisely* because the debt is indeterminate. Hence, I showed the social centrality of what the anthropologist Gino Satta called «gifts without compensation» (2001: 122) or «unilateral gift» (*ibidem*: 145): people in Barbagia found a way to get things done and, conterminously, to reproduce the social fabric without the need for direct

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<sup>139</sup> At least, not without a dire cost for all the families involved. This means that the severance of a social tie is something to be taken extremely seriously in contexts such as Funtanalba.

compensation. The exchange of food is then the basis for personal and familial survival: Carole Counihan already observed that in 1984, when she found out how the Bosan community withered hand in hand with its autonomy in bread production. However, contrary to what she observed in Bosa, I tried to show how mutual help, indeterminate debts, and most importantly food sharing are still central to Funtanalba's economy of exchanges.

For this reason, I chose to focus on food production in the subsequent chapters to explain socioecological change. Thus, in the second chapter, I analyzed cheesemaking in Barbagia and how the change in productive methods amounted to a transformation of both environments, more-than-human bodies, and their social practices. I analysed pasteurization as an ecopolitical device, connecting more-than-human bodies and ecologies together. Through ruminating sheep and growing greens, I employed Matteo's words to exemplify how human, animal, and environmental health are understood to go hand in hand in Barbagia. This fact was then further specified through the description of changing habits and foods: I employed a traditional cheese, *sa casada*, to exemplify the connections between goat and human bodies in shepherding families, and how a peculiar assemblage of people, practices, and foods contributed to creating deeply local biologies for humans, nonhumans, and environments alike. Finally, zooming ever closer on food matter, I focused on the microbial changes brought about by the industrialization of food production. Thus, employing elements of epigenetics and microbiology, I tried to further highlight how foods, environments, and more-than-human bodies find themselves in a relation of constant, mutual reproduction: structures of mutual help, together with peculiar food production practices and peculiar food themselves, contribute to the expression of intensely localized bodies, which at the same time embody and express one another. Bodies, foods, and socioecologies were thus shown to re-produce one another.

Having dealt with two of the most produced goods, milk and cheese, I then turned towards the other, paradigmatic shepherding product: meat. Having employed multispecies ethnography as the primary data-collection method, and having been a vegetarian for eight years before starting my fieldwork in Barbagia, I had first to discuss how death and killing were made to make sense, by both my interlocutors and I. Thus, by employing the example of a mourning sheep, I discussed the possibility, for humans and nonhumans, to understand death; I then

turned to nonhuman corpse disposal and, finally, I told the story of a ram dying from food poisoning to offer an account of how shepherds themselves may understand both human and nonhuman death. These examples were used to produce an introductory stance towards ecological justice and multispecies ethics: by employing Deborah Bird Rose's (2011) paradigm of connectivity, I shifted the focus from individual to species, and from species to environments, contending that nonhuman killing can be deemed as always morally wrong only by applying speciesism, human exceptionalism, and metaphysical flattening—three gestures that fundamentally contributed to animal exploitation, environmental degradation, and more generally to Capitalocene itself. Thus, I aligned with Donna Haraway's (2008) proposition to stay in the open, when things are always and contextually questioned.

This ethical stance found itself reworked in the fourth and last chapter, where I employed the concepts of mutual nourishment, metabolic justice, and metabolic rift to address the current ecological unravelling: in this way, I showed how any environmental ethics cannot help but also be, and always, a political ecology in and of itself. I employed three separate examples of mutual nourishing: lamb predation by foxes; accidental human myiasis engendered by *P. Casei* larvae; and human-flock myiasis caused by *O. Ovis* larvae. These examples helped me in framing mutual nourishment and its metabolic relationality: generally speaking, living beings are constantly immersed in a process of becoming food-for-others, a process in which individual death is but a peak of this diuturnal gifting. Then, through the concept of cosmoecology, I tried to show how this mutual nourishment acts as a kind of semiosis between bodies and socioecologies: as meat meets meat to become new meat, individual, sociopolitical and environmental coordinates are transmitted through both the substances and how the individual body comes to metabolize them. Having framed mutual nourishment, I turned to metabolic justice: as bodies are massively disallowed to weave relations of mutual nourishment (plantation ecologies and animal farming are the best examples of this), the dynamics of ingestion, absorption, and discharge of both biological and inorganic matter change. This is true on both an individual and community level (let us think about the Marind and their forest) but also at the global scale: as settler extractive capitalism expands and tightens its grip, the socioecological dump becomes a function of the «safe and green neighbourhood» (Armiero 2021:

10), but as waste<sup>140</sup> piles up, anthropogenic change can only get worse. Thus, I turned towards the concept of the metabolic rift (Foster 2000; Moore 2017; Saito 2022), which seeks to pinpoint the capacity of capitalism to mess with earth's metabolic processes, bringing irreparable damage to both humans and the environment. In this section, I criticized a dualist approach to the Capitalocene, and offered methodological pluralism as a way out of epistemological isolation. More importantly, I underlined how it is impossible to cherry-pick social features of human communities, abstracting them from the cosmological and symbolical world they inhabit. What this means is that the industrialization of food production changed social structures, ecologies, and bodies, but produced also a new subject—the city-dweller that Francesco, Matteo, and Lucio discussed about in the first chapter. Thus, I demonstrated how methodological pluralism is not only a means to acknowledge that there are multiple ways of conceiving the world, but also a way to materially engage with different ontologies and explore the practical outcomes that emerge. Not only we need variegated tools: we also desperately need different subjects to operate those tools. We don't just need commons: we need commoners too<sup>141</sup>.

The next sections will be dedicated to finalizing my observations on the shepherding society of the Barbagia di Seulo, and what they can offer the world in terms of strategies to contrast, and indeed prevent, the ecological unravelling of Capitalocene. Thus, I will turn to ethnography for one last time, in order to offer a complete account of how Funtanalba's society survives amidst the contemporary socioecological changes.

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<sup>140</sup> Here, I use “waste” in the sense proposed by political ecologist Marco Armiero (2021): in his account, the term does not indicate waste as object as much as it indicates waste as a relation – “wasting relations” that settler societies entertain with their socioecological dumps, which include trash but also the necropolitics (Mbembe 2019) that separate people and spaces into those that can be wasted and those that need protection.

<sup>141</sup> I partly owe this reasoning to Elizabeth Povinelli, who discussed this idea in her seminar “Relational Ontologies|Relational Materializations” at our Laboratory of Social Anthropology (LAS), University of Milan (05/03/2025).

