What Does a High-Altitude Farmer Do? Different Perspectives on Mountain Practices

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Abstract

This chapter explores the challenges currently faced by high altitude farmers in South Tyrol (Italy) who maintain their farms at altitudes between 1,300 m and 1,900 m. It examines the transformation that these workplaces have undergone in recent decades, from subsistence-based multi-generational family farms to specialised monoculture dairy operations. A development caught up in the contradictory relationship between resilient notions of rural life and urban condescension, and in the modern hybrids of "nature" and "culture". A brief historical review of the medieval and early modern periods shows that such changes in agricultural intensification are not the exception but the rule, and are often, as in the case of the most recent changes, politically driven. Two case studies illustrate the impact of these changes on individual farmers and the variability in their implementation. The most recent transformation, while initially successful in preventing vertical out-migration and preserving the cultural landscape, is currently facing challenges due to increasing regulatory demands in relation to various subsidies on which farmers rely, and due to fluctuations in grain and milk prices. This shows the low resilience of the industrialised system but contrasts intriguingly with the century-long tenacity with which high altitude farmers still insist on remaining on their hard-to-operate mountain farms.

The farmstead of Michael (54 years, unmarried) is situated 1,620 m above sea level and looks towards the impressive massif of the Ortler glacier. The hayfields and woods belonging to the farm are steep and remote. Summarising his work, he says: "my twelve cows are my boss". A chat group informs his brothers, sisters and cousins, all living in the villages of the valley bottom, which days they should join him for haymaking. At harvest time, he makes fine discriminations between one day and the other regarding the effect on

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the quality of his hay, influencing ultimately the quality of the milk he delivers. In the months when he has no hay work, he has a job with the forestry department to be able to maintain the farm, which has been in his family for several generations.[1]

What keeps Michael going? Is it rural nostalgia? Why is he still up there? The ethnographic vignette, which represents a typical situation of certain mountain farms in South Tyrol, raises some questions and issues that will be discussed in this contribution.

During the last decade, anthropologists have increasingly studied industrialized farming, be it against the background of food production, the Anthropocene, climate change, human-animal relationships or ecology. There are two recurring themes in these works, which are discussed here against the background of fieldwork with high altitude farmers in South Tyrol (Italy) who maintain isolated farmsteads on steep mountain slopes at altitudes above 1,300 m.[2] The first issue concerns the resilient imaginaries of rural life, the second the confused and tense relationship between "nature" and "culture". Together, they shape the modern farming industry and food production. Insofar as they are directed towards the countryside (Jenkins, 2011, p. 56), industrial societies throughout north-western Europe and elsewhere seem to be built on a contradictory relationship between rural nostalgia and urban condescension.

Concerning the northernmost limit of commercial apple production in Western Norway, and the ambiguities behind a seemingly smooth progressive commercialization and industrialization of these fruits, we find producers and vendors constantly struggling to keep both, the idea of a natural product and a liveable environment alive (Hastrup, 2018). Hansen reports of a similar ambiguity in the context of industrial dairy farming in Japan (2014a and 2014b). Hardly any ambiguity seems even left in Ofstehage's example of huge scale soybean production in Bahia, Brazil, where North American farmers practice transnational "flexible farming" (2018 and 2020). They push

1 The first names used in this text are pseudonyms.

2 This research was made possible by a three-year research project, led by Elisabeth Tauber: 'Naturally' relating to land. Mountain farming in the Alps - an ethnographic study (2019-2022). I thank the Free University of Bolzano for generous funding. See also Schneider and Tauber (2020). I am very grateful to the anonymous peer reviewers for their pertinent and insightful comments on this chapter.

the boundaries of family farming and manage to find new forms of engaging with land in agrarian communities, regarded as "out of place", alienated from customary social and physical relations.

It is interesting that when it comes to Danish pig farms, Anneberg et al. (2013) take their cue for investigating references to nature from an analysis of the advertisement strategy of the Europe-wide operating dairy plant for organic milk, Arla. Apropos Norwegian apples, Hastrup (2018) describes how, in their advertising campaigns, apple farmers manage to present the charms and potentials of fruit production so that highly cultural practices such as grafting, fertilizing, implanting, preserving, and pesticide-spraying, in fact play into "naturalizing" these apples. A pronounced instance is similarly the vibrant advertising activity in South Tyrol. Here the tourist industry, the farmer's association, agricultural manufacturers and dairy plants likewise make use of images of traditionally built farmsteads, green meadows and placid, picturesque cows. Advertisement in agrobusiness or tourism reveals, it seems, the nature-culture paradox in a particularly striking way.

An exoticizing view of the European mountain agricultural landscape, including its significant role in art history, contributes to the romantic gaze of urban people on an area they experience as a rural idyll (Norbye, 2018, p. 441). More importantly, relations existing between farming, landscape, nation-building and thus national identity are assumed to be intrinsic (Norbye, 2018 and Anneberg et al.; for Denmark), a connection that is also clearly emphasized in South Tyrol as well as in the neighbouring Alpine countries of Austria and Switzerland. Here, most sectors and actors – be they consumers of organic and sustainable or conventional food, tourists, farmers, agricultural businesses, and consultants or, indeed, the advertising industry – are deeply intertwined in "hybrids of nature and culture", in what is widely understood as a paradox of modernity (Latour, 1993, p. 11 and 30ff.). Industrialized food production offers a classic example of the paradoxical interaction of "translation" and "purification" (ibid.). But the paradox does not cover everything, or rather it is not the whole story. The kind of paradox dealt with, the particular expression it takes, depends on which actor is being considered. This contribution will therefore focus specifically on mountain farmers in South Tyrol, and we might ask where in their perspective such views appear and where they do not; this particular example might provide a reveal-

ing glimpse into the paradox of resilient rural imaginaries and the confused contemporary relationship between nature and culture. The question of why the farmers stay up there in the first place may have something to do with it.

