

CHAPTER 6

Revisiting Transhumance from Stilfs, South Tyrol, Italy

The Everyday Diverse Economy of a Forgotten Alternative Food Network

Annalisa Colombino and Jeffrey John Powers

Introduction

This chapter discusses the pastoral practice of transhumance through the lens of the idea of an alternative food network.¹ The literature on alternative food networks in geography and agro-food studies is abundant. However, it has neglected to explore how transhumance is a lively agricultural practice that engenders and partakes in food networks that may be radical in their alternativeness. The chapter starts with introducing how alternative food networks emerged in the last thirty-five years or so as important foodways through which food is produced and consumed. It moves on to discuss transhumance as an agricultural practice and to focus, specifically, on summer transhumance—a form of extensive agriculture that is present especially in the European Alps and that produces cheeses primarily for local consumption. The chapter then draws on ethnographic data to offer an account of the everyday practices and routines of humans and animals working on the summer pastures right above the village of Stilfs/Stelvio in South Tyrol, northeast Italy. It concludes with a short discussion that points to how alpine transhumance may be seen as engendering radically alternative food networks which enrich what Gibson-Graham have notably called the “diverse economy” (Gibson-Graham 1997, 2014; Gibson-Graham and Dombroski 2020; see also Healey 2020); namely, the economy is conceptualized according to interconnections between a multiplicity of practices of production, exchange, and consumption, which are more than just profit-oriented, and which mainstream scholarship has long tended to overlook by framing them as “alternative” and, thus, marginal.

The Rise of Alternative Food Networks

Alternative Food Networks (AFN) have been increasingly present in society as both a production and consumption option and have been well represented in the academic literature. Agreed-upon definitions are difficult to come by, but a point of departure in defining AFN is by pointing to what they are not: AFN are not industrialized food systems. Angela Tregear, for example, identifies AFN as

forms of food provisioning with characteristics deemed to be different from, perhaps counteractive to, mainstream modes which dominate in developed countries . . . [and which are] heavily reliant on industrialized methods of food production and processing, global sources and means of supply, corporate modes of financing and governance, and [have] an imperative towards operational efficiency. (2011: 419)

AFN are different from conventional, industrialized food systems as they involve short supply chains, sustainable forms of agriculture, and focus on producing and circulating “quality” food; food whose qualities are deemed to be good not only in organoleptic terms but also in terms of how that food was produced: locally, in a socially fair and environmentally sustainable way, according to (invented) traditions, etc. AFN are frequently described as emerging as a response to the global, industrialized food system considered responsible for detaching consumers from producers (Venn et al. 2006: 248) and, subsequently, for fostering an obliviousness about the ingredients used to process food and their geographical provenance. It is in fact frequently argued that people are increasingly removed from food production because farming has become a large-scale, specialized activity carried out by few big companies. AFN stem partly from a desire to resist or change this trend (Holloway et al. 2007). Their agenda is one which aims at reconnecting producers, consumers, and the origins of the food they respectively produce and eat (see Bruckner, Colombino, and Ermann 2019).

One of the ways in which this reconnection takes place is via “spatial proximity between farmers and consumers” (Jarosz 2008: 231), as AFN’s distribution channels consist of direct sell, local farmers’ markets, and small, local shops, for example. The narratives around AFN tend to emphasize, often in a nostalgic way, the role of proximity in assuring the quality of the food eaten in the past. Consumers, it is argued, once knew the producers and could observe how food was made. Trust in the quality of food was then a by-product of the local nature of food production (Renting, Marsden, and Banks 2003). With the advent of a more global, industrialized food system rising after World War II, food quality

assurance changed and became institutionalized: governmental or semi-governmental agencies took the role of controlling the safety and quality of food. While consumers initially seemed to accept and rely on these formalized controls, today it appears that for the public this trust has been broken (Renting et al. 2003).

Mistrust in industrially produced and institutionally controlled food emerged as a response to the “food scares” (such as bovine spongiform encephalopathy, foot and mouth disease, the use of lethal doses of methanol in wine-making, etc.), which have been occurring since the late 1970s (see DuPuis and Goodman 2005; Goodman 2004; Knowles, Moody, and McEachern 2007). Consumers then started to buy food produced in other-than-industrial ways; namely, food produced and circulated within AFN as, for example, food produced locally by small farms, sometimes practicing organic agriculture that avoids the use of chemical fertilizers and pesticides. Mistrust in industrial food, combined with growing public concerns over additional issues such as animal welfare and sustainability have resulted in the establishment of AFN as an option for consumers’ food provisioning (DuPuis and Goodman 2005: 360).

More generally, according to Venn et al. (2006), in order to be characterized as alternatives, food networks need to have four main characteristics. First, they must connect consumers, producers, and food in an economic space, which re-embeds food production and consumption. Second, their distribution channels and supply chains should be unconventional; that is, detached from industrial supply-and-demand distribution and corporately controlled food chains. Third, they should adopt principles of social embeddedness; namely, they should be linked with a specific geographical location, evolve around a sense of community and work through relationship of trust. Finally, AFN should focus on “quality” food and contribute to preserving local heritage.

AFN is then a broad descriptor and scholars apply it to a wide range of different foods and venues that range from community gardens and food cooperatives, allotment groups and a wide range of food self-provisioning practices whereby those who grow food also eat it (see Jehlička and Smith 2001; Smith and Jehlička 2013). Community supported agriculture, where the risks of production are shared by consumer-producer partnerships, and direct sales initiatives such as farmers’ markets, farm gate sales, adoption/rental schemes (e.g., the project “Adopt-a-Sheep” in Abruzzo, Italy, see Cox et al. 2011), mobile food shops, box schemes, and producer cooperatives are comprised under the AFN umbrella term. AFN also include more profit-oriented venues such as specialist retailers, where sales are more direct than in conventional supermarkets, and which commercialize high value-added, specialty foods and which are often targeted by

tourists or gastronomes (see Venn et al. 2006; see also Colombino 2018). What falls under the guise of AFN is thus extensive. Scholars in geography and in agro-food studies have abundantly explored AFN.² There is in fact a plethora of publications that, in the last thirty years or so, with very few exceptions, has primarily debated the production, circulation, and consumption of vegetables and fruit within AFN. Very few studies have explored animal-based products such as cheese, meat, and eggs in AFNs (exceptions include, for example, Baritoux et al. 2016; Bruckner et al. 2019; Colombino and Giaccaria 2013, 2016; Forney 2016; Miele 2011; Stassart and Whatmore 2003). Importantly for the aim of this chapter, transhumance has been rarely explored as an agricultural practice that specifically partakes in alternative food networks (but see Buller’s [2008] discussion of the benefits of pasture-based systems in France, and Holloway and colleagues reference to transhumance in Italy in their works which analyze “internet-mediated food production and consumption” to suggest that the glocal “economy of care”—articulated in the Abruzzo’s agritourism they analyze—may inspire sustainable farmland management strategies elsewhere; Holloway 2002; Cox et al. 2011). More generally, and importantly, transhumance has been neglected in recent geographical accounts of the Global North, perhaps because in the Anglo-American geographical debate, transhumance is thought to be an agricultural, pastoral practice that pertains to the past and to the Global South (cf. Urbanik 2012: 104–5). Yet, as this chapter and other contributions in this volume highlight, transhumance is a form of animal husbandry and extensive agriculture currently practiced in different parts of the world. Importantly, as we point out in the conclusion, it engenders food networks which may be radically alternative to conventional ones, and which contribute to nourishing the conceptualization and empirical study of the diverse economy.