## 1. Sumptuous consumption. On food sovereignty and collective continuance

The last weeks of fieldwork came just as the whole village was preparing a *fiesta* (feast) for the local saint. During that day, the community was neatly divided: those attending mass, and those already preparing lunch behind a stone church outside of the village's boundaries, surrounded by thick greens and tall, lush trees. The anthropologist was with the shepherds, who happened into the second group<sup>142</sup>. In any case, the preparation of the *fiesta* required work for many days before: Francesco and I were occupied full-day with the preparations, sometimes helped by Matteo and other locals of various ages. I was extremely excited to take part in it, as that *fiesta* was not aimed at tourists—it was a local celebration that people traditionally took part in. No tourists, no stands to sell nuts and candies, just the people from Funtanalba getting together. This was my best occasion to observe how things function here when monetary transactions are not on the horizon. I have already discussed *feste* at length in the previous chapters, so the reader may be aware that the first thing one needs to consider is food. Particularly meat, as it is known how offering a supper without meat is taken as a sign of bad hospitality in Sardinia (see Satta 2001: 165-ss.). Hence, people got along to decide and organize: in the end, the choice fell on one of Matteo's sheep. After the killing and preliminary butchering, it was a matter of finding ways to properly preserve the meat until the lunch, that would happen the next day. Thus, Francesco had the idea of employing the village's butchery: we invited the butcher to eat with us, and asked her if she could store the meat and chop it up in smaller pieces for cooking a stew. She agreed to do so, but said she couldn't be there for our lunch, as she would have been out of the village. Then, it was a matter of preparing the actual feast. We had to go grab long, rough tables from someone's garage; we had to gather wine and chairs, gas bottles and cookware, wood and seasoning. We had to borrow tools and cars, especially, we needed to ask for a van to carry a whole, bar-sized fridge to cool wine and beers in the wilderness. All of this entailed the reproduction of relations of mutual help and respect, and the orchestrating of different actors,

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<sup>142</sup> The vast majority of shepherds I worked with were proud atheists; however, many told me that the peculiar nature of Funtanalba's history makes it tricky to obtain any conclusive data on religious practices in Sardinian shepherding *per se*.

needs, and interests across more than six different family units. To organize the feast required to summon a net of helping people, both internal and external to Funtanalba, who were in turn automatically included in the food offering: you cannot go to someone asking for help in cooking, and then disallowing them to eat with you. Conversely, few would show up empty-handed to a feast they have been invited to: almost everyone contributed in some way—some bringing food, some bringing drinks, some bringing workforce. The guest list kept expanding and expanding, just as the food on the table, during the *festa*, kept amassing and amassing.



*Fig. 30*

*The bar-sized fridge we had to carry in the woods to cool people's wine and beers. The fridge was powered by someone else's power generator, as we totally forgot to borrow one, and those people were invited to share fridge space with us. I remember being amazed by this view, by how people felt like owning their village space and the wilderness around it, and by how they were able to weave nature and technology seamlessly to create a patchy yet liveable, even comfortable situation.*

This is a perfectly fitting example of what anthropologist Gino Satta calls «gifts without compensation» (2001: 122), and that I call “indeterminate debt”. I like this category better, I must admit, because it better underlines how gifts in Barbagia are not really “without compensation”—compensation is just delayed to a second moment (*ibidem*). This very fact lies at the heart of social reproduction: it is the indeterminate nature of the debt that makes space for respect to enter the equation and, most importantly, for the relation to keep on going. Here, I cannot refrain from referring back to Bronislaw Malinowski (cf. 2013) and the *kula* exchange in the Trobriand Isles. By now a classic example in anthropology, the *kula* exchange entailed the circulation, among neighbouring islands, of small baubles that bore no actual economic value: proprietors exchanged them in any case, and that kept the exchanges, and thus the gifting, and thus society itself in constant reproduction. What is stimulating in all of this is that objects inserted in the *kula* exchange were disallowed to be used as tokens in other contexts: what people exchanged was not really the property of the object itself, but the right of using it in the *kula* (see Godelier 2018). For this reason, in analysing *kula* and other forms of exchange, the anthropologist Maurice Godelier concludes that gifting is at the very core of social reproduction, and practices such as the *kula* thematize this fact and act according to it (*ibidem*).

However, while I agree with the general theory, I find Godelier’s reading far too generous, as he links such gifting, a core device for social (and ecological) reproduction with democracy and its constitutive laws, with the reproduction of western democracies. Godelier believes that «it is not true, even in the most developed capitalist societies, that ‘everything is on sale’. Let us take the example of the constitution of a western democratic society. In open societies it is possible to buy the elector’s votes. Still, you can’t buy a constitution in the supermarket yet» (*ibid.*: 201)<sup>143</sup>. According to him, a constitution is «an ensemble of principles that humans employ to organize common life, and that they oblige themselves to follow. A democratic constitution is a common good that, by nature, is not the product of commercial relations, but of political ones» (*ibid.*: 201-202)<sup>144</sup>. In theory, this might feel right, even reassuring. However, I disagree with Godelier for two main reasons. The first is that it is simply not true that humans “oblige

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<sup>143</sup> T.A.

<sup>144</sup> T.A.

themselves to follow” democratic constitutions. This may occur to a restricted number of people (all wearing wigs, or at least most of them) in determinate timeframes. However, generally speaking, people do not agree with constitutions spontaneously. People are born into them, and suggested to act according to their principles by common sense and shared cultural principles, of course, but also by structural and organized State violence. While it is true that, generally speaking, humans organize themselves around commonly agreed rules, the more you distance decision-making processes from local lifeways, the more you distance yourself from that “common agreement” that should supposedly run societies. This emerges evidently when you work at the fringes of the State, in places where institutional democracy is present, but extremely patchy. The second reason why I do not agree with Godelier’s theory is that the deployment of State institutions did not come simply as a formalization of commonly agreed rules: it came with an entire process of subjectivation with it, one that fundamentally changed commoners into citizens. As Silvia Federici writes, capitalism in Europe «destroyed a society of commons materially grounded not only in the collective use of land and collective work relations but in the daily struggle against feudal power» (2019: 164). In this way, the deployment of capitalist structures «subverted the rise of new forms of communalism produced in the struggle, as well as those existing on the feudal manors on the basis of the shared use of the commons» (*ibidem*).

The deployment of State institutions, entwined with capitalist modes of production, came with a violent process of subjectivation, one that left little space for alternative lifeways, and is today progressively eroding all the spaces that were left. Thus, while the constitutions of western democratic societies may not be *literally* on sale, they are still necessarily premised and expressed within the frames of structural and institutional violence, of social class and externalization. How can we speak about consensus, how can we even measure it, if power relations are unequal? Even more: if socioecological dumps are a vital organ of democracies (Armiero 2021), who is even involved in such consensus? And what about those subjects working to reproduce our democracy from the outside—what about present-day colonies and plantations? What about the subjects working there—do they agree with our green neighbourhoods built on their externalized labour? I believe that some of the devices for social reproduction that are employed

in Barbagia do align with gifting, but are almost opposed to institutional tools. Let us try to unpack this by analysing how such practices are deployed there.

In Barbagia, as we have seen, the indeterminate nature of the gift 1) *commands* a delayed, equally indeterminate compensation and 2) requires keeping the chain of exchanges going. Such fact makes space for respect as respect itself can be a token of exchange: if I cannot repay you in any way, I must keep myself open to your requests and satisfy them. I must acknowledge that I owe you, and act accordingly. This makes space for a virtually infinite kind of accumulation that still is fundamentally opposite to the infinite accumulation that capitalist markets seek: if I help you, say, milking sheep for one hour, and then ask you to fix a fence in my sheepfold, your actual work-force and work-time in fixing it may be incredibly superior to the time and force you spent in milking my sheep. It is precisely this “purposefully wrong math”<sup>145</sup> that makes up for an infinite set of exchanges: people have no way to precisely weight *ajudu torrau* (mutual help), and this makes up for a continuous differential in the help given and received. I will see the labour you put in that fence, and understand I still owe you. So, I will gift you some of my cheese—a gift that is both free and indebting, as I know you will return back that favour sooner or later, thus keeping the chain of debts always alive. Debt is constant, as it is its repayment.