High Altitude Farms as Part of Industrialized Farming

Beginning this account with reflections from anthropological works on industrialized farming was deliberate: I argue that vertically operating high-altitude farms in some parts of the Alps are indeed part of this industry. Even though the single farmsteads, with their often centuries old buildings, hanging on steep mountain slopes, in the middle of verdant meadows, which are often cut by hiking paths, do not give that appearance at all. During fieldwork in South Tyrol, I lived and worked on several such high-altitude farms which average less than 10 ha (25 ac).

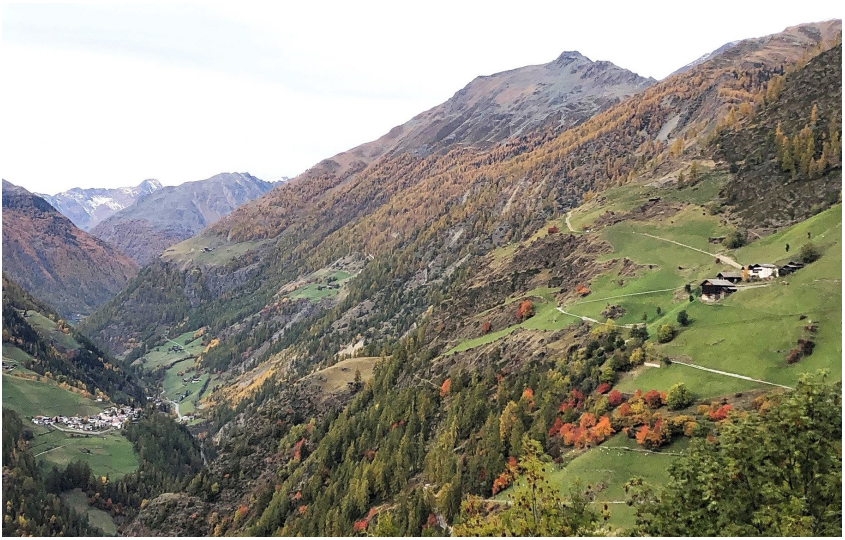

Figure 1 – View into a side valley in South-Tyrol (2022); mountain farms at heights between 1,600 m and 1,800 m.

Until the 1940s, these farms were regularly inhabited and managed by multi-generational families and, depending on their size, several maids and farmhands. The economic model of the time was mainly based on subsistence production and aimed at maximum autonomy. In contrast to the lower-lying agricultural areas, regional market integration remained limited for high-altitude farms due to the previous orientation towards subsistence farming on the surrounding land and with their own labour (Cole and Wolf, 1999, p. 84ff.). Only a few products (e.g. cheese, eggs, cow or sheep meat), if there was a surplus, were marketed in the nearby village and generated some income.

Agriculture and forestry have always predominantly shaped the South Tyrolean altitudinal landscape, and in the early 1960s, the province of Bolzano was still one of the most heavily agricultural areas of the Italian and Austrian Alps. By the early 1970s, rapid modernisation, industrialization and increase in prosperity started to show among the urban and village population (see Cole and Wolf, 1999, p. 92ff.). This made it even more obvious that the farmers in the high altitudes had fallen far behind. For a quite comparable situation in Switzerland, Weiss wrote in 1962 of the external (economic and political) and internal (mental) crisis of the mountain farmers; he spoke of proletariats and slums which are not to be found in cities but in the mountain valleys (1962, p. 236). And he went as far as referring to "sick valleys", threatened by permanent or seasonal "flight from the heights" by their despondent population (241). At the beginning of the 1960s, Weiss considered the high mountain area facing a phase of rapid and confusing upheaval (249). In their book Heirs of Loneliness (2003[1975]), journalist Aldo Gorfer and photographer Flavio Faganello describe very similar conditions. In the early 1970s, they hiked to isolated high altitude farms in several mountain valleys in South Tyrol to document the living circumstances and speak with the residents, more and more of whom were about to seek seasonal work in the valleys which led to neglect of the farms. With the same motive, participating in the economic upswing, many farmers entertained or realized the idea of giving up their farms and moving further down, where they expected easier, less risky work and better education and prospects for the next generation.

The provincial government recognised that the presence and survival of these farms was under immediate threat, while the cultural landscape creat-

ed by centuries of agricultural activity was crucial to the development of the tourism sector on which much of the emerging prosperity in the valleys depended. Therefore, the government put into place a comprehensive program to support to high-altitude farmers who attended to this landscape, crucial to the rural imaginary on which the tourism sector is heavily focused. In the late 1970s, government policy supported a significant expansion of the infrastructure serving these remote farms (to date), and strongly encouraged farmers to change their mixed crop-livestock subsistence farms into monoculture dairying farms. Bätzing (2005, p. 132f.) rightly points out that South Tyrol started this structural change towards market-oriented dairy farming relatively late compared to Austria and Switzerland. This was due to its particular historical situation. For centuries, German-speaking South Tyrol was part of the County of Tyrol and belonged to the Austro-Hungarian Monarchy. After WWI and the collapse of the Habsburg monarchy, Tyrol was divided by the Treaty of St. Germain (1919) and South Tyrol became part of Italy. In the early 1920s, Italian Fascism implemented a violent Italianisation policy, which the Italian state continued in a more moderate form until the 1950s. After WWII, South Tyrol tried to re-integrate into Austria, an attempt that was unsuccessful but laid the foundations for its statute as an autonomous province of Italy, which would be realised 25 years later.[3] Until the mid-1970s, South Tyrol was thus preoccupied with its struggle for political autonomy within Italy, which it obtained in 1972 and which laid the foundations for a strongly developed South Tyrolean "national" identity.