Pastoralism, Transhumance, and *Almwirtschaft*

Transhumance is a form of pastoralism; namely, an agricultural practice in which domesticated animals play a primary role. Pastoralism “involves herds of ungulates, which, depending on location, can include cattle, yak, sheep, goats, horses, donkeys, reindeer, camels, llama and guanaco, as well as a number of non-ungulate species” (McGahey and Davies 2014: 1). Pastoralism is both a land-use strategy and a form of animal husbandry (Reitmaier et al. 2018), in which managed herd movements are key to producing animal-based products such as milk, cheese, meat, and also wool, for example. Estimates vary largely, but it is thought that pastoralism is

practiced in over 75 percent of all nations on earth, by up to 500 million people and involving over a billion animals (McGahey and Davies 2014; see also Dong et al. 2011). It is an important form of subsistence, particularly in low-income countries where people rely on animal keeping for their family's income and nutrition. Although scholars tend to neglect the role of pastoralism in the Global North as most of contemporary studies focus primarily on the Global South (see Turner et al. 2016; Urbanik 2012), this agricultural practice plays an important role in more affluent countries where the "centrality of keeping livestock—and of meat or milk consumption—to traditional cultures and identities" is of great importance (Garnett et al. 2017: 10). This is particularly evident for the pastoral practice of transhumance, which has been recently rediscovered as an object of academic enquire and empirical investigation (Nori and Gemini 2011; Nori and de Marchi 2015; Hartel, Plieninger, and Varga 2015);³ of theoretical reflection in the social sciences and humanities (Colombino and Palladino 2019; Palladino 2017; Philippopoulos-Mihalopoulos 2012); and also of public interest, as its recognition as UNESCO immaterial cultural heritage in 2019 suggests (see Bindi, Chapter 7, in this volume).

More specifically, transhumance refers to the regular seasonal movement of animals between two or more locations, where, in many instances, the distance between these places would be too great for daily return (see European Commission 2009). More precisely, transhumance can be seen as "a system of livestock farming which rests on the utilization of pastoral resources in complementary zones which, by themselves, can only support livestock for part of the year" (Clearly 1987: 107). These complementary zones are primarily the common lands, and/or rural areas which are left unproductive for parts of the year. These pastures, in which the animals graze, are productive for certain seasons only, or even time-periods within a season. The animals therefore move from pasture to pasture, sometimes covering great distances based on the availability of grass or forage, which differ accordingly to several variables, such as location, season, weather, altitude, and specific vegetation profiles, etc.

Transhumance is widespread throughout the world and it is practiced in different ways according to the history and geography of the regions and countries where this form of animal husbandry exists. Scholars of different academic traditions classify transhumance in various ways, which primarily depend on the time of the year in which it is practiced, on the distance covered by the herds, and on the direction that movement is accomplished by the animals. Transhumance may be thus characterized as long-distance, horizontal, winter transhumance, such as the one practiced in Romania (see Juler 2014) and also in France (see von Sturler 2013), or as short-distance, vertical, summer transhumance, as the one explored

within this chapter and which is common in several European alpine regions (see Jeschke and Mandl 2012).

There is uncertainty over when exactly the practice of transhumance in Europe is thought to have started.⁴ There is evidence that dates it back at least ten thousand years in some regions. Whereas in alpine regions of Europe the estimates put the date around 6000 BP (Zoller 1960; Bätzing 1996). It is hypothesized that areas closed to the European Alps were settled since 7000 BP. Looking more specifically at the Po Valley of Italy, for example, it is hypothesized that forage was not available in summer due to the long dry summers that are characteristic of this region. These conditions therefore necessitated the movement of domesticated animals to the higher adjoining alpine regions to take advantage of the mountain pastures. Although there is uncertainty in general regarding when vertical transhumance began, it is interesting to note that for some scholars the oldest European mummy, known as Ötzi (or Similaum Man), discovered at the border between Italy and Austria, in a location 40 km away from the area discussed later in this chapter, was possibly a high-altitude shepherd involved in transhumance (see Carroll 2000; Ruff et al. 2006). In the area of Vinschgau (Val Venosta), South Tyrol, where Ötzi was found, it seems that alpine grazing by domesticated animals began in the Middle Bronze Age (around 3300–3550 BP; see Festi, Putzer, and Oeggel 2014).

This form of transhumance common in the Alps is called vertical transhumance or alpine transhumance in English, which corresponds to the Italian *transumanza* and to the German *Almwirtschaft*.⁵ The expression specifically refers to the seasonal movement of animals to mountain pastures at high elevations—generally at or above the tree line—for the summer and then back down to the valley during the other months of the year. It differs from horizontal transhumance primarily because the distance the livestock moves is generally shorter. Yet, importantly, the significance of the movement is one of altitude.

Vertical transhumance is one which is specifically geared towards mountain farming as it enables a very efficient use of forage resources. Farming in alpine regions was possible only with high levels of adaption to “seasonal changes of climate and vegetation [and] vertical transhumance evolved as one of these adaptations” (Sal, Herzog, and Austad 2004: 192). During winter, farmers had to keep their animals inside barns, where they would be fed with hay which needed to be produced in the summer. However, the combination of a shortened summer growing season and narrow mountain valleys meant that there were instances in which the hay or pasture resources from the valley were not enough. This resulted in the system of vertical transhumance where the farmers could take advantage of high-altitude mountain pastures during the summer

leaving the valleys free to produce hay for the winter (Sal et al. 2004; Grasseni 2007; Laiolo et al. 2004; Zendri, Sturaro, and Ramanzin 2013).

Characteristic of vertical transhumance used to produce cheese is what can be seen as a “graduated” farm organization: animals are brought to different altitudinal pastures at different times of the year and, importantly, different animals have access to different altitudes. For example, lactating cows are given access to the best grass at a lower level to maximize milk production; non-lactating cows graze the pastures at a higher level;⁶ and goats or sheep move to the highest level to graze the land, that is, to pastures with insufficient nutritional availability for cows and also which would be physically dangerous or impossible for cows to reach. This system not only uses pastures and grasses that are only available at certain times of the year and at certain altitudes but also, and importantly, frees up lower pastures for haymaking in the summer to feed the animals throughout the winter. This vertical movement or vertical ordering is a key component of alpine, summer transhumance.

The type of vertical transhumance practiced most commonly in the Alps today is a dairy vertical transhumance, where goats, sheep, and, more commonly, cows are brought from their valley homes to the mountain pastures in the summer months to take advantage of the grasslands to feed the animals and to produce local kinds of cheese and other dairy products.

The ways in which cheese and dairy products are manufactured is very similar to the way they were made in the past in the alpine European valleys. During the summer months, in fact, cheese was made in the *Alm* (*malga* in Italian); namely, a “chalet” with the facilities to make cheese and to host the workers during the season. The reason why cheese was made up in the mountains is because, as we explain below, it was not feasible for a single dairy farmer to make cheese. As Barbara Orland argues in her historical account of transhumance in Austria and Switzerland, to be able to manufacture “10 kilograms of cheese even in the best months—May to July—the milk of 10 to 15 cows was still necessary” (2004: 340). In the past, most valley meadows were common lands and everyone in the community had the right to graze their animals there. Because of this right, villages and communities in the Alps had limits on cattle or barriers to prevent that too many people owned large numbers of animals: “having 6 to 8 cows in the stall was already a sign of prosperity” (Orland 2004: 340). Single farmers could not make cheese by themselves due to a lack of resources, stemming from practical ones such as the equipment needed, the knowledge necessary, or the amount of milk necessary to make a wheel of cheese that would age for a long period of time. Therefore, to maximize resources and productivity, communities started to hire workers and put

their animals together for the summer on the alpine pastures, which had areas with the necessary infrastructure to make cheese, i.e., the *Alm*. Importantly, the workers called in to make the cheese and care for the animals freed the owners of cattle from a labor standpoint so that they were able to make hay from the lower pastures for the winter.