I had to even start my fieldwork yet, when I found myself sipping some beer with a sixty-year-old shepherd, Antonio. When I asked him “how much do you think you are self-sufficient in Funtanalba, as a population, on a scale from 1 to 10?” I expected a six, or seven as an answer. Three was the number I was given with no hesitation, and the added info that other, nearby villages may enjoy a better degree of autonomy—reaching maybe four, or five, on my scale. However, «here [in Funtanalba] we always have to buy [animal] feed, we have no grains...before, we were much more autonomous» (inf. 28/08/22). Before, he continues, «everyone was his own master. You couldn’t put a boss to manage shepherds. Now, everything is changed: money arrived, and young men have respect for nothing. They would cut down a centenary tree for a thousand euros» (*ibid.*; Guglielmo 2023).

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<sup>145</sup> This does not mean, of course, that shepherding in Barbagia is completely alien to any other form of “classical” debt, nor that it was at any point: I remember, for example, the time when Matteo showed me how they used to track the milk loans between shepherds by pouring it into containers, inserting a stick in them, and cutting a line in the where the milk level reached.

Interestingly, Antonio's answer<sup>146</sup> includes the fact that "everyone was his own master" during the times when Funtanalba was more autonomous in terms of food production. He is, probably, referring to a time not so long past, before that 1970 time-mark, when common uses of the land were abandoned in favour of private enterprises. There is thus, in his and many others' eyes, at least a direct correlation between the withering of Funtanalba's food sovereignty and the diffusion of the private management of land. A management that they themselves partly furthered (cf. Pitzalis, Zerilli 2013b), but still, a management that they now see in its limits and flaws. It is also interesting that this fact of "being one's master" feels so close to what Matteo was saying about nonhumans—that they "fend for themselves", if left to their own devices. I believe that there is an underlying connection between human and nonhuman freedom, intended here in the same way as my fieldwork friends would mean it when talking about their nonhuman companions: the freedom to live and, most importantly, the freedom to die, and thus to become food for the world that once fed you. More-than-human freedom would thus be at the basis of more-than-human food sovereignty: the ability to become food-for-others is what allows environmental reproduction, thus, as creatures and communities adjust beside one another, their ability to freely feed and become food (and thus, their food sovereignty) founds the food security of the entire local ecology. Individuals and even communities may die in the process, and indeed they constantly wither and bloom and wither again, and it is precisely this coming and going that needs to be reproduced for life to come forth. At the smaller scale of Barbagia's modes for food production, this fact is recognized by Antonio, who links the disappearing of local food sovereignty with the disappearance of common uses of the land (and food, and public spaces, and so on).

However, as I was arguing in the last chapter, you cannot simply take the commons and pretend you solved the problem: you need to summon back commoners too. However, now, "everything is changed: money arrived," and with it, as we have seen in the course of this work, socioecological decay arrived too. If, in the first chapter, Matteo summoned the category of "need" to explain this change—people needed each other, so they were closer to each other—Antonio now employs that of respect. And it is of pivotal importance that he follows with

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<sup>146</sup> I repeated this question to Matteo, Francesco, and other shepherds in Funtanalba, and they all gave me incredibly similar answers.

“[young people] would cut down a centenary tree for a thousand euros”. When Antonio refers to young people having no respect *because* they would cut down a centenary tree for a thousand euros, he is referring to the fact that monetary transactions came to substitute local norms of rightness and righteousness. You could theoretically pay rent with respect and indeterminate debts; you surely cannot pay bills with it. It is important to stress here that this by no means indicates an idyllic society in which people always live together blissfully. A fitting example could be the time in which a shepherd was gifted a dead sheep as a repayment of previous debts: the receiving shepherd recognized that his peer gave him a “bad sheep”—one so thin that such gifting was interpreted more as a way to solve a problem, and eliminating one useless sheep from the flock, rather than as a just repayment. However, such things do get noticed, and thus enter the chain of communitarian discussion, negotiation, and judgment: people discuss, with low voices, such severances of mutual respect, and therefore constantly negotiate and reproduce local norms about justice and community. It is also true that, as people perform acts that profit themselves while masking them as gifting, and this fact gets increasingly discussed and noticed in local discourses, people tend to lose hope into one another, and into the very sustainability of the gifting practices they themselves try to keep alive.

This further specifies the process of subjectivation I described in the first chapter: it is through the change of socioecologies that villagers started to become “city-dwellers” (albeit still living in the village), and these new subjects further accelerated such change of socioecologies. Land was privatized, thus shepherds transformed into producers (Pitzalis, Zerilli 2013b), and producers started to act on the land *as producers*, instead of shepherds. Village *feste* (feasts) began to include people external to the local chain of inter-village exchanges and who tried to profit from them, thus *feste* were commodified, and the number of tourists coming was multiplied. The process of subjectivation goes hand in hand with the changing of socioecologies—you cannot grab “shepherds” and “land” as they were natural categories. This process is akin to what Plumwood (1993) called the devouring phase in the deployment of master rationality: here, the colonized world gets «appropriated, incorporated, into the selfhood and culture of the master, which forms its identity» (*ibidem*: 41; see Barca 2020: 19). Similarly, as Barca writes,

ecofeminist thought has pointed to how the European scientific revolution of the seventeenth century turned nature from a living entity (the Renaissance animate cosmos) into a mechanical object, thus allowing the overcoming of (moral) limits to both its knowledge and its exploitation. Capitalist/industrial modernity would be unthinkable without that shift in consciousness (2020: 54)<sup>147</sup>.

Food sovereignty in Barbagia disappeared *because* peculiar subjects came to disappear, and the withering of food sovereignty further fuelled the disappearance of those subjects. The shaping goes both ways. In this way, «industrial wage-labour became the cornerstone around which modernized societies could address their social problems» (Barca 2020: 20): Lucio told us that, in the first chapter, when with eyes wide open and scrolling his shoulders answered that “that’s civilization!”—that pervasive force they first came to naturalize, and only then criticize through their embodied experience of socioecological change in Barbagia. I already linked this process with what Carole Counihan (1984) called the atomization of social relations and the substitution of inter-familial dependence with dependence from State and institutions. Again, the commodification of *feste* is a fitting example, as it marks the passage from inter-familial to institutional reliance, and is thus a perfect symptom of such process of subjectivation. Now I would like to further this reasoning through the categories of food sovereignty (La Via Campesina 1996) and collective continuance (Whyte 2018) and, to do so, I will employ the example of the *potlach* ceremony.

Indigenous scholar and philosopher Kyle Powys Whyte (*ibidem*) developed the concept of collective continuance by drawing on the work of the indigenous economist Ronald Lloyd Trosper (1995, 2003, 2009) and his account of *potlach*<sup>148</sup>. This practice is by now a classic anthropological example, first analysed by Franz Boas (e.g., 1897; 1921) in his ethnographic study of the Kwakiutl community of North America, then observed again by Marcel Mauss (2016), and it is also particularly fitting for exploring festive consumption in Barbagia. In its most basic description the *potlach* ceremony, diffused among many indigenous

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<sup>147</sup> This, in turn, ties back to Povinelli’s (2016) analysis of the mobilization of non-life in settler capitalism to further extraction.