In the late 1970s, it was hoped that with a strong focus on dairy farming several problems would be addressed at the same time: enabling the mountain farmers to generate sufficient income on their land to support a nuclear family, maintaining and developing the farms, stopping vertical migration and preserving the cultural landscape.[4] The smaller local dairy cooperatives in the valleys, which had, at the beginning of the 20th century been organized

3 See for a more detailed version Steiniger 1997

4 In the lower-lying, flatter areas in the eastern districts of the region (Eisack Valley, Bozen Unterland, Burggrafenamt and Vinschgau Valley), a corresponding transformation to very profitable intensive apple monoculture had been taking place since the late 1960s. In the western Puster Valley, where the climate is less favourable to fruit-farming, the mixed crop-livestock subsistence farms were converted into correspondingly larger monoculture dairying farms.

by farmers around the needs of processing and selling the products of their farms, began to merge into larger units during the 1970s to professionalize the collection of milk and its marketing. They have by now grown into very large companies, by and large independent of the farmers, that focus on optimizing their own business operations. Today, four very large dairy cooperatives (with 500 to 2,000 members) dominate the South Tyrolean market.

In order to support the conversion to pure dairy farming 50 years ago, the construction of larger barns, cowsheds, milking machines, refrigeration systems and cable cars (to transport milk to roads accessible to refrigerated lorries) was heavily subsidised over a number of years. Farmers were advised to switch to non-local breeds of high-yielding cows. Where arable farming had previously been practised, the land was levelled and reseeded with non-local grass and clover mixtures to allow the use of modern machinery, thus guaranteeing a larger hay crop, sufficient to feed the increased number of cattle, which now spend considerably more time indoors than out in the fields. The logic and rationale of farming practices changed significantly, and new technology was not the only area in which agribusiness came to the fore. Farmers were trained in the use of grain-based concentrates to increase milk production, and as a result of this new feeding practice, barns had to be equipped with slurry pits and connected hoses to spread the slurry over the hay fields. Farmers had to familiarise themselves with the rules governing the use of medicines in cows and the collection of milk samples, which they send weekly to the provincial dairy association's laboratory for analysis of the milk's constituents. They had to familiarise themselves with the hygiene standards in the new "dairy kitchens", inevitable adjuncts of the new barns. Within a few years, the transition to industrial dairy farming was complete.

While in the Italian or German lowlands the comparable transformation reached its epitome in large-scale establishments that comprise several hundred head of cattle, in the Alpine highlands the same processes shaped small-scale enterprises that had to provide a living from 10–20 cows per farm. Making these farms thus viable was recognized as an achievement. It ensured the supply of local dairy products to the growing urban population of South Tyrol but, more importantly, it was a successful reaction to counter the impending vertical migration that loomed in the 1960s. At the same time, it "kept open" the cultural landscape for which these small structures are de-

cisive. The intensification of agriculture in geographically more favourable, i.e. flatter, locations, which has been globally transformative since the 1950s, has generally been achieved by an increase in the size of farms and agricultural land, being based on the logic of economies of scale. On the contrary, these small mountain enterprises present us with an example where the geographical constraint in keeping a moderate size is linked with the possibility of a profitable livelihood. The combination of conservation and commercialisation seems to be another variant of the paradox mentioned above (Latour, 1993): to maintain the outward appearance of picturesque individual farms in the high mountains, surrounded by green pastures, while at the same time transforming the inside into a modern dairy monoculture.

For a time, these changes were welcomed by many high-altitude farmers, and indeed the measures have been effective in that South Tyrol has been spared the extreme emigration from high altitudes that has severely affected other regions of the Italian (and French) Alps.[5] However, enthusiasm about this transformation to what are now called 'economically viable farms' has been significantly dampened for at least a decade. Milk prices no longer meet farmers' expectations, while animal welfare requirements and growing safety and ecological standards demand ever more – and considerable -- investments from them.

The development towards an intensified industrialized farming that these mountain farmers experienced in the last third of the 20th century is, contrary to what one might think, not "modern" at all. It is far from being the first introduction of agricultural intensification in this area. In the high and late Middle Ages, so-called *Schwaigen* (Alpine dairy farms) were established by landlords at high altitudes, especially in the Tyrol. At this altitude, where cereals are no longer grown, dairy farming was the only form of agriculture, and the tenants paid their land rent in cheese. This way of farming was, at the time, a new attempt to use the higher altitudes more intensively and with greater economic gain than before (Bätzing, 2005, p. 64f.). The heyday of intensive dairy farming on the Schwaigen farms came to an end with the

5 The problem of vertical out-migration (leaving the higher places of residence for the valley bottoms and urban centres) is well known for other provinces of the Italian Alps (Bätzing, 2003, p. 271–283).

outbreak of the plague in 1348 and the deterioration of the climate (cooling down). Many farms at very high altitudes were abandoned. Self-sufficiency became more important again. But then the same occurrence happened again. The historian Mathieu shows that between the 16th and 18th centuries, a very marked process of agricultural intensification can be traced throughout the Alpine region. Small livestock declined significantly in favour of a considerable increase in the number of dairy cattle. Farmers specialized in the production of long-life cheese that was exported far beyond the Alps. They thus responded not only to the rising demand of the urban population in Southern Germany, Eastern France and Northern Italy but also to the demand from travellers by land and by sea whose number had increased significantly during these centuries and who had great need of durable food (Mathieu, 2001, p. 56ff.).