In the past, but also nowadays, this type of farming practice was considered necessary to produce high-quality cheese and also to keep animals healthy. For example, it was claimed that the mountainous climate was generally much healthier for cattle and gave them considerably greater resistance to disease, and that the high percentage of ethereal oils contained in the vegetation eaten by the cattle improved their salivation and digestion (Orland 2004). Cheese and butter produced on the *Alm* is in fact considered unique. Because of the conditions of alpine living—such as the altitude, greatly increased walking distances compared to barn confinement, and in general much less or no supplementary or commercial feed—animals are slower to fatten than during the same length of time in the valley, and milk output decreases. As a result, at higher elevations the milk contains more fat (Mathieu 1992: 97). Additionally, alpine products were, and are, “considered to be tastier and healthier because of herbs found only there, containing high percentages of ethereal oils” (Orland 2004: 333). For example, butter and cheese produced from cows in alpine pastures can contain an orangish hue due to increased levels of beta carotene, which is the effect of the grasses, flowers, and herbs eaten by the animals in alpine meadows.

The practices of vertical transhumance and cheese making in the *Alm* continue today in the Alps: they exist as renovated cultural foundations for mountain communities and provide farming solutions and a valuable product in a challenging environment.

In the next section, we turn to discuss the Stilfser Alm, located in South Tyrol, above the village of Stilfs (Stelvio, in Italian), in the autonomous province of Bozen (Bolzano), Italy. After introducing the history of this specific Alm and offering a brief description of the transhumance of the animals to the pastures, we provide an account of the everyday practices and routines of humans and animals working together on the Alm to produce and distribute cheese.⁷

The Stilfser Alm

Stilfser Alm dates back to 1322 and is perhaps one of the oldest Alms in Vinschgau. The current Alm is actually the second location, the original building was located approximately four hundred meters up the moun-



Figure 6.1. The Stilfser Alm from the Upper Alm, 2019. © Annalisa Colombino

tain. It is thought that an avalanche destroyed the original building, yet the remnants of the original Alm in the form of stonewall ruins are still present. The current Alm was rebuilt in the sixteenth century at its current location.

The Upper Alm (Obere Alm), located approximately three hundred meters away, was built in the seventeenth century. In the past both Alms (Upper and Lower) had cows and made cheese. Today the Upper Alm has been turned into a restaurant and guesthouse and has no cows. It has overnight accommodations, but its main business is to serve meals to hikers and mountain bikers. When the Upper Alm did have cows, both Alms would milk cows owned by different farmers living in the community of Stilfs and make cheese. However, they would operate completely independently. The river Tramentan—originating from the various small streams and springs surrounding the Alm and running through the village of Stilfs—was used as a reference point for the community to determine whose cattle would be taken to which Alm. If the farmers lived on the left or south side of the Tramentan their cows went to the Upper Alm, if they lived on the right or north side then the cattle had to go the Lower Alm (i.e., the present, working Alm we discuss in this chapter). Both Alms received water in 1953. In 1972 the first milk machine was installed, before this all cows were hand milked. Up until the 1980s, the butter churn was not run on electricity but by water that was diverted through the house and to the butter churn which was located inside. Around 1990, a water turbine was constructed approximately three hundred meters downhill of the house and barn for electricity (before this a generator was used) on

one of the streams that in the past was used to divide cows into the Upper and Lower Alm. Both the Upper and Lower Alm were on this closed system powered by the turbine until 2013 when they joined the community electricity grid. Operations of the water turbine were taken over by the community power company, the turbine is still in operation today supplying a percentage of the power for the wider Stilfs electrical grid. Due to a decrease in the total number of cows beginning in 1976, the Upper Alm no longer functioned as a cheese-making Alm and all animals were sent to the Lower Alm. In 2006, a section of the Alm barn was converted to house goats and make cheese from their milk.⁸

The management of the Alm is the responsibility of an Alm Meister (director of the Alm) who is appointed by the local community. Since 2014, the Alm Meister has been Ernst Pingerra, a lifelong resident of Stilfs who, as a child, spent summers herding the goats of the community in the surroundings of the Alm, and who has put cows on the Alm for over twenty years. As a productive unit, the Alm may be described as a form of cooperative. As in the past, the herd is not owned by a single farmer, but each farmer owns a few animals. The majority of cow owners have from one or two up to five cows grazing the pastures. Normally, they pay a certain amount of money for the summer per cow, whose milk is measured once a week and they are given the corresponding percentage of cheese that their individual cows produce. The same system is used for the goats.



Figure 6.2. Laura, the *Sennerin* of Stilfer Alm, making cheese in the summer, 2016.
© Jeffrey John Powers

The workers on the Alm are not necessarily farm owners or have cows but are hired by the farmers from the village to take care of their animals. In summer 2016, there were two shepherds for the goats, one shepherd for the lactating cows and the horses and one for the “dry” cows, one cheese maker, and two dogs. The workers follow the directions of the Alm Meister. For example, when it comes to decide the areas where the milk cows graze, the shepherd follows unspoken constraints of general rules put in place by the Alm Meister on the basis of what has been done in the past.

The “actual” transhumance (i.e., the movement of the herd from down the valley to the Alm and then backwards) in Stilfs takes place in June and September. The movement of the animals towards the Alm in June is called, in the local dialect, *Auf-fohrm* (literally, going-up): the animals who are owned by farmers who live close by walk up with the owners to the Alm (around 50 percent of the entire herd); those who are located farther away are nowadays brought up to the pastures in trailers. The most important moment for the transhumance, in terms of heritage commemoration, is the celebration of the end of the season up in the pastures, in September. In Vinschgau, this event is called *O-fohrn*. This dialectical expression (*Almabtrieb*, in high German) means literally “drive down” and refers to returning the animals back to their original farms. In Stilfs, the *O-fohrn* involves the animals and the Alm’s workers, who walk down with the herd and drop the individual animals off at their home farms. The way down towards the village follows a curving path, which passes each (or almost each) farm, where the owners wait for the herd to come past and separate the animals out from the group. For this occasion, the animals (the cows, in particular) can be adorned with flowers and large bells around their necks. Furthermore, it would be customary for the cow who has produced the highest quantity of milk during the season to be adorned with the largest of the bells and with more flowers, compared to the others. The *O-fohrn* ends once the village of Stilfs is reached by the group, where the farmers—those who live farther from the Alm and the path followed by the herders—pick up their animals and put them in trailers to drive them back to their farms. Around fifty per cent of the Alms in the Vinschgau valley would celebrate their *Almfest* (literally, the celebration of the Alm) in the village at the end of the cattle drive. However, the Stilfser Alm organizes its specific celebration on August the sixth, the day of St. Rochus, its patron saint.⁹

The infrastructure of the Alm consists of a chalet with accommodations, including a kitchen, for the workers, as well as the cheese-making facilities. These include the cheese-making room (*Sennerei* in German) with the cheese pot, a milk storage room (*Milchkeller*) with the cooling tanks and a butter churn, and a cellar for the cheese (*Käsekeller*). There is also a barn

which can accommodate around sixty cows and which has an additional section for the goats, including a milk stand and indoor and outdoor areas for them to rest. Next to the goats' area, there is an outdoor fenced space for the pigs and also an indoor structure for them to sleep, which holds the two large whey tanks. The reason why pigs are on the Alm is to feed them with the whey, the by-product of cheese making, which cannot be disposed elsewhere. Approximately three hundred meters away from this Alm, there is what is referred to as the Upper Alm (*Obere Alm*). This used to be a cheese-making barn and housing, but it has been recently turned into a restaurant and guesthouse. It has overnight accommodation, but the main business is to prepare and serve meals, specifically lunch, to hikers and mountain bikers.