<sup>148</sup> In reality, Whyte employed this notion also in previous works (e.g. 2015), but the framing he offers in the cited work, through his analysis of *potlach*, is perfect for a comparison with Sardinian shepherding.

groups of Northwest America, entails the distribution and even the destruction of wealth as a means to accumulate symbolic capital. Given that society is divided into different “houses”, their respective “titleholder” gives away as much of their material wealth to others (Whyte 2018: 8). Now, houses themselves act as «corporate groups with proprietorship to specific land and fishing sites» (Trosper 2003: 7), and thus «actively cultivated the plants, animals, physical entities, terrains, and waters of the ecosystems they inhabited» (Whyte 2018: 8). Titleholders secretly held ecosystemic knowledge; yet, according to Trosper, a shared system of knowledge had to exist in order for these communities to develop a «scientific understanding» (Trosper 2003: 12) of salmon ecosystemic functions and their capability of restoring their own population. In any case, to be recognized as a rightful titleholder one had to «organize a feast to give away wealth, which meant candidates had to know how to conserve sufficient salmon and the ecological sources of others gifts too» (Whyte 2018: 9; see Trosper 2009: 50-80). To organize a feast, in turn, meant organizing the efforts of other house members. Through the ceremonies «kinship relations were established and maintained that connected different houses through friendship, marriage, and other connections» (Whyte 2018: 9). Now, this system had to operate on a relatively large scale, as «when neighbouring houses all harvested salmon from a major river, they had to deal with the interdependence of their harvests» (Trosper 2003: 8). Thus, being certain that wealth was in any case to be redistributed through *potlach*, everyone knew that cooperation, rather than competition, was the most efficient way to go (*ibidem*).

Whyte employs this analysis of the *potlach* to show «the entwinement of human institutions and food systems» (2018: 10), something that strongly emerged also from my ethnography of Sardinian shepherding practices. To Whyte, food systems are what he calls “collective capacities”, a term aiming to describe

an ecology (i.e., an ecological system) of interacting humans, nonhuman beings (animals, plants, etc.) and entities (spiritual, inanimate, etc.), and landscapes (climate regions, boreal zones, etc.) that are conceptualized and operate purposefully to facilitate a collective’s (such as an Indigenous people) adaptation to change (*ibidem*: 10-11).

This is why he employs the terms “ecologies” and “collective capacities” interchangeably, «since collective capacities—such as Indigenous food systems—are really ecological systems» (*ibid.*: 11). Most of all, they «are built on relationships» (*ibid.*: 12), because elders need to pass down salmon knowledge to the youth, and houses need diplomatic relations to concert their efforts. In reality, the concept of collective capacities, which Whyte employs to analyse food systems, is to him an inclusive term: «examples of collective capacities could be gender systems, for example, which can be unpacked just as I have unpacked food systems via Trosper’s work» (Whyte 2018: 11). Thus, he specifies that

analyzing collective capacities is akin to zooming in on a particular dimension of a society’s collective self-determination and unpacking its significance for the sake of some goal, like the analysis of food justice. If we choose to zoom in very closely on food or gender, we can talk about them separately, yet as we gradually zoom out, we will find they both overlap and reinforce each other, which creates opportunities for us to explore ecologies at different scales and through different interconnections (*ibid.*: 12).

This sums up perfectly what I mean by methodological pluralism and by calling the attention back to processes of subjectivation. On the one hand, gender and food can be analysed separately. This usually heightens the degree of rendered depth and detail of the one system we are describing. On the other, from a sociocultural standpoint, “food systems” do not exist in a vacuum (rather, they don’t exist *in themselves*), but are instead inherently based on and weaved through a particular society’s cultural theorization of the world itself. Hence, the way societies craft ways to reproduce themselves can never be fully understood if disentangled from the way local subjects pray, or make up a family, or build houses, or play, or work, or wage war. It follows that we cannot simply focus on food systems to solve ecological unravelling and food injustice: while I share Saito’s (2022) call to economic degrowth, simply switching down the dial of production could not do the job for us. Not completely. What we need is a whole system to entangle with the world. What we really and desperately need is not just a new economic system, but ways to further collective continuance—which, of course, include economic systems. We don’t simply need commons: we also need commoners.

To Whyte, collective continuance «is a society’s overall adaptive capacity to maintain its members’ cultural integrity, health, economic vitality, and political

order into the future and avoid having its members experience preventable harms» (2018: 12). And, given that it is collective capacities that further a society's collective continuance (*ibidem*), collective continuance can never be disentangled by the processes that create and distribute food across species—the metabolic justice<sup>149</sup> comprised in mutual nourishment, or the capacity of living beings to constantly shift between being eaters and food themselves.

Food systems, then, can contribute to collective continuance as a capacity or ecology when they involve three types of relationships that support (1) the means of advancing robust cultural and social ways of life, (2) peaceful diplomacy and emboldened resistance to domination, and (3) the societal decision-making protocols required for evaluating high stakes decisions. [...] The types of relationships just described, in some cases, are very hard-to-replace immediately if lost, given their connection to particular ecologies. For example, the desire to discharge reciprocal relationships of giving (and not hoarding) in societies with potlach ceremonies is very closely connected to persons' experiences with the cultural and spiritual value of salmon and that fact that those persons have been gaining specific knowledge about salmon since time immemorial. If salmon and salmon habitat disappear at a highly rapid pace, then it will be hard for those responsibilities to endure because the responsibilities are so closely associated with the experience and knowledge of salmon (*ibid.*: 13).

It must be again underlined that “salmon knowledge and experience” are deeply entrenched with the spiritual relation humans shared with them, as the «potential to facilitate reincarnation involves accountability to maintain the habitats» (*ibid.*: 14; see Atleo 2006). As Silvia Federici writes, «[t]o acknowledge this history and its legacy today is not [...] to romanticize an artificially constructed Indian subject [...]. It is to recognize the peoples that historically have most suffered and fought against the enclosures» (*ibidem*: 81). Their peculiar anthropopoiesis (Remotti 2013), their way of culturally shape themselves as humans in a socioecological collective, partly motivated *potlach*, thus salmon collection, hence salmon preservation: their way of culturally creating a world ended up actually materializing a world, as human cultures always do (see Guglielmo 2024a). Similarly, in Australian Aboriginal totemism, «[k]inship is both a structure and meaning to the structure [...]. The process is circular: bonds of mutual life-giving

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<sup>149</sup> Whyte's account has been important in the emergence of the concept of metabolic (in)justice itself: see Chao 2022.

congeal as kinship, and kinship calls forth bonds of mutual life-giving» (Rose 2022: 77). Thus,

[a]s a general rule, people do not eat their nonhuman countrymen. But nor they do hoard. Rather, human responsibilities for the well-being of others include the obligation to perform ceremonies and other actions that keep the nonhuman members of the kindred healthy and thriving [...]. Everyone has to eat, and hunting is a joy, but at the same time everyone knows that the creatures they eat are someone's kin [...]. Furthermore, if humans believe that their kin are not faring well they have the right and duty to prohibit hunting until the species' prospects improve (*ibidem*: 79).