Both waves of intensification receded, for various historical reasons, over the following centuries. The most recent intensification of high-altitude farming in South Tyrol, from the 1970s onwards – once more encouraging specialization in dairying – has possibly already passed its peak after half a century. Neither the market situation nor environmental requirements are likely to be able to cope with its impact. Thanks to successful communication strategies, starting at the EU level and down to the local branches of the South Tyrolean agricultural advisory centres, however, this recent development is presented neither as a step backwards nor as a necessary correction. It is rather considered a further development and adaptation to changed market conditions and as yet another strategy to ensure the continuity of small-scale high-altitude farming. National and EU-subsidies are now increasingly linked to agricultural diversification, and the provincial agricultural office (*Landwirtschaftsamt*), the Farmers' Association (*Südtiroler Bauernbund*) and the consulting cooperative Advisory Ring on Mountain Farming (*BRING*) are steering with a great deal of effort in this new direction.

Subsidy, Regulation, Conservation, and Image

The rapid conversion to a kind of industrial farming in this region, where the rough terrain still demanded the preservation of small-scale structures,

could only be maintained and further developed thanks to two actors. On the one hand are the state agencies, that need to continuously adapt the conditions for funding to changes in policies, to the market situation and to technological changes, and on the other there are the mountain farmers, who need to constantly be on their toes and cooperate in this game.

At the time when the provincial government encouraged mountain farmers to switch to dairy production, extensive infrastructure improvements had been made. In just a few years, the road network was extended to connect to nearly every individual resident in often remote farmsteads, and regular snow clearance was put into place (both measures not least to ensure the daily collection of milk). School buses were set up to provide transport for all pupils coming from the remote farms, while the construction of cable cars was encouraged for the transportation of milk and hay. Agricultural schools were established or expanded, and the provincial agricultural office developed a complex system of consultancy to ensure the further development and continuing success of what was in effect monoculture dairy farming in this mountainous region.

The economic viability of the high-altitude farms that was enabled by all these measures has had its price. For several decades now, farmers regularly need to apply for subsidies and premiums (*Beiträge*) to be obtained from the South Tyrolean provincial government and the Italian national government as well as from EU funding schemes. This not only turns them into administrators, but also obliges them to run their farms according to the rules set by the respective funders. Without this funding, most of the high-altitude farms would not survive, despite having turned to monoculture dairying, or more to the point, because of it. While a few decades ago subsidies pushed them towards plain modernisation, high-yield cows, slurry pits and levelling of high-yield meadows, nowadays they receive grants for keeping certain local cattle breeds, for feeding mainly self-grown hay, for keeping the meadows in the conditions in which they currently appear (i.e. by keeping the old fruit trees and dry stone walls), for renovating ancient living quarters and farm buildings, often listed monuments.[6]

6 Despite all the modernisation, the exterior of these listed buildings should remain unchanged, especially in view of the tourists for whom these buildings are part of the characteristic landscape and one of the main reasons to visit the area. The construction measures that are often necessary for such "monument-friendly" conversion can bring farms to their knees economically, despite the subsidies, as the case study below will show.

One of the most important provincial subsidy schemes was introduced by the end of the 1970s, the so called "hardship points" (*Erschwernispunkte*), which were meant to compensate high-altitude farmers for the difficult production conditions they endured. These points were determined for each farm according to its altitude, the steepness of the meadows, the connection to the infrastructure and its distance to the next supply centre. The calculation of these points was revised in 2008, and it may be worthwhile to have a look at the preface of the brochure published by the provincial agricultural authority, explaining this revision. Some of the perceptions of farming in this region, at least but perhaps not only from the point of view of the farmers' lobby, become quite clear here. The South Tyrolean Farmers' Association, with its 300 employees and almost 1,200 honorary functionaries, vigorously defends the interests of the province's primary sector. A powerful political and economic player and networker, it is the largest professional association in the country, representing over 20,000 farmers.

Figure 2 – Entrance to the extensive offices of the South Tyrolean Farmers' Association in Bolzano, 2024. Photo by Stefan Festini Cucco.

> Mountain farming plays a central role in South Tyrol. However, a mountain farming family can only live off and on the farm in the long term if the economic conditions are right. The possibilities for adaptation are extremely limited, as production cannot be significantly increased or expanded due to the topographical conditions. The steepness of the meadows, which requires the use of expensive special machinery, and the high altitude, which shortens the vegetation period, play a decisive role [… and] are key factors for the cultivation or abandonment of mountain farms. For some time now, attempts have been made to mitigate these disadvantages by means of compensation payments. So far, this strategy has been quite successful and to be able to use the compensation payments in an even more targeted manner, the hardship points have been revised. The result of this revision is hopefully a sufficiently fair and flexible instrument to ensure the sustainable protection of our mountain farms and cultural landscape. (...) The experience of the past decades has shown that, in view of global price pressure, support for mountain farmers is indispensable if we want to preserve mountain farms and the cultural landscape in the long term. This requires, on the one hand, broad social recognition of the services provided by mountain farming and sufficient financial support to meet the challenges on the mountain again and again. (Danninger, 2009, p. 3; my translation)

Given that this citation comes from a publication of the South Tyrolean agriculture department, it obviously originates in one of the very institutions that have driven the most recent transformation of mountain agriculture, sketched out in the previous section. One wonders whether the authors see in fact the "challenges of the mountains" against the situation in the plains, which seem to be taken as the "yardstick'" and therefore orient agricultural practices on exactly these, regardless of the very different conditions in the mountains. What is the subtext of this presentation concerning the situation of high-altitude farmers and those who try to support them?