In general, the season runs from early to mid-June until mid-September, the specific date depends on the weather and corresponding amount of grass available. In summer 2016, the animals were brought to the Alm on 7 June and went back on 9 September. The team of four people, of which Jeffrey was part, had to look after sixty-two milk cows, sixty-eight goats, twenty pigs, and twelve horses.¹⁰ As mentioned before, the animals themselves came from individual farmers.

A normal day at the Alm begins at four-thirty in the morning: two team members collect the cows from the night pasture and "hang" them or tie them in their individual spots in the barn. At the same time, the other two members of the team begin to work in the *Sennerei* as they take the previous days cheeses out of the molds, clean these molds, and prepare the large cooling tanks for that day's milk. The herding and the preparation of the cheese-making room take until about five or six in the morning. Then, one team member also has to move the goats from their night pasture, which is located in a small area next to the barn and, differently from the cows, rarely changes. The remaining team members would assemble the milking machines and begin milking.

The milking of cows and goats begins at approximately six in the morning, with two people milking the cows and the other two milking goats.¹¹ The milking takes around two and a half hours for the cows and three hours for the goats, to one and a half hours for the cows and one hour for the goats. The length of milking changes because the animals give less and less milk as the summer progresses and therefore it takes less time to milk. The goats are milked in a wooden milking stand constructed by one of the farmers, which allows the team members to milk eight goats at one time using three milking machines. The cows do not have a milk stand but are tied in a specific, individual spot, with thirty-one cows on either side of the barn. Before the milking, the cows are fed in their places: the milkers have a wheelbarrow of "noodles" (the local term for "dry feed"; *Nudeln*

in German or *Nudl* in the local dialect) and go down the barn, giving each cow a specific amount. Two people milk the cows using two milk machines each. At approximately eight in the morning the milking for both animals is finished and the team members split into separate tasks: two shepherds move the cows and the goats on the pastures, and the *Sennerin* (female cheese-maker) starts to prepare the cheese-making process.

Depending on where the cows are supposed to be that day, the shepherd pushes them with the help of a dog to a specific area, which can be located from very close to the barn up to one hour of walking uphill (the longest push being a move of approximately two kilometers and a gain of about three-hundred meters in altitude). The goats are also led out of the barn by a shepherd. In contrast to the cows who are pushed, the goats follow the shepherd who leads the herd. The goats have no set pastures or areas they are supposed to be. The only rule is that they need to be moved above the pastures used by the cows. Normally, by eight-thirty or nine the cows and goats are moved in the area they are supposed to graze, and the shepherds move back to the *Sennerei*. One helps the cheese-maker and the other shepherd helps the fourth team member with brushing and cleaning the previously made cheese in the cellar. Including a short break to eat breakfast, the cheese making (Figure 6.2) and brushing processes take approximately three to four hours; that is, up to noon or one o'clock. At this point, any "extra" or non-routine tasks can be completed (additional cleaning in the *Sennerei* and milk cellar; fencing, and general maintenance and repair). This is also the time for regular work tasks such as the cleaning of cheese boards; the checking and giving salt to the horses; calling the veterinarian and farmers; additional cleaning of the barn and paperwork (the recording of the daily cheese-making process, amounts of milk and cheese and butter made, accounting of the cheese given to farmers or sold, etc.). These additional tasks vary but on average the entire team finishes them by 2 p.m. to take a break. At approximately 3:30 p.m., depending on where the cows and goats are located, one or all four team members collect the animals. The animals are herded back to the barn to be milked and fed, and then put back in the night-pastures. The cows are put in one of three night-pastures, which are rotated according to grass availability and additional factors, such as the state of the fencing, for example. Finally, basic tasks need to be accomplished in the *Sennerei*, milk cellar, and cheese cellar: the cheeses have to be flipped, the weights taken off the cheese molds, cooling turned on, and the milk cellar cleaned. The working day finishes at approximately 8 p.m.

Over the course of the 2016 summer, three different types of cow-milk cheese and only one kind of goat cheese were produced. The cows' cheese is referred to by local names in combination with the type of bacteria

used. The first type of cow cheese is referred to as “Alm DIP,” DIP being an acronym for “direct in production” and refers to specific freeze-dried bacteria culture used to make the cheese. The second, *Säuerwecker*, can be translated as “awakening of the acidity,” and refers to the bacteria culture used to start the cheese-making process. Finally, the third type of cheese is called *Schweizer Kultur*, which again refers to the specific the “Swiss [bacteria] culture” used.

The choice of bacteria, and subsequently the kinds of cheese produced, depends on what was produced in the past and on the knowledge and experience of the cheese maker: the owners of the animals expect the cheese to be ready soon and that the cheese maker will start with producing a cheese that ages quickly. The *Sennerin* then has some flexibility in deciding which specific cheeses should be produced, for how long, and at which stage of the season.

For the 2016 summer, the *Sennerin* decided to begin making “direct-in-production” cheese in the first two days of the season. This was a result of concern by the cheese maker of the risk of unwanted bacteria both on the cows and in their milk. The cows were coming from many different barns operating with different standards. The *Sennerin* decided to use first the strongest bacteria culture—that is, direct-in-production—in order to combat any unwanted bacteria in the milk or on the animal in the first two days. The beginning period of cheese production is the most at-risk regarding unwanted bacteria, which can affect or possibly ruin the cheese. After this period, the team on the Alm has more control over where exactly the cows are grazing and this corresponds to a having more confidence in the milk being produced by the animals. On the third day, the team began making *Säurewecker* (produced until 17 July), because the farmers want cheese as soon as possible and *Säurewecker* is the quickest to age (it takes approximately one month in the cellar before it is ready to eat).

Beginning in August, the cheese of the Swiss type was made. This is the longest aging cheese, needing a minimum of three months and having an ability to age for much longer. This gives the farmers the best chance at having cheese for the majority of the year. As an experiment, the *Sennerin* decided to make, for two days in late August, a combination of the Swiss culture bacteria with a special culture of bacteria from milk mold; a little less than 150 kilograms of this cheese were produced. This cheese differed in that it required no cleaning or brushing, and it also had a more white and dry rind.¹²

For the entire summer, direct-in-production bacteria was used for producing goat cheese. In the past seasons, there had been problems with the goat cheese and the *Sennerin* surmised that the problem lied in unwanted bacteria in the milk. As mentioned before, direct start is the strongest bac-

teria, and it was used to correct or combat this problem. Finally, there were small quantities of soft cheese (less than a hundred kilograms of mascarpone, ricotta, and Topfen) that were produced and eaten by the team on the Alm and distributed to the farmers on a very small scale.

As for the distribution of the cheese, some is sold on the Alm itself to hikers and mountain bikers who are vacationing in the area, and to community members who walk up to the Alm from the village. Farmers also sell the cheese privately amongst friends and personal connections. Several farmers also run guest houses on their *Hofs* (farms), where they provide sleeping accommodation and also food: the cheese is then served or sold to the guests. In 2016, one farmer made an agreement with a local Spar grocery store to sell his cheese over the summer, and one member of the Alm team sold small amounts of cheese through personal connections in Graz and Vienna. Finally, a significant proportion of the total amount of cheese made is not commercially sold, but it is either eaten by the farmers themselves or given to friends and family.