As Whyte writes, settler colonialism «directly targets the relationships that create collective capacities (the ecologies) that make up collective continuance» (2018: 15); it works by dismantling the features of trust and ecological redundancy that enact collective continuance, and it does so in order to further the collective continuance of settler societies. In this way, «[v]iolating indigenous food sovereignty is a strategy of settler colonial domination that erases Indigenous capacities for exercising collective self-determination. Food injustice, in this sense, can be understood as derivative of settler colonial domination» (*ibidem*). His view can give us a different way to look at the ghosts Matteo, Francesco, and many others were trying to show me, pointing at empty sheepfolds and abandoned orchards. The transformation from villagers to city-dwellers speaks precisely about that dismantling of the collective capacities enabling collective continuance: both the more-than-human collectives composing ecologies and the ecologies composing said collectives. Indeterminate debt, in Barbagia, acts as one of the local people's collective capacities: the gifting of food is one means of survival, and thus is the production of food, and thus is the maintenance of the ecologies producing such foods. More than the gift, more than its repayment, it is its suspension that truly founds the social fabric here: by maintaining oneself constantly indebted towards one's community, one keeps the relation going.

It is just like in mutual nourishment, where eating or becoming food are simple peaks of an ongoing process of metabolic transformation that creatures continuously endure. When the processes of mutual nourishment are jeopardized, collective reproduction is at risk as well. This process, even if it does not travel neatly across scales, it ripples through them, with different spatial-temporalities:

the metabolic injustice affecting the Marind people of Papua serves as a means for settler colonialism to further the collective continuance of its own population; however, as ecologies are progressively destroyed, and species progressively go into extinction, settler societies will also suffer the consequences of the metabolic injustices they created. You can delay it, you can diffuse it, but you can't avoid it: Earth is a living, and thus agentic, whole, but is also a (relatively) closed system.

For this reason, food sovereignty, «based on particular qualities of relationships that promote a society's overall adaptive capacity» (*ibid.*: 21), is one of the key points to contrast Capitalocene: to give back communities their means of reproduction, that are at the same time material, relational, and spiritual. The reasoning is indeed very elementary: if we don't buy into false (and frankly sad) Hobbesian views of the human, and stick to ethnographic data and anthropological theory instead, we see that many, different human communities found out that commonality and mutual help were simply the smartest strategies to employ. These practices have also, inevitably, been socially immersed into always different symbolical configurations, themselves responsible for collective continuance—the continuance of the ceremonies, the food that is consumed therein, and thus the whole socioecological environment enabling both the food and the ceremonies<sup>150</sup>. Food sovereignty, in this sense, is *already* fundamental to collective continuance: as communities are responsible of food production, they need to balance metabolic justice with their more-than-human environment. Collective continuance, here, indicates the continuance of metabolic relationality between creatures in a local environment—thus, food sovereignty emerges as the ability of the local more-than-human population to sustain itself through socioculturally emplaced processes of mutual nourishment. If socioecologies reproduce, that is because a degree of food sovereignty is achieved by the whole more-than-human communities living in them. To be free of producing food, in this way, comes at a cost: to also have the freedom of becoming food in return. This process is not opposite to that of economic degrowth; to the contrary, it heightens it, in that progressively more autonomous communities could rely less and less from the State, market, and institutions, and more and more on the relations that

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<sup>150</sup> This does not mean that each and every society, beyond the “Capitalist West”, employed commonality and mutual help as the basis for socioecological reproduction. Many societies collapsed long before the steam engine was even on the horizon. However, those local communities that did survive up to now, and which can be ethnographically observed in the present, overwhelmingly (albeit unevenly) did.

grant them their material possibility for survival<sup>151</sup>. It is, to put it simply, a means to reclaim control over the forces of reproduction (Barca 2020), which are both material and symbolic, both human and nonhuman.

Feminist philosopher Stefania Barca considers the forces of reproduction to be those less-than-humanized «subjects who reproduce humanity by taking care of the biophysical environment that makes life itself possible [...] they keep the world alive, yet their environmental agency goes largely unrecognized» (*ibidem*: 1). In her account, labour emerges as a fundamental tool to define the Other: «from different positions, and in different forms, women, slaves, proletarians, animals and nonhuman nature are all made to work for the master» (*ibid.*: 6): it is their capacity of being exploited in a value-system that define them as Other from the *Anthropos*, the master human. Conversely, the forces of reproduction are those mainly responsible for reproductive labour:

*[r]eproductive labour opposes abstract social labour and all that objectifies and instrumentalizes life towards other ends. Life itself is the product of (human and non-human) reproductive labour. At the same time, capitalism subjects this labour to increasing commodification and objectification: this generates a contradiction insofar as reproductive labour becomes directly or indirectly incorporated within the money-commodity-money circuit of value (Barca 2020: 6).*

Thus, recognizing and profoundly criticizing the discursive power of the Anthropocene concept, she calls our attention back to the forces of reproduction, whose agency lies at the heart of more-than-human survival, and to mobilize science and technology as «counter-master tools» (*ibidem*: 60)—since life itself, in the Anthropocene, is «the result of a painful history of counter-mastering» (*ibid.*: 61). This is why, according to Silvia Federici, «reproductive work, insofar as it is the material basis for our life and first terrain on which we can practice our capacity for self-government, is ‘the ground zero of revolution’» (2019: 196). In this way, it becomes possible to eschew awkward attempts at using women’s rights as a «Trojan Horse [...] to spread a particular economic agenda founded on the primacy of individual private property rights» (Patel 2009: 669-670; cf. Monsalve 2006), while reproductive rights such as healthcare and education are inevitably

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<sup>151</sup> Such process cannot be, of course, divorced from massive wealth redistribution, as to avoid an anarcho-capitalist dream in which everything works just the same, but unhindered by State limitations.

presented as derivatives of private property (*ibidem*). Thus, food sovereignty and the commons open up «not the promise of an impossible return to the past but the possibility of recovering the power of collectively deciding our fate on this earth. This is what I call re-enchanting the world» (*ibidem*: 8). As I see it, to recover such power, it will be necessary to strive towards a collective food sovereignty, considered as a multispecies condition derived from metabolic relationality, and thus directly dependent on metabolic justice to reproduce. Again, Barca's (2020) forces of reproduction are key here, as such forces are at the very basis of collective continuance: we can't really get it wrong, as long as we understand who these forces are, how Capitalocene is messing with them, and how to foster their proliferation instead.