South Tyrolean tax money is used to contribute to the support of mountain farmers, who are increasingly gaining a questionable reputation among the rest of the population, especially since they are largely exempt from tax payments (Weißensteiner, 2021; Pfeifer, 2022). In the public discourse of the province, agriculture has a strong presence, partly in terms of the public money that supports it (see the quote above), partly in terms of the formative

role that agriculture plays in the "sub-national identity", but also increasingly in terms of the dramatic environmental consequences of agricultural activities over the last fifty years. The urban and valley populations have begun to react to this contradictory situation with prejudice and hostility towards farmers. In particular, apple and grape growers in the lower valleys have been criticised for decades for their heavy use of water and pesticides, while mountain farmers have been treated more leniently. But since the daily press has increasingly reported on the spreading of liquid manure on high mountain pastures or in forests, public opinion has also become more critical. Among the valley population, mountain farmers also have the reputation of "living on subsidies", an assessment which, taken out of context, is rather inaccurate (as in Bacher, 2020; Pfeifer, 2022). As a result, they feel marginalised and misunderstood. The "broad social recognition" that Danninger considers necessary seems a long way off.

The monoculture approach to dairy farming is also showing its limitations – while the landscape looks well preserved to the untrained eye, the ecological consequences of the new land management have proved problematic. Over-fertilisation with manure, including waste from industrial feeds, depletes the soil and leads to a significant loss of biodiversity on the meadows that have been turned into hay fields. Due to the pressure to daily produce as much milk as possible, alps (high-altitude pastures above the treeline) are abandoned and overgrown, as cows spend the summer months indoors instead of on the alpine pastures (Tauber, 2024).[7] The pressure to deliver not only every day but also as much milk as possible with a high fat content demands too much from the cows; they often get sick, require numerous visits from the vet and die early.

The situation presents a curious disjunction. The cows stand in the barn as pure milk producers, while the meadows are fuelled by artificial irrigation, fertilization and the sowing of high-yield grass to achieve the greatest possible return. These practices are taught by most agricultural colleges, ad-

7 As the high alpine pastures for dairy cattle (often, but not always, commons) are currently of very little importance in South Tyrol, I will not discuss them in this article. The dairy plants do not include these grasslands, which were historically so valuable for the farmers, in their economic model.

visory agencies and funders, partly financed through tax money and given for just such an approach. The farmers who spend a lot of time with the animals every day are in a dilemma that they hardly express; they are not entirely sure whether the cows and the land are doing well under these conditions, but they are far too intertwined with the arrangement to supply local milk and landscape care in exchange for subsidies to admit to it. As we have seen in the text above (Department of Agriculture, Danninger, 2009), policymakers see themselves as "protectors" of the landscape and of mountain farmers, whom they want to compensate for their geographical disadvantage – although it is not entirely clear what is taken as the standard against which mountain farmers are to be considered disadvantaged. In return, they expect compliance with a type of agriculture that demands a lot from the ecosystem, animals and people alike. Since high mountain agriculture is indeed inextricably linked to the South Tyrolean identity (Schneider, 2022), in this "monstrous" (Latour, 1993, p. 42) connection, both policy makers and farmers pursue the same goal of preserving a cultural landscape "as it has always been" with industrial farming methods that could eliminate it in the long run.

At a global level, the intensification of agriculture has gone hand in hand with the distribution of subsidies, whether at a provincial, national or supranational level. In return for this financial support, farmers have to comply with frequently changing but standardised regulations and production conditions, which are rarely adapted to different geographical or country-specific working and production conditions. Criticism of the various negative effects of subsidies (termed "perverse subsidies" by Myers and Kent, 2001) refers to socio-economic effects that lead to a widening gap between farms that grow larger thanks to subsidies and small farms that cannot withstand the economic pressure. But it also increasingly refers to environmental degradation – resource depletion, pollution, landscape loss, misuse and overexploitation of resources – which are seen as consequences of subsidies (most recently in FAO, UNDP and UNEP, 2021).[8]

8 The subsidy machinery has already adjusted to this "new situation" by introducing the idea of agriculture as "land stewardship", the key concept in transforming the EU agricultural subsidy program in 2005. It shifts the program's focus from specific crops to achieving sustainability goals through subsidising the management and conservation of the environment (Sabaté, 2013 and Bieling and Plieninger, 2017).

Without exception, all the farmers I worked with during my research complained about the funders imposing too many restrictions on their ways of farming. At the same time, they felt compelled to resort to every bit of financial assistance available to them to be able to keep their farms and to be able to provide for their families and successors. Only very few of the farmers I encountered forego particular types of subsidies to avoid restrictions and be able to work as they see fit. Only two out of the sixty-three farms of the valley where I did fieldwork do without subsidies and membership in the farmers' association altogether. They are envied for their courage and "freedom" by the other farmers, who therefore eye them suspiciously and consider their way of cultivating their land rather dubious.

The majority of farmers seems to have internalized the new role of keepers of the cultural landscape, which politicians and farmer lobbyists have promoted and attributed to them for several decades, so that they also see the subsidies as a "compensation" to which they are entitled (Schneider, 2022). It is as though the subsidies themselves became part of the land and its yield. And indeed, much of the underlying rationale for support, whether from the provincial government or from EU programmes, relates to the land, its size and condition; it is in relation to parameters associated to farmland and to what farmers grow on it and subsidies are paid accordingly. It is therefore not surprising that, in the eyes of farmers, it is their land, the land they work on, that brings in these subsidies.