Conclusion

In their extensive work, Gibson-Graham (1997, 2014, Gibson-Graham and Dombroski 2020) formulate an understanding of the economy as “diverse”; that is, as performed through manifold and varied practices of production, exchange, and consumption which, in turn, enact an economic space of difference and experimentation, which is no longer dominated by purely profit-oriented capitalist enterprises. In so doing, they propose a profound critique of the common conceptualization of the economy as comprising two main, oppositional and distinct forces; namely, conventional, mainstream capitalism versus alternative, and presumably marginal, economic practices. In Gibson-Graham’s theorization, the economy emerges as a plethora of different practices of production, circulation, exchange, and consumption, which are not only those of Capitalism with a capital C—a monolithic, nearly transcendental, economic force that dominates and exploits subordinate human and nonhuman subjects and matters. Such practices of economic diversity encompass human and non-human unpaid labor in households and farms (Barron and Hess 2020) and practices of food self-provisioning, for example (Grasseni 2020; Jehlička 2021 for a series of diverse economies’ studies see Gibson-Graham and Dombroski’s 2020 edited volume). Thinking of the economy as diverse enables the possibility of recognizing how, in different places, there are modes of production, circulation, and consumption, which are enacted to achieve aims that are not uniquely concerned with the extraction of

monetary profit and capital accumulation. In the diverse economy, other relations, regimes, and registers of value are at stake, which, in turn, may contribute to fostering social and environmental benefits, unlike capitalist practices. These other-than-conventional economic formations do not exist nor emerge as distinct from conventional capitalist modes of production: often invisible, diverse economies' practices intertwine and coexist with the workings of conventional and more visible capitalist ventures. By adopting ethnographic research tools able to bring to light what theory may fail to grasp (Gibson-Graham 2014), the diverse economy approach is able to include, rather than marginalize and exclude, modes of existence and related economic practices, which the myth of alternative economies as marginal (and therefore not worthwhile of falling under the lens of mainstream academic enquiry and policymaking) tends to obscure. The burgeoning literature on alternative, diverse economies has been demonstrating the existence of a wide range of practices that are widespread, rather than marginal and unimportant, and which support a variety of real (rather than idealistic) livelihoods around the globe.

Our, admittedly partial, discussion of Stilfser Alm's microcosm of alpine transhumance has attempted to offer a glimpse into some of the practices that contribute to engendering the diverse economy nourished by a food network which emerges as radically alternative, when compared to conventional food production and exchange. We have discussed how daily work on the Stilfser Alm is organized and keeps summer transhumance alive and meaningful in the Vinschgau Valley. Our account suggests that alpine, vertical transhumance generates an alternative food network, which partakes in an economy which is diverse in the sense that its effects and aims are more than just profit driven.

Rather obviously, the Stilfser Alm is an extremely small and local production system. The animals, their milk, and the cheese produced come from Stilfs, a small village in South Tyrol. The cheese's identity and value are profoundly rooted in this locality: it is a very specific kind of cheese produced at a specific time of the year, made in a particular way that builds on local heritage, practices, and knowledges. The number of animals and workers involved, and the amount of cheese produced are modest. Over the course of the summer of 2016, sixty-two cows and sixty-eight goats produced respectively just over five thousand kilograms and around nine hundred kilograms of cheese. The Alm may be described as a very small, local cooperative, where individual animal owners and the community of Stilfs make decisions to determine the direction the Alm needs to take. Importantly, the direction of the Alm is constrained in a way that no industrialized food system would be: that is to say, by the local, cultural practices and desires of this specific community. Members

of the local community visit regularly the Alm and have done so for generations. They personally know the farmers who own the animals on the Alm, as they are either their neighbors, close friends, or acquaintances. From the village, they can literally see the Alm's pastures and where the animals are grazing on a specific day. The Stilfser Alm thus can be seen as engendering a food network and a diverse economic formation that is socially embedded. A sense of community and of trust is omnipresent. The animals are not owned by the people running the Alm but are lent for the summer. This occurs in a rather high-risk environment: while making cheese is more profitable on the pastures in summer, it carries a higher risk compared to selling milk to the companies (which is what the farmers would do for the other nine months of the year). Miscalculations by the cheese maker regarding timing, temperature, amounts of bacteria used to make cheese, contamination of any equipment, and the continued caring for the cheese over the course of months could result in failure of the cheese batch from that day and even for other days, thus resulting in a complete loss for the farmers. Furthermore, the environment itself is a more dangerous one for the animals: they are grazing at a high elevation over an extremely large area, which contains significant hazards such as steep slopes, rocks, and ravines. In addition, the animals who belong to different farms have diverse social orders, hierarchies and, therefore, there is instability in the power relations that needs to be established once they become part of a new single group up in the Alm. The danger that animals would be injured is a very real one, because of the morphology of the land but also because of confrontations between the animals in the new group. All of these risk factors necessitate a high level of trust between the farmers, the local community, and the Alm's team. We thus suggest that vertical, alpine transhumance partakes in alternative food networks and diverse economies that contribute to make agriculture socially and environmentally sustainable, compared to the unsustainability of current industrialized food systems. As an animal husbandry method, opposed to intensive and industrial animal production (see Porcher 2017), and as a type of extensive agriculture, alpine transhumance is a practice that does benefit the environment. In sharp contrast with conventional modes of rendering the land productive, alpine transhumance may be seen not only as an agricultural and economic practice that, in summer, minimizes costs as it maximizes the productivity of natural resources (which without transhumant herds would not be productive) to produce "quality" food. Also, and importantly, alpine transhumance acts as a tool for preserving biodiversity in the mountains and for containing the depopulation of these areas. In fact, farm animals in transhumance contribute to landscape and biodiversity preservation by grazing the land, which otherwise

would be neglected. Moving across the landscape and dispersing seeds through their feces, farm animals contribute to maintaining biological and genetic diversity. In becoming food for predators, these domesticated animals prevent the disappearance of those wild animals who could not survive without the presence of transhumant livestock. Transhumance thus represents a mode of living together with animals (cf. Porcher 2017) and the environment which, in supporting lively and diverse economies of food specialties, keeps farmers on and across the land, which otherwise would be abandoned.

Transhumance, in its different historical and geographical manifestations, has a perhaps ironic relations with capitalist, economic expansion. From being an activity that historically has contributed to the spread of capitalism, transhumance has been more recently pushed to its margins (Chang and Koster 1994). Too often understood by governments as a backward, agricultural practice in sharp contrasts with the imperatives of modernization, transhumance has been discouraged in diverse parts of the world including Europe (see e.g., Juler 2014 on Romania), so much so that, along with other forms of pastoralism, it has sometimes been framed as an agricultural practice that does not any longer exist in the Global North (see, e.g., in geography Urbanik 2012). In a similar manner to food self-provisioning practices and other alternative food networks, notably explored by Jehlička and colleagues (e.g., Jehlička 2021; Jehlička et al. 2020; Fendrychová and Jehlička 2018), and as this book and the revival of interest in agricultural pastoralism in and beyond academia seem now to show, transhumance is widespread, rather than marginal. In a world in which the economies of conventional food production appear to be dominant, transhumance emerges as tenaciously resilient.