The sumptuous consumption of Sardinian *feste*, at least of those organized for the local community alone, is the symptom of the collective capacities of Sardinian socioecologies, and thus a symbol of its collective continuance. It is evidence that «[a]bundance is not a technological threshold, but a social relationship» (Saito 2022: 232). The importance of this point cannot be overstated: while technologies may help, their reproduction is for now enmeshed in the very powers that are destroying collective continuance in the first place—colonialism, racism, finance capitalism, appropriation of indigenous knowledges and lands, and so on. The technological innovations of the “Green Revolution”, while contributed to incredible yields for a time, they have also had «unsustainably high environmental and social costs including natural resource degradation, salinisation and desertification, rising water scarcity, chemical pollution, and loss of biodiversity» (Ishii-Eiteman 2009: 692). Thus, a technocentric approach could very well «exacerbate current conditions of poverty and inequity, in part because such an approach tends to concentrate power and privilege [and] a narrow set of world views at the expense of pertinent local knowledge» (*ibidem*: 692-693). On the contrary, abundance in human societies has always been the result of emplaced social relationships spanning from commoning practices to spiritual relationships with the non-human and the beyond-human: totemism (Rose 2013a), as well as Sardinian *feste*, thus emerges as a set of culturally-bound practices aimed at collective continuance. Such set inevitably binds together subjects well beyond the human and even beyond the living, reaching non-life and the spiritual—the meta-life of ghosts, ancestors, and gods. In Funtanalba, it is both the product of deep-

seated webs of mutual help binding people together and the effect of their stewardship of Barbagia's wilderness: the two things emerge conterminously, showing the inextricable bond between the social and the environmental fabric.

What my fieldwork friends suggested me is that social and environmental structures do not mirror neatly each other, but respond holistically to each other's movement; furthermore, they showed me how the industrialization of food production is introducing progressively more and more unbalances to such system, to the point that the world elderly shepherds remember is slowly dissipating. For this reason, processes of mutual nourishment have changed, and more-than-human collectives struggle to adjust. This can be seen in the changes in foods, food production, and nonhuman bodies, of course, but if one departs from a biocentric perspective on nourishment, things get even blurrier. As sheep hooves step less and less on rocky terrains, non-life's plans may also get changed: minerals and molecules moving and being moved, shaping bodies and landscapes together—I saw it in my own body, as it got chewed by the steep cliffs that, together with goats, plotted my demise, while shaping my muscles and lungs. What about the salt rocks given to sheep together with hay, to integrate what they cannot get from their environment? Mutual nourishment and the metabolic (in)justice around it are deeply connected to non-life also: as extractivism tightens its grip over local ecologies, the metabolic transformations of non-life into life are drastically changed. In a sense then, mutual nourishment underlines a connectivity of constant, mutual manipulation between living, non-living, and meta-living entities, and metabolic (in)justice seeks to understand how extraction and accumulation mess with such mutuality. It is, in a way, a simple way of capturing living and non-living entities in their diuturnal moulding of each other, in their never-ending relationality.

Metabolic justice, in this sense, is profoundly involved in the reproduction of indeterminate debts in Barbagia. To be caught in such net of obligations amounts to being in a constant relation of mutual nourishment in which one gets masticated as the best strategy to secure their own mastication, both biophysical and symbolical. In this way, understanding the relationality of human debt, they know the relationality of more-than-human ecologies. To help someone is to open the possibility for their help to come, should the need arise; to give food is a sure way of receiving food in return. It is not a neatly defined social contract, but a

socioecological obligation: they are not keeping a precise track of the wealth (symbolic and material) they inject in the system of *ajudu torrau* and indeterminate debts. They keep their world alive to allow it to keep them alive. Thus, inevitably, they keep others alive, so that their world may keep them alive, and in this way embody and materialize how «in a biosphere of entangled connectivities, this is how life lives. Ethics precedes individual life» (Rose 2022: 65); and humans and nonhumans are always and inevitably «enmeshed in a shared moral domain that is dedicated to life's becoming» (Rose 2011: 87).

Indeterminate debts in Barbagia pinpoint, mirror, and act according to the fundamental yet straightforward fact that gifting ourselves to others, both socially and biologically, is the very thing that lets life and society reproduce. In this way, seeing the withering of both the foods and relations that constitute *ajudu torrau* (mutual help), my fieldwork friends can foretell a much greater, and more ominous, withering: that of a whole world. As indeterminate gifts become rarer and rarer, so the socioecological fabric that nourished them and their ancestors withers away. Indeterminate debts, in Barbagia, can be thus seen as a cultural thematization of life's relationality: by allowing constant, albeit indeterminate, relations, they mirror the mutual nourishment that life and non-life entertain with each other, and attune with it to secure both daily survival and festive, sumptuous consumption. For this very reason, the withering of *ajudu torrau* can emerge as a sentinel for both the atomization of social fabric and ecological unravelling. When subjectivities change, environments tend to follow suit. Ethics do indeed precede individual lives, as it is our current way of weaving the world, and through it, that will materialize our sons' and daughters' bodies, and the relational world they will inherit.

Their lives are bound up with each other, and what happens to one affects others; risks to one are risks to all, and the well-being of each is enmeshed in the well-being of others. The person who exists in others, and in whom others exist, is vulnerable to what happens outside their own skin, but, equally, they find their power in the relationships that are situated beyond the skin. They participate in the well-being, as well as the suffering, of kin (Rose 2022: 77).

Rose's ode to life and mortality asks us to situate each life in waves of ancestral power that push future generations forward: although each one is born

individually, we emerge in a world that has been already here long before us, and thus «we join the flows as beneficiaries of much that precedes us and will outlive us» (*ibidem*: 133). We are born with an already embodied debt, an already indeterminate debt with the innumerable generations of living creatures that set the conditions, for us, to exist. They became ancestral so that we may pulse into existence, and it is our capacity of becoming ancestral—our «organically programmed death» (*ibidem*)—in turn that will set in motion future generations. Death sits beautifully in this account, as does the mutual mastication binding flocks and flies, shrubs and shepherds, goats and gods. «[W]e are multispecies becomings, the beneficiaries of all that nourishes us (organic and inorganic) and all that nourished our forebears. We are the beneficiaries of flows that so vastly precede us [...] that our indebtedness is impossible to imagine» (*ibid.*: 136). If Rose sees gene inheritance as a fundamental part of this becoming ancestral, the suggestions epigenetics gives us, as we have seen, indicate that by becoming ancestral we are not simply passing “us”: we are passing down our homes, environments, foods and fears, and the objects and creatures that lived through us. This is the very point where the concept of metabolic justice, drawing from ethnoanthropological data, links together political ecology and environmental ethics: we, as creatures, are borne out of the very metabolic connectivity that masticated our world into existence; thus, the way in which we masticate and get masticated by the world—the particular kinds of mutual nourishment we entertain with local and global environments—has a fundamental role in the possibility for life to keep coming forth. Structures of systemic more-than-human, material and symbolic exploitation emerge into the fields of metabolic relationality between creatures, and weaken them, arguably to the point of no return. The ways in which we nourish and get nourished from the world are already, and inevitably, political. Cosmologies are political. And they do precede, and indeed allow, the birth of seemingly individual lives.

It would be extremely easy to end this work with a sour tone, attesting the slow, but inevitable collapse that both human and nonhuman worlds are experiencing, and are bound to experience ever more as the Global North desperately tries to do everything *but* to address the root problem of the so-called Anthropocene, that is, unquestionably, extractive settler capitalism. However, that would not make justice to my fieldwork friends: if they often dabble in nostalgia,

anguish is a privilege they cannot afford. While they keep witnessing the creeping extinction of their world, they are bound not to give up by their same cosmoecological obligations towards one's more-than-human kin: «[e]thics within connectivity don't allow a person to give up» (Rose 2011: 141), Thus, to conclude this work, I will turn to ethnography one last time, and offer a final account on how they carve out an existence worthy of being called a life.