Agricultural intensification and the conservation of a type of agricultural practices on occasion go hand in hand yet at other times seem to diverge in their effects on farmers' livelihood. If farmers are negotiating this situation, what else in their circumstances might throw light on the ensuing accomplishments and predicaments? But if we are to learn anything from a farmers' perspective, it is also necessary to change the scale and attend to specific details that have not yet entered the picture.

Circumstances for Farmers

How do the fortunes of particular families weave through the agricultural history briefly sketched above? Any one set of individual circumstances also speaks to what was and was not shared in the lives of others in the vicinity. I came to know of several farms where the previous generation(s) did not manage to realize the ameliorations that would have been necessary to bring them up to date. The reasons attributed by farmers were various: cases of illness and death, other strokes of fate, inability to manage the farm (financial miscalculations, disinterest in farm work, drinking) or lack of family support.

Such was the situation on one of the farmsteads with which I became well acquainted. In the 1940s, this farm seemed to have been one of the richer ones in the area, holding relatively more land than its neighbours. It had been owned by the same family for over 500 years.[9] Shortly after the birth of her 14th child, in the early 1950s, the farmer's wife died. The husband, who according to my informants was not an overly talented farmer himself, was overwhelmed with the numerous underage children, drank too much and increasingly lost his focus. The older children took over some of the work, but there was no stringent planning or management of the enterprise, and guidance and orientation on the part of the heir was missing. In the early 1970s, the farm was handed on to the eldest son Hubert, who then was in his early 40s and single. Some younger, unmarried siblings were still on the farm, helping out. But, as my interlocutors conveyed, Hubert was a loner and had little contact with neighbours; before taking over the farm, he had worked for a few years as an unskilled labourer in the valley, but he did not complete any training. It soon turned out that his sense of the land and the animals was inadequate, and that he was unable to cope with the challenges of managing the farm. But the prestige of heading a farmstead, locally still considerable, was high and Hubert was unable to admit his failure, even when the farm

9 Parts of the farm building date back to the 14th century, making it one of the first farms on this mountain. Historical documents testify that it was a locally influential, wealthy farmstead for a long time. The present farmer's wife, who married into the farm, is extremely interested in the farmstead's past. Whenever time permits, she learns to read old manuscripts. Numerous times we have visited different archives to complete the farm archives and understand its history.

was facing bankruptcy a decade after he had taken over. The older siblings threw together all the available money to avert this situation and in the mid-1980s asked the youngest brother, Kurt, who had a wife and two young sons, to take over.

This was the time when many farms of the valley had already converted to exclusive dairy farming. Kurt could just about manage to join this phase: He gradually bought more high-yielding cows, converted fields into meadows, and installed an irrigation system to improve the hay harvest. He also began renovation works in the large farmhouse, by now only occupied by himself and his family. To create an additional source of income, he had planned with his wife to set up two holiday flats that she would take care of.[10] These plans were shattered when his wife suddenly died a couple of years after he had taken over the holding. As a widower with two young sons and no additional help on the farm, he only just managed to maintain the current situation; the renovation work was to come to a standstill for some twenty-five years.

As soon as his sons were strong enough, they helped with the daily work. The younger one went down to the valley for an apprenticeship and was to stay there. In the beginning of the 2000s, the elder one completed an agricultural apprenticeship and returned to the farm. For more than 10 years, the farm was run by father and son, the milk yield and quality gradually increased and the two slowly managed to improve some meadows and bring the farm's machinery up to date. Finally, Kurt handed over to his farmer son, Stefan, and the neighbourhood paid tribute to the two of them for their success in steering the historically significant farm out of crisis. However, the fact that the new farmer was still unmarried in his mid-thirties was viewed with misgivings. Without the prospect of continuing the farm, it would be difficult for him to push ahead with the changes that had become necessary. However, in 2014, Stefan married a woman from a village of another valley, without farming background. Like her husband, she only had one sibling, who (like her) also married into a farm and was too preoccupied to offer

10 With tourism flourishing in South Tyrol in the 1970s, when the mountain farms came under the political spotlight, the main measure to save their existence was the conversion to dairy farming, but this was immediately followed by the encouragement, especially of the women on the farms, to seek an additional income in tourism. So, there were subsidies and counselling for setting up guest rooms or holiday flats on the farms. An economic model that is still extremely successful today.

much help. Family members, as we will see even more clearly in the next case, even though they are not living on the farm, are a crucial workforce especially in the busy summer months. Nevertheless, Stefan's new wife immediately began to press ahead with the many tasks that needed to be done in and around the neglected farmhouse. In the meantime, the couple had several children, the conversion of the house to accommodate guests – interrupted twenty-five years ago – was gradually completed and father and son continue to work the farm with some success. Today, one renovation measure that has been pending for a decade, and which the farmer feels is urgently needed, is the construction of a new cowshed and barn. Both have been too old and too small for many years, and thus extremely labour-intensive, especially in view of the increasing conversion to business-oriented dairy farming in recent decades. The barn and cow shed were built 350 years ago and were intended for less than half the animals that are in it today and were indeed meant for smaller animals than the high-performance breeds common today. This makes the daily barn work of about 5 hours difficult; transporting the hay from the overfilled barn to the animals requires acrobatics, the ceiling is too low for installing a milking system, so the milk must be carried bucket by bucket to the milk kitchen. The low ceiling and few windows leave the workplace rather dark and prevent the air circulation necessary for animals and people alike. "I myself am just about coming to terms with these working conditions – whoever of my children will take over, will certainly not be able, nor willing to do so anymore".