Acknowledgments

We would like to thank Laura Hanni, Sennerin of the Stilsfer Alm, from 2015 to 2017, for her patience and knowledge of cheese making. We are grateful to Petr Jehlička, Paolo Palladino, and the anonymous reviewers for reading and commenting on the early draft of this chapter. Their comments helped us to revise the chapter and, hopefully, clarify our account of Stilsfer Alm.

Annalisa Colombino is a human geographer currently working at the Department of Economics, Ca' Foscari, University of Venice, Italy. She obtained her PhD at the Open University, UK. Her current research inter-

ests lie at the intersection of critical food studies, human-animal relations, biopolitics, and the diverse economy.

Jeffrey John Powers completed his Master's degree in Sustainable Development from the University of Graz in 2019. For three summers, he worked with his wife Laura Hanni, the Sennerin at Stilfers Alm, as the shepherd and assistant cheese maker. He currently works for the United States Forest Service in Utah.

Notes

1. Far from being merely systems of food distribution, alternative food network (AFN) broadly refers to networks which comprise the production, circulation, and consumption of (usually local) food. AFN is thus an expression used to think about how these three empirical and analytical spheres should not be seen as distinct or linear, but as closely interrelated.
2. Despite a general positive view of AFN, geographers and agro-food scholars have explored AFN from a critical standpoint. Recently, critiques have emerged to point to how it is no longer possible to clearly separate the products produced and circulated as part of AFN from more conventional food networks such as those involved in supermarkets chains. This is because, nowadays, supermarkets also sell products associated with AFN (e.g., local and regional products) and put a premium price on them (See Goodman and Goodman 2009; Tregear 2011). The difficulty in clearly distinguishing AFN from conventional food networks is enhanced by the fact that multinational industrialized food companies have been buying smaller organic and “alternative” producers, for example, the takeover of Horizon and Cascadian Farms by the food giant Dean. From a socioeconomic perspective, some authors point to how AFN may be elitist and observe that some initiatives may maintain—rather than overturn—pre-existing inequalities between participants (Allen et al. 2003; Goodman 2004; DuPuis and Goodman 2005). Others point to how AFN may exhibit a conservative insularity and defensiveness rather than being open to progressive change (Winter 2003). Hinrichs (2000), for example, points out that local or short food supply chains do not necessarily translate into social justice. Saying that a food is local does not mean necessarily that there are not substantial exploitative relations at play. Local food systems may employ industrialized production techniques, exploit farm workers, and still produce organic food. Local food systems cannot be assumed to be uniformly “good” or progressive, based solely on a geographical basis (DuPuis and Goodman 2005; Winter 2003). Scholars have in fact pointed out that research on AFNs has frequently focused on consumers and has often ignored producers, thus neglecting to explore the social conditions of farmers and, especially, those of farm workers (Goodman 2004). There has also been

criticism on AFN regarding environmental impacts: some of the metrics used to determine how environmental or sustainable a system or product is, such as food miles, are not the best or an even accurate tools to judge appropriate environmental goals (Edwards-Jones et al. 2008; Oglethorpe 2009).

3. See also the extensive work being undertaken within the project, recently funded by the European Union, *Pastres: Pastoralism, Uncertainty and Resilience* led by Ian Scoones, Michele Nori, and Jeremy Lind (<https://pastres.org>).
4. For an historical and geographical account of transhumance in the Mediterranean see Braudel (1995). On diverse types of transhumance's entanglements with capitalism see, e.g., Shields (1992) and Chang and Koster (1994).
5. These terms in different languages are important to note for two main reasons: first, the case study explored later in the chapter is located in South Tyrol/Alto Adige, in Italy, where German is primarily spoke by its inhabitants; second, German-speaking academics would not classify *Almwirtschaft* as a form of transhumance (*Transhumanz* or *Wanderweidewirtschaft*) but as the "economy of the alpine hut" (its literal translation), which points to the specific economic activity related to pasturing and cheese production. See "Transhumanz" in Wikipedia, where *Almwirtschaft* is described as a mistaken form of transhumance: <https://de.wikipedia.org/wiki/Transhumanz>, retrieved 10 June 2020. See also [https://de.wikipedia.org/wiki/Alm_\(Bergweide\)](https://de.wikipedia.org/wiki/Alm_(Bergweide)), retrieved 11 July 2020.
6. Non-lactating cows are brought to the pastures to save money for their feeding.
7. Recent scholarship in human-animal studies and cognate fields have demonstrated how farm and other animals are also individuals who do work. See, notably, Jocelyne Porcher's extensive work (2014, 2017); see also Barua (2019), Coulter (2016), Lainé (2020). In this chapter, however, we maintain a humanist perspective on transhumance. A more-than-human/posthuman perspective on the economies of transhumance is at the core of Colombino's ongoing research (see Colombino and Palladino 2019).
8. The data on the history of the area of the two Alms was gleaned from an interview with Ernst Pingerra, the current Alm Meister (the director of the Alm). The data used for the account of the Alm are the outcome of participant observations conducted in the summer of 2016 primarily by Jeffrey as he was working as a cow shepherd and as an assistant to the cheese maker on the Alm. It must also be noted that Jeffrey worked on this Alm for four seasons. Annalisa conducted some ethnographic incursions in the same Alm and, from the vantage point of the Upper Alm, she observed the pastures and the Alm's human and animal workers for nearly two weeks in 2016, from 12 to 25 August. She conducted two semi-structured interviews with the Alm's workers and had several informal conversations with the shepherd responsible for the dry cows, with the Upper Alm's manager, and some of the valley's farmers who visited the Alm.
9. During the summer some individual animals go back to their farms if they are close to giving birth or if they are injured. More commonly, some cows leave the Alm when they are *galtovieh* (a young female cow who is pregnant but has

- never delivered a calf before) and do not produce enough milk. In this case, they are moved higher in the pastures and are taken care of by another shepherd. When these cows are close to giving birth (about two weeks before) then they are brought back to their home farms by trailer.
10. The horses required little work or interaction and were located approximately one to two kilometers away from the Alm.
 11. Approximately halfway through the season the schedule was changed to allow only one person to milk the goats and the other person would begin making the butter.
 12. For the 2016 season, direct start was also made in the last two weeks in July to add to the total direct start produced and give more of a variety to the farmers.

References

- Allen, Patricia, Margaret FitzSimmons, Michael Goodman, and Keith Warner. 2003. "Shifting Plates in the Agrifood Landscape: The Tectonics of Alternative Agrifood Initiatives in California." *Journal of Rural Studies* 19(1): 61–75.
- Baritoux, Virginie, Marie Houdart, Jean Pierre Boutonnet, Carole Chazoule, Christian Corniaux, Philippe Fleury, and Jean François Tourrand. 2016. "Ecological Embeddedness in Animal Food Systems (Re-) Localisation: A Comparative Analysis of Initiatives in France, Morocco and Senegal." *Journal of Rural Studies* 43: 13–26.
- Barron, Elizabeth, and Hess, Jaqueline. 2020. "Non-Human Labour: The Work of Earth Others." In *The Handbook of Diverse Economies*, ed. J. K. Gibson-Graham and Kelly Dombroski, 163–69. Cheltenham: Edward Elgar Publishing. <https://doi.org/10.4337/9781788119962.00026>.
- Barua, Maan. 2019. "Animating Capital: Work, Commodities, Circulation." *Progress in Human Geography* 43(4): 650–69.
- Bätzing, Werner. 1996. *Landwirtschaft im Alpenraum—unverzichtbar, aber aber zukunftlos?* Berlin: Blackwell Wissenschafts-Verlag.
- Braudel, Fernand. 1995. *The Mediterranean and the Mediterranean World in the Age of Philip II: Volume I*. Berkeley: University of California Press.
- Bruckner, Heide K., Annalisa Colombino, and Ulrich Ermann. 2019. "Naturecultures and the Affective (Dis)Entanglements of Happy Meat." *Agriculture and Human Values* 36: 35–47.
- Buller, Henry J. 2008. "Adding Value in Pasture Based Systems: Reflections on Britain and France." *Proceedings of the British Society of Animal Science*: 11–14.
- Carroll, Rory. 2000. "Iceman is Defrosted for Gene Tests: New Techniques May Link Copper Age Shepherd to Present-Day Relatives." *The Guardian*, 26 September. Retrieved 25 July 2020 from <https://www.theguardian.com/world/2000/sep/26/rorycarroll>.
- Chang, C., and Koster, H. A., eds. 1994. *Pastoralists at the Periphery: Herders in a Capitalist World*. Tucson: University of Arizona Press.
- Cleary, Mark C. 1987. "Contemporary Transhumance in Languedoc and Provence." *Geografiska Annaler: Series B, Human Geography*. 69(2): 107–13.