*Fig. 31*

*Preparing meat on the skewer for a spontaneous festa. The wrinkly texture of the meat, so similar to the flesh of people handling it, was to me a constant reminder of the fundamental kinship people share with nonhumans, especially the ones they eat.*

## 2. The wisdom of the flies

As a strangely chill night darkens, and tightly grips the houses and hills in Funtanalba, me and Francesco are chatting and drinking wine around his table while his young nephew attentively watches some YouTube videos. Our topic, despite the wine's presence, is not a happy one. He looked at his nephew with sad, tired, and worried eyes, and started discussing how the generations to come will face dread far beyond what we have seen and lived in our lifetime, between ecological unravelling, pollution, and social decay. His take is that the atom bomb dropped in Nagasaki will pale in comparison: nothing compares to the slow, diffused death we are witnessing, and will lead the next generations into catastrophe. I, for one, am not disagreeing with him, as my eco anxiety kicks in. I am connecting bits of information producing a picture of the interrelated causes and effects, talking about microplastics, global warming, oceans, and the sixth mass extinction, with extinction rates sitting somewhere at ten thousand times what ecologists would deem normal (Rose 2022: 149). And then, there's those who aren't technically extinct, but whose ecological connectivity is so severed that no new generation will come forth: sometimes it is just one species, sometimes are entire, seemingly lush forests (*ibidem*). And then there are the positive feedbacks of ecological unravelling, exponentially escalating the interlocked causes of both environmental destruction and species extinction, and the unequal responsibilities of the absurdly rich individuals and absurdly squandering countries; I keep on going and going, haunted by what Rose saw as a spiralling vortex of biocultural loops where devastation is «entangled and recursive» (*ibid.*: 181), until I stop and mutter “that's it, there's not much to do about it”.

A few moments of cold, awkward silence pass, and I raise my eyes to meet Francesco's, which in an instant pass from gravity to light. He is now barely containing a laughter, with his fingers half-covering his mouth while blushing a little. Two giggles manage to burst out of his mouth while I smile, with a questioning expression. «And so, do you know what do we do?» he mutters, trying his best not to burst laughing. I shake my head; no Francesco, I have no idea. «We organize a little feast, cook a good chunk of meat, drink, and they can all go fuck themselves!». I crack in the most spontaneous, deep laughter I had in months, with him following. «We always come back at this: eat, drink, and fuck; this is life,

*bò!*», he concludes. We laugh together, and it takes me a few moments to realise that Francesco gave me an answer more profound than what I firstly imagined. This is not nihilism, nor is it a superficial, childish way to face Capitalocene in its unravelling. To the contrary, it is a fierce answer to blinding, structural powerlessness. An extreme act of power upon one's own life, against the creeping death that crawls and dampens everywhere. It is where grief and sorrow get overcome in an act of final, proud, and passionate rebellion.

The little feast is Francesco's and many others' dance. It entails organising, often embarking in more tasks than others who are more taken by jobs, families, or even carelessness, and yet helping each other, founding and re-founding social ties and obligations, bearing consequences and taking responsibility. It entails the sharing of food, and the sustenance of a moral economy based on debt yet partially beyond money and individual gain, including respect, work, cleverness, and the collective debate and negotiation of social norms. Sometimes, it entails ignoring interfamilial grudges for the sake of the feast. Then there's wine, produced on their land with their own labour, and getting drunk together while singing and discussing, joking and cursing. There's meat, produced with the labour of an array of entities so vast it is hard to pinpoint, there's feeding animals in the snow and scorching heat, there's curing and caring for them, there's helping them to be born, and looking at them age, and die outside of one's control. There's stabbing in their neck, sometimes more ceremoniously than others, and there's watching them die, sometimes holding their heads to facilitate the bleeding and passing away. Sometimes, there's comforting them in their passing, knowing that no one is really comforting the dying animal—they are comforting themselves. There is the agency of innumerable persons glancing attentively on human activities, and calling. There are lost lambs and cunning foxes, old dogs and sharp eagles, tired limbs and smart parasites. Then there is gathering wood from the wilderness, cutting it along with one's hands and fingers, there is stacking it and distributing the fire while impaling huge chunks of meat. There is cooking it, together, taking turns without mentioning it, and careful consideration about heat and moisture, raring and salting; there is oiling it with lard and grabbing the boiling skewer to cut the meat. There is snapping bones with huge scissors, and then there's sharing again, and eating together.

Francesco's dance is what keeps life going in the face of the anguishing decay that creeps ever closer. It is the dance of people and places, where places brim with life and death, and the mutual nourishment between the two. It is his way of materializing a world that once was, and that he so deeply wants to protect. A keen critic could say: such world never existed. And they would be right. Francesco's emplaced romanticism does not weave past worlds: it is instead a desperate attempt into materializing present ones. It is one way of practicing the wisdom of the flies: to partake in collective, crazed forms of consumption, and in equally whole kinds of restitutions. It is to feast together, often but never too often, as the next day sheep will need food and water again. Fences will need to be repaired, and lost lambs to be retrieved, and rogue donkeys to be chased. It is to occupy one's place in this collective feasting of humans and nonhumans, and eating joyously while surrendering oneself to be masticated by those nourishing you. It is the wisdom and folly of life itself, in its attempt to endure, and adjust, and connect, and reproduce. Now I am reminded of Deborah Bird Rose, and her dingo companions:

Love and death embrace and depart, come together and withdraw., sustaining each other's passion. [...] Nothing lasts forever: dogs know this too, and like us, they resist the knowledge. They want to live forever, and if they can't do that, they want to fuck forever. Even dogs get tired of that jealous hold, and that's the dilemma, for people and for dogs: we want to be together forever, and knowing we can't, we so desperately want to return. The return sings up Eros, sings up the world, sings up life and holds it strong in the face of death (Rose 2011: 131).

This is the metabolic process that masticates minerals into bodies and bodies into environments, that turns environments into social webs, for humans and nonhumans, sustaining those same environments. Fungi and flowers, goats and humans, we all know that nothing lasts forever, we all want to live forever and fuck forever, each in their own way. And we all know we can't. Yet all, fungi and flowers, goats and humans, we all have nothing if not to sustain ourselves, knowing that each life is a gifting by innumerable other entities. Francesco's dance is one way to keep us (more-than) human while we watch the world wither, knowing that we can't do much more beyond tenderness, having respect, practicing care, and holding hands. It is a way not to dabble in the apocalypse, and instead reaffirm one's heaven. But it is much more than a presentification, as it stretches far beyond

the present moment, towards the past and future. Francesco's dance is an ode of care, and its astonishing capability of making present and future worlds possible. It embodies and entails the reproduction of both society and environment, the social and material gifting that maintains relations always open. It is this dance that ripples through the waves of ancestral power, in worlds soaked with ethics, bringing forth bodies and communities: in this mutual nourishment is the third life, the one that is bequeathed. Francesco's dance is his way of offering himself to be nourishment for others and, thus, his way of bequeathing us a life, and a world, worth living. It is this dance that, here, keeps the world enchanted. It is this gifting that, here, keeps the world alive. Maybe this dance will keep us singing and drinking and eating and fucking. Maybe not. The answer does not matter: we are bound to become ancestral, one way or another. However, this comes with its own ethical call. What would you do in the face of hopeless unravelling? I think I would join Francesco's little feast. Let us sing life, let us sing death, and let us pass this song onto the next generations.