The planning of this conversion was tough, especially since the cowshed and the barn, as the entire farm, are listed buildings and the regulations imposed by the Monuments' office hardly fit with the increasingly binding requirements on animal welfare and hygiene imposed by the agricultural office. Two of the architects involved in the planning had already given up when the Covid crisis (2020 onwards) led to an increase in prices for building materials and manpower and brought the planning to a halt. The war against Ukraine (2022 onwards) then brought about radical rises in the prices of concentrated feed and fuel, while the milk price remained the same. Now, suddenly, it seems possible that the farm may again be faced with the risk of bankruptcy due to the necessity to run into debts. The conversion plan for barn and cowshed is presently postponed until further notice. Most neighbouring farms rebuilt or at least converted their farm buildings between the

1970s and the 1990s. They are now busy with building improvement measures to bring them up to the standard that is currently required in order to obtain national and EU subsidies. For the farmer in our case study, this innovation gap is huge.

I add quite a different example that might clarify the situation of these small-scale farmers in recent generations. This farmstead has smaller land holdings but has, contrary to the first case, a geographical orientation on the valley's sunny side, which is very advantageous for good growth on the meadows. Several hectares of the nearby forest and an alpine pasture 1,000 m above the farmstead also belong to the holding. In the 1970s, a son took over the management of the farm. His wife comes from a farm further down the valley. Both spouses have several siblings who regularly came to help with the hay harvest in summer and with the structural and mechanical renovations soon to be undertaken to convert to dairy farming. Since they tackled this in the early 1980s, at the height of the conversions, that were encouraged and subsidised by the provincial government, they benefited from the maximum support offered at the time.

A second project was carried out at the end of the 1990s: the couple renovated the dilapidated cowshed and residential building on the high mountain pasture to be able to cater for and accommodate hiking tourists. Since then, the management of this building has been more or less successfully leased out to various hosts during the summer months.

In the mid-2000s, they handed the farm over to one of their daughters; her husband comes from a neighbouring farm. At that time, the holding was economically sufficiently viable to start converting to organic milk. The farmer woman's parents continue to live on the farm and are spry enough to help with the work in the cowshed, on the meadows and with raising the children. About 10 years ago, the husband started his own timber company, invested in machinery, and now cuts timber in his own forest as well as carrying out orders for other forest owners (heavy damage caused by a hurricane in 2018 in parts of the valley that needs cleaning up has meant a good order situation for him for years). The eldest son, 15, already participates in the forest works.

In recent years, the woman farmer had been able to lease additional land and to completely discontinue the previously necessary purchase of additional hay. In this generation, too, both spouses have numerous siblings who,

together with their children are ready to help with the hay harvest in summer. The good economic situation of the farm, also thanks to the timber business, has made it possible to bring the barn, the milking machine, and the dairy kitchen up to the currently necessary standard. The latest EU requirements in this respect mean major investments for many farmers, and only very few farms in the area have already succeeded in this conversion.

In comparison to the first case, it becomes strikingly clear that farmers relate their present activities to the past and the future at the same time, and that both situations are highly interdependent. The constant pressure to innovate is very evident here, as is the speed and sequence with which changes need to be implemented to have a lasting effect. But the feasibility of such investments into the future also very much depends on the situation the farm is in due to the activities of the predecessors. It seems that it would become almost impossible for Stefan's successor to catch up with the innovation gap; it is very hard for one generation to keep up with changes that should have been done over two. On the one hand, the technological changes of the last five decades, but above all their impact on the frequently changing impulses of agricultural policy, force farmers to repeatedly change the way they operate. On the other hand, their own wishes and interests in improving their working environment and that of their successors mean that most farms are always a construction site in one form or another. In the decades immediately following the policies of the 1970s (see previous section), the pressure for transformation stemmed from the policy of converting self-sufficient farms into quasi-industrial dairying. Today's impetus comes also from farmer's projects of re-diversification of sources of livelihood and local self-marketing.

Temporal Horizons of Innovation

Farmers constantly deploy temporal reasoning in such matters, whether by referring to the past, reasons why they struggle or succeed, or to the future, reasons why they do something now (such as make an investment) because they want their successors to be able to cope. All this may condense into one very powerful preoccupation: the question of farm takeover. When I asked

one farmer what his relationship with land meant to him, he said without hesitation, "when I look at my meadows, I think of my children and what they will make out of them one day". Our subsequent conversation made it clear that my question also made him remember his own past. The potential he had seen as a young farmer in this land (whose meadows, in his opinion, needed renewal), and the obligation he had felt towards the land and thus towards his predecessors, all helped him in his decision to take over the struggling farm from his father.

High altitude farmers understand the current situations of their farms as a direct consequence of what their predecessors did and speak of their own actions on the farm or on the land as something they do for their successors. When they consider the farm's past, they do so in terms of what innovations their predecessors undertook or failed to realize. And what they see as a necessary or possible project today can only be thought and planned in direct relationship to past projects - or the lack of them. The same applies for the time ahead. If farmers plan for an investment in making some areas around the farmstead or on their land more workable, they talk of themselves as profiting from these ameliorations, but dwell even more on their successors, preferably their children, who will be dependent of these alterations having been made. It is they, and their successors, who benefit in the end.