- Colombino, Annalisa. 2018. "Becoming Eataly: The Magic of the Mall, the Magic of the Brand." In *Branding the Nation, the Place, the Product*, ed. Ulrich Ermann and Klaus Hermankik, 67–90. London: Routledge.
- Colombino, Annalisa, and Paolo Giaccaria. 2013. "Alternative Food Networks tra il locale e il globale. Il caso del Presidio della Razza Bovina Piemontese." *Rivista Geografica Italiana* 122: 225–40.
- . 2016. "Dead Liveness/Living Deadness: Thresholds of Non-Human Life and Death in Biocapitalism." *Environment and Planning D: Society and Space* 34(6): 1044–62.
- Colombino, Annalisa, and Paolo Palladino. 2019. "In the Blink of an Eye: Human and Non-Human Animals, Movement and Bio-Political Existence." *Angelaki: Journal of the Theoretical Humanities* 25(5): 168–83.
- Coulter, Kendra. 2016. *Animals, Work, and the Promise of Interspecies Solidarity*. New York: Palgrave Macmillan.
- Cox, Rosie, Lewis Holloway, Laura Venn, Moya Kneafsey, and Elizabeth Dowler. 2011. "Adopting a Sheep in Abruzzo: Agritourism and the Preservation of Transhumance Farming in Central Italy." In *Tourism and Agriculture: New Geographies of Consumption, Production and Rural Restructuring*, ed. Rebecca Maria Torres and Janet Momsen, 151–60. London: Routledge.
- Dong, Shikui, Lu Wen, Liu Shiliang, Zhang Xianfen, James Lassoie, Shaoliang Yi, Xiaoyan Li, Jimpeng Li, and Yuanyuan Li. 2011. "Vulnerability of Worldwide Pastoralism to Global Changes and Interdisciplinary Strategies for Sustainable Pastoralism." *Ecology and Society* 16(2): unpaginated.
- DuPuis, E. Melanie, and David Goodman. 2005. "Should We Go 'Home' to Eat?: Toward a Reflexive Politics of Localism." *Journal of Rural Studies* 21(3): 359–71.
- Edwards-Jones, Gareth, Llorenç Milà i Canals, Natalia Hounsome, Monica Truninger, Georgia Koerber, Barry Hounsome, and David. L. Jones. 2008. "Testing the Assertion That 'Local Food is Best': The Challenges of an Evidence-Based Approach." *Trends in Food Science and Technology* 19(5): 265–74.
- European Commission. 2009. *New Insights Into Mountain Farming in the European Union*. Document: SEC(2009)1724. Retrieved 10 June 2020 from http://mountainlex.alpconv.org/images/documents/EU/CSWD_new_insights_mount_ain_farming.pdf.
- Fendrychová, Lenka, and Petr Jehlička. 2018. "Revealing the Hidden Geography of Alternative Food Networks: The Travelling Concept of Farmers' Markets." *Geoforum* 95: 1–10.
- Festi, Daniela, Andreas Putzer, and Klaus Oeggl. 2014. "Mid and Late Holocene Land-Use Changes in the Ötztal Alps, Territory of the Neolithic Iceman 'Ötzi.'" *Quaternary International* 353(1): 17–33.
- Forney, Jérémie. 2016. "Enacting Swiss Cheese: About the Multiple Ontologies of Local Food." In *Biological Economies: Experimentation and the Politics of Agri-food Frontiers*, ed. Richard Le Heron, Hugh Campbell, Nick Lewis, and Michael Carolan, 67–81. London: Routledge.
- Garnett, Tara, Cécile Godde, Adrian Muller, Elin Rööös, Pete Smith, Imk de Boer, Erasmus zu Ermgassen, Mario Herrero, Corina van Middelaar, Christian Schader, and Hannah van Zanten. 2017. "Grazed and Confused? Ruminating

- on Cattle, Grazing Systems, Methane, Nitrous Oxide, the Soil Carbon Sequestration Question—And What It All Means for Greenhouse Gas Emissions.” Food Climate Research Network, University of Oxford. Accessed on 10 June 2020 from <https://library.wur.nl/WebQuery/wurpubs/fulltext/427016>.
- Gibson-Graham, J. K. 1997. “The end of capitalism (As We Knew It): A Feminist Critique of Political Economy.” *Capital & Class* 21(2): 186–88.
- . 2014. “Rethinking the Economy with Thick Description and Weak Theory.” *Current Anthropology* 55(S9): 147–53.
- Gibson-Graham, J. K., and K. Dombroski, eds. 2020. *The Handbook of Diverse Economies*. Cheltenham: Edward Elgar Publishing.
- Goodman, David. 2004. “Rural Europe Redux? Reflections on Alternative Agro-Food Networks and Paradigm Change.” *Sociologia Ruralis* 44(1): 3–16.
- Goodman, David, and Michael K. Goodman. 2009. “Alternative Food Networks.” In *International Encyclopedia of Human Geography*, ed. Robert Kitchin and Nigel Thrift, 208–20. Oxford: Elsevier.
- Grasseni, Cristina. 2007. “Managing Cows: An Ethnography of Breeding Practices and Uses of Reproductive Technology in Contemporary Dairy Farming in Lombardy (Italy).” *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences* 38(2): 488–510.
- . 2020. “Direct Food Provisioning: Collective Food Procurement.” *The Handbook of Diverse Economies*. Cheltenham: Edward Elgar Publishing. Digital.
- Hartel, Tibor, Tobias Plieninger, and Anna Varga. 2015. “Wood Pastures in Europe.” In *Wood-Pastures in Europe. Europe’s Changing Woods and Forests: From Wildwood to Managed Landscapes*, ed. Keith Kirby, and Charles Watkins, 61–76. Nosworthy Way: CABI Press.
- Healey, Stephen. 2020. “Alternative Economies.” In Kobayashi, Audrey (ed.) *International Encyclopedia of Human Geography*, ed. Audrey Kobayashi. Oxford, UK: Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10049-6>.
- Hinrichs, Clare C. 2000. “Embeddedness and Local Food Systems: Notes on Two Types of Direct Agricultural Market.” *Journal of Rural Studies* 16(3): 295–303.
- Holloway, Lewis. 2002. “Virtual Vegetables and Adopted Sheep: Ethical Relation, Authenticity and Internet: Mediated Food Production Technologies.” *Area* 34(1): 70–81.
- Holloway, Lewis, Moya Kneafsey, Laura Venn, Rosie Cox, Elizabeth Dowler, and Helena Tuomainen. 2007. “Possible Food Economies: A Methodological Framework for Exploring Food Production—Consumption Relationships.” *Sociologia Ruralis* 47(1): 1–19.
- Jarosz, Lucy. 2008. “The City in the Country: Growing Alternative Food Networks in Metropolitan Areas.” *Journal of Rural Studies* 24(3): 231–44.
- Jehlička, Petr. 2021. “Eastern Europe and the Geography of Knowledge Production: The Case of the Invisible Gardener.” *Progress in Human Geography* 45(5): 1218–36.
- Jehlička, Petr, Miķelis Grīviņš, Oane Visser, and Bálint Balázs. 2020. “Thinking Food Like an East European: A Critical Reflection on the Framing of Food Systems.” *Journal of Rural Studies*. Retrieved 22 July 2020 from <https://doi.org/10.1016/j.jrurstud.2020.04.015>.