*Fig. 32*

*People preparing together the locally produced food to enjoy a feast together.*

On the last day of fieldwork, some people cried, others smiled, others made jokes to laugh together. Some stayed more distant, some others even feigned annoyance, that I was still there, “breaking the balls”. Some gave me strong, masculine high fives with firm eyes, only to then whisper “come back again next year, maybe you can help me with something in the sheepfold”. A dear friend saddled his horses instead, and grabbed me to have a long ride in the wilderness together. We all have our own ways to cope with loss and endings. Was I feeling as an ethnographer, a friend, or a family member? Most importantly, what was I to them? That is, partly, the privilege of being someone inside enough to the community to share a great amount of time with them, but external enough that everybody knows that such closeness will, someday, come to an end. Regardless, it is sharing such closeness, through words and silence, and with strong yet vulnerable people. But most importantly, it is a matter of being with people, living closely with them, and actively listening to them. A matter of sharing time, money, food, debts, problems, and obligations in times where this closeness, especially from young people, is starting to lack. It is dialogue and confronting, and giving help in a world where they navigate splendidly, but where things start to feel off. What is a link, how do I send it? What if today we don’t go back to the village, and have lunch here at the sheepfold instead? Could you print some songs for me, so I can play them with my guitar? Would you sing them with me—at least those you know? And we sang, we sang indeed. We sang and sang together, screaming out loud the words of *Bella Ciao*<sup>152</sup> to the old houses and looming mountains, with old friends and new acquaintances.

I received many gifts, from people both internal and external to this ethnography: an artisanal, metal statue and a wooden one; a t-shirt with the name of the village; a traditional, handmade suit; one *pittiolu* (sheep bell); a machete, so that I may “properly defend” my PhD thesis. Matteo gifted me his best wheels of cheese, and said I could tell my parents I crafted them. But I’m not the one keen on lying, even for such a small thing. He knew that, I told him when he asked me if I could fantasize a little bit in my thesis, “pumping” some stories a little, because after all, who will ever know. With slightly lucid eyes, he told me that in the end I learned something during this year: I learned to craft cheese, to knot some ties, to

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<sup>152</sup> *Bella Ciao* is a famous partisan song, sprouted from the Italian resistance against the fascist party during the 20<sup>th</sup> Century.

feed and care for the animals a bit. He told me that he imagines that must be something for one like me, who only philosophised his entire life. He was right. In the end, he said that the wheels of cheese I crafted were a little soft, that some worms would soon start to crawl in them. That is how my entire fieldwork research started: looking at some worms crawling in cheese inside his basement. That is also how my fieldwork ended: in that same basement, with tiny maggots starting to eat cheese—this time, the cheese I made.

He smiled, and told me it's even better for him: he will sell those at high price, when *su casu martzu* will be completed, when the maggots and flies I nourished will have “finished their work”. I can't speak for Matteo, but on my part, I can say I know something: no price will be ever enough to repay what he and many others gave me. But maybe, maybe he wasn't simply speaking about gains. Maybe that was his way of telling me I had done a good job, that he was proud of me, and thankful of the time we spent together. He then helped me hiding some 20 kilos of ham in my car—we both didn't know how things were with the law, and how badly the African Swine Fever Virus quarantine was still considered at that time. The ham was from one of his pigs, but the meat had been cured for months by another shepherd, in a nearby village, whose mastery in ham-making was close to legendary. “Don't make them [policemen] take them! It is better that you kill them and run away, rather than giving these up!”, he exclaimed jokingly. His eyes shimmered after hiding them and giving me some advice on how to put my luggage to hide them even better—“I know a thing or two on how to do these things, you know”.

I know, Matteo, I know indeed. And that is part of your greatness. You stubbornly survived amidst society and nature changing together. You stayed true to yourself despite everything, with your old-ass phone and your patchwork sheepfold. And I can do nothing but honouring your lesson, and live by what you and Francesco and many others taught me. My fieldwork started and ended with maggots eating cheese, and with the feeling that such nourishment was something much bigger than flies and cheese. And now that I am writing about it, I can see a clearer picture of that. We mortals, we are all like flies and cheese. We are just nibbling at each other through mouths, teeth, breaths, and by making love with each other, but also with wind, and time, and minerals, and the blood and sweat and secretions we all give each other, living and non-living.

This is the wisdom of the flies. We masticate and get masticated, each confirming that willing or not, we are all gifting each other. What Matteo and Francesco taught me, besides knots and curd, besides milk and goats, is this fundamental fact of life: we cannot help but to be gifts for each other. It does not matter how trying the times are, how much greed seems to be eating up everything. It does not matter that it seems to be the end of the world. We keep singing it, and we keep singing it together.



*Fig. 33*

*A shepherd leading sheep from the taccu back to the sheepfold*





# Acknowledgments

Gratitude has been an underlying emotion of my PhD, as research work shows that nothing of value can ever be achieved in solitude—especially in an environment as trying as contemporary academia. Within and without such an environment, wonderful companions and comrades taught me, helped me, or stood by my side. Here, I wish to acknowledge some of them.

Starting with an institution, I should mention the University of Milan: I wish I could name all those who contributed to my PhD. It has been a privilege to contribute, even if just a little, to the life of the Piero Martinetti Department, named after the only Italian philosopher who denied loyalty to the fascist regime.

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A shepherd and a cheesemaker share the same village, food, and a portion of my heart; also, the nickname Billy.

Billy, thank you for each donkey chased and goat milked, for each story told and laugh had, for each sneaky trip we undertook. Thank you for all the conversations we had in front of a fire, which I know changed us both for the best. I trust that our names will long stay marked on that cactus. Should they fade, I will grab my knife and carve them out again.

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Once a wise man told me that if we utter words to someone unable to hear them, the universe will listen on their behalf. So, I will try and write mine to Sofia, my cat familiar. It is said<sup>153</sup> that anthropologist Margaret Mead held that human civilization did not start with clay pots, but with the first femur bone healed. She considered that in the animal kingdom no one survives a broken leg: one becomes prey or starves long before the bone has a chance to heal. Thus, culture, what makes us fundamentally human, did not start with tools and technology: it started with care. For this reason, I thank you, for your needy ass is what keeps me human. However, I strongly disagree with Mead's neat division between human civilization and the animal kingdom, as if the two of us belonged to different realms of existence. Your grace keeps healing all the bones that my soul breaks, making me more than simply human.

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<sup>153</sup> This story was told in Byock 2012.

Mom, dad. Trying to thank you is like attempting to thank what keeps me alive. Where should I start? The blood, the heart, or the brain? The air, the rain, or the soil? Not only did you give me a bag, a sleeping mat, a tent, and all the food and first-aid kits I could ever wish for. You gave me wings to fly, all the wind to freely use them, and a safe harbour to always return to. Perhaps more importantly, you gave me roots to grow, and water to flower. Mom, I wish I had all your strength, cunning intellect, and ability to always make space for love. Dad, I wish I will always be worthy of carrying your name; I wish I will have your same wisdom to hold it proudly, both wearing a suit and the rubber boots for the barnyard.

We'll see about the wishes, but know that there will be no achievement, in my whole life, that will not bear your name.

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