The former times that South Tyrolean farmers focus on is sometimes imagined through a nostalgic lens, but their focus on the past is also (quite literally) crucial to the way they think about their own current working practices. To be able to continue their work means making constant advances in innovation, which has always to be measured against what has been done before and what the present state of the farm is in. This could be the conditions of the meadows, the ease of looking after the animals or milking them as a result of the layout of the farm buildings, the adequacy of storage for hay and machinery, and so on. The point is that, on a small-scale farm, every one of these matters is the evident result of the farmer's own or a predecessor's actions. So, the past is generally seen as the measure to identify the kind of forthcoming transformations necessary to ensure a future for the farmstead. This applies to the past prior to the 1970s, the more self-sufficient, diversified mountain farms that were hardly oriented toward the market, as well as the period of new policies, which saw the consolidation of quasi-industrialized

dairy farming that generated income to re-invest in intensive milk production. Moreover, nowadays that past is looked back at from a present in which, given the problems that the monoculture of dairy farming means for the animals, soil and species loss, policy advice goes towards a *re-diversification* of farm activities (re-introducing more diversity among animals and crops) and promotes self-marketing to generate income.

Nevertheless, the daily work of high-altitude dairy farmers implies that they also focus very much on the present. The current seasonal weather conditions, the everyday needs of the animals and the functioning of machinery all require regular as well as immediate acting. Often, what has been done the previous day determines the tasks of the following days, and farmers report of the loss of time or energy when they get the work sequences wrong. During the haymaking period in the summer months, whatever work is planned or in progress must be able to be interrupted immediately, depending on whether the weather conditions are favourable for mowing, drying or bringing in the hay. On haymaking days, only the care of the cows is similar to the rest of the year – otherwise everyone is in a state of emergency, concentrating on this one task. The management of the extremely diverse tasks and projects on farms is complex and requires organisational skills, the cooperation of all those working on the farm and, increasingly, the ability to overcome or exploit administrative hurdles.

Conclusion

It seems that the ethnographic reality of the year 2023, with its multiple crises, has gained the upper hand. Discussing the current situation of mountain farmers in South Tyrol inevitably leads to an engagement with a global system of agrarian modernisation that has climbed up to the Alpine heights to be implemented in small-scale local contexts. It may be helpful to understand both situations as two different temporal systems (borrowing from Luhmann's connotation of the term; cf. Noe and Alrøe, 2012 and Gershon, 2005) that are independent, closed and self-referential. In short, the systems' two vantage points on farming are barely congruent and each deal with issues that are only visible to them. That said, the issues both systems are concerned

with are quite similar and both sides consider themselves to be experts in the field. It is not a question of trying to bring both sides together but of challenging the ethnographer to see both sides at the same time; double vision as an ethnographic method (see Jiménez, 2018).

The mountain farmers I have worked with do not see their farms as subject to industrial development, as part of modernised agriculture, or even as monoculture dairy farms; they see their land and their cattle, and they use all the opportunities available to them to continue to work and survive with their animals on that land. As the case studies showed, they emphasise the continuity of the farms, which they see as a follow-up to their parents' and grandparents' way of working, indeed an essential impetus for their daily work, which they achieve by adapting their agricultural practices to the prevailing realities (currently dairy monoculture). What they are either less aware of, or consider to be of secondary importance, are the medium-term consequences for them: dependence on non-local policies that set changing, complicated rules for the payment of subsidies, on the world market price of cereals for concentrated feed, on the milk price set in the interplay between large milk cooperatives, EU regulations and the international market. The use of industrial means to cultivate high altitude pastures, or rather hay fields, in order to extract as much protein as possible from the steep mountain slopes, once considered the most desperate working environment, is not considered a paradox for mountain farmers, but a pragmatic survival strategy. Needless to say, they are far from the ideal of the autonomous farmer living off the land, which is still a much cherished model, while the high costs of industrialised agriculture mean that they earn little more than the minimum wage if the farm is run full-time (Mair, 2022). The industrialisation of agriculture in this region has also led to, or even made possible, the rise of part-time farmers (like Michael, mentioned at the beginning), who are now the majority in South Tyrol. These are farmers who get up at 4 a.m. to milk and look after the cows, then go to work in the valley before returning to the animals in the late afternoon. They often say that they do this paid work so that they can invest in the farm, keep it up to date or at least be able to hold on to it. To abandon it would be seen as a defeat, a betrayal of the ancestors or the children to whom they owe the land and the buildings; to move to a village flat on the valley bottom, close to so many people but without land to look after, is unimaginable for the vast majority of them.

What the policy makers seem to have been oblivious to when introducing the comprehensive modernisation measures in the beginning of the 1970s was how small the farms were, what topographical and climatic conditions they were exposed to and the impact the specific management of mixed crop-livestock farms had on the ecosystem over a long period of time. The focus at that time was on preserving the farms and thus the cultural landscape. The experience gained from agricultural modernisation since the 1950s in Europe was applied here belatedly and, it seems, without paying too much attention to the specific environmental conditions. Trucks loaded with soya- and maize-based concentrated feed (of obscure origin), making their way up narrow switchbacks to mountain farms to deposit a few tonnes of their load are seen with more doubt today than they were then. And some farmers and policy makers are starting to see the paradox of such a delivery to hay milk producing highland cows. Whether it is due to the changed regulations regarding subsidies, which are increasingly linked to environmentally friendly measures, agricultural research initiatives (as in Zanon et al., 2023), or the focus on "sustainability strategies" of agricultural advisory institutions, there is a tendency towards attempting to reduce specialisation in high-performance dairy farming. A few farmers dare to leave the dairy cooperatives to market their products themselves, and their numbers are slowly increasing. This is possibly encouraged by the two crises since the beginning of 2020, which have made remarkably clear how little resilience the existing structures seem to have.

Whether a continuity of mountain farming could be achieved with industrialization is still in question. Currently, a slow change towards a kind of de-industrialization and re-diversification can be observed. More and more farmers are leaving the cooperatives and trying to market their products themselves. In times of recurring economic crises, whatever their causes, the exclusive milk farming model is anything but crisis-proof.

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