- Jehlička, Petr, and Joe Smith. 2011. "An Unsustainable State: Contrasting Food Practices and State Policies in the Czech Republic." *Geoforum* 42(3): 362–72.
- Jeschke, Hans Peter, and Peter Mandl. 2012. "Eine Zukunft für die Landschaften Europas und die Europäische Landschaftskonvention." *Klagenfurter Geographische Schriften* 28: 185–325.
- Juler, Cainerol. 2014. "După coada oilor: Long-Distance Transhumance and its Survival in Romania." *Pastoralism* 4(1): 1–17.
- Knowles, Tim, Richard Moody, and Morven McEachern. 2007. "European Food Scares and Their Impact on EU Food Policy." *British Food Journal* 109(1): 43–67.
- Lainé, Nicolas. 2020. *Living and Working with Giants: A Multispecies Ethnography of the Khamti and Elephants in Northeast India*. Paris: Muséum national d'Histoire naturelle.
- Laiolo, Paola, Francesca Dondero, Enza Ciliento, and Antonio Rolando. 2004. "Consequences of Pastoral Abandonment for the Structure and Diversity of the Alpine Avifauna." *Journal of Applied Ecology* 41(2): 294–304.
- Mathieu, Jon. 1992. *Eine Agrargeschichte der inneren Alpen, Graubünden, Tessin, Wallis 1500–1800*. Zurich: Chronos.
- McGahey, Daniel, and Jonathan Davies. 2014. *Pastoralism and the Green Economy—A Natural Nexus?* Nairobi: IUCN and UNEP.
- Miele, Mara. 2011. "The Taste of Happiness: Free-Range Chicken." *Environment and Planning A: Economy and Space* 43(9): 2076–90.
- Nori, Michele, and Valentina de Marchi. 2015. "Pastorizia, biodiversità e la sfida dell'immigrazione: il caso del Triveneto." *Culture della sostenibilità* 8(15): 78–101.
- Nori, Silvia, and Michele Gemini. 2011. "The Common Agricultural Policy Vis-à-Vis European Pastoralists: Principles and Practices." *Pastoralism: Research, Policy and Practice* 1(1): 1–8.
- Oglethorpe, David. 2009. "Food Miles – the Economic, Environmental and Social Significance of the Focus on Local Food." *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 4(72): 1–11.
- Orland, Barbara. 2004. "Alpine Milk: Dairy Farming as a Pre-Modern Strategy of Land Use." *Environment and History* 10(3): 327–64.
- Palladino, Paolo. 2017. "Transhumance Revisited: On Mobility and Process Between Ethnography and History." *Journal of Historical Sociology* 31(2): 119–33.
- Philippopoulos-Mihalopoulos, Andreas. 2012. "The Triveneto Transhumance: Law, Land, Movement." *Politica & Società* 3: 447–68.
- Porcher, Jocelyne. 2014. "The Work of Animals: A Challenge for the Social Sciences." *Humanimalia* 6(1). Retrieved 1 October 2020 from http://www.depauw.edu/site/humanimalia/issue_percent2011/porcher.html.
- . 2017. *The Ethics of Animal Labour. A Collaborative Utopia*. New York: Palgrave MacMillan.
- Reitmaier, Thomas, Thomas Doppler, Alistair W. G. Pike, Sabine Deschler-Erb, Irka Hajdas, Christoph Walser, and Claudia Gerling. 2018. "Alpine Cattle Management During the Bronze Age at Ramosch-Mottata, Switzerland." *Quaternary International* 484: 19–31.

- Renting, Hank, Terry K. Marsden, and Jo Banks. 2003. "Understanding Alternative Food Networks: Exploring the Role of Short Food Supply Chains in Rural Development." *Environment and Planning A: Economy and Space* 35(3): 393–411.
- Ruff, Christopher B., Brigitte M. Holt, Vladimir Sládek, Margit Berner, William A. Murphy, Dieter Zur Nedden, Horst Seidler, and Wolfgang Recheis. 2006. "Body Size, Body Proportions, and Mobility in the Tyrolean 'Iceman.'" *Journal of Human Evolution* 51(1): 91–101.
- Sal, Antonio Gómez, Felix Herzog, and Ian Austad, eds. 2004. *Transhumance and Biodiversity in European Mountains. Report of the EU-FP5 Project TRANSHU-MOUNT*, IALE Publication Series 1. Alterra: Wageningen.
- Shields, S. D. 1992. "Sheep, Nomads and Merchants in Nineteenth-Century Mosul: Creating Transformations in an Ottoman Society." *Journal of Social History* 25(4): 773–89.
- Smith, Joe, and Petr Jehlička. 2013. "Quiet Sustainability: Fertile Lessons from Europe's Productive Gardeners." *Journal of Rural Studies* 32: 148–57.
- Stassart, Pierre, and Sarah J. Whatmore. 2003. "Metabolising Risk: Food Scares and the Un/Re-Making of Belgian Beef." *Environment and Planning A: Economy and Space* 35(3): 449–62.
- Tregear, Angela. 2011. "Progressing Knowledge in Alternative and Local Food Networks: Critical Reflections and a Research Agenda." *Journal of Rural Studies* 27(4):419–30.
- Turner, Matthew D., John G. McPeak, Kramer Gillin, Erin Kitchell, and Niwaeli Kimambo. 2016. "Reconciling Flexibility and Tenure Security for Pastoral Resources: The Geography of Transhumance Networks in Eastern Senegal." *Human Ecology* 44(2): 199–215.
- Urbanik, Julie. 2012. *Placing Animals: An Introduction to the Geography of Human-Animal Relations*. New York: Rowman & Littlefield.
- Venn, Laura, Moya Kneafsey, Lewis Holloway, Rosie Cox, Elizabeth Dowler, and Helena Tuomainen. 2006. "Researching European 'Alternative' Food Networks: Some Methodological Considerations." *Area* 38(3): 248–58.
- Von Sturler, Manuel, dir. 2013. *Winter Nomads*. Louise Productions. Documentary.
- Winter, Michael. 2003. "Embeddedness, the New Food Economy and Defensive Localism." *Journal of Rural Studies* 19(1): 23–32.
- Zendri, Francesco, Enrico Sturaro, and Maurizio Ramanzin. 2013. "Highland Summer Pastures Play a Fundamental Role for Dairy Systems in an Italian Alpine Region." *Agriculturae Conspectus Scientificus* 78(3): 295–99.
- Zoller, Heinrich. 1960. "Die kulturbedingte Entwicklung der insubrischen Kastanienregion seit den Anfängen des Ackerbaus im Neolithikum." *Bericht des Geobotanischen Institutes der ETH Stiftung Rubel* 32: 263–79.