



Farmers' empowerment and learning processes in accountability practices: An assemblage perspective

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ABSTRACT

Certification and standards are key instruments to implement accountability in the contemporary governance of food systems. They are based on the idea that, thanks to the creation and circulation of information, promises to consumers are kept in increasingly complex value chains. However, critical examinations also describe it as a symptom of an ongoing globalisation and neoliberalisation, shifting power from the state to market actors, in particular retailers and supermarkets. This paper offers a new perspective on accountability within the tripartite standards regime, inspired by an assemblage approach and focusing on power relations and knowledge creation, as fundamental dimensions. The example of IP-Suisse, a Swiss farmer organisation and a food label, allows us to identify multiple contradictory power and knowledge processes that are simultaneously unfolding within the agri-environmental governance assemblage. Beyond the expected dominance of powerful actors (particularly retailers) and the relentless bureaucratisation of governance, more positive processes also emerge, including a collective empowerment of farmers and the realization of cumulative and progressive learning through new collaborations and experiments. The assemblage approach suggests that the point is not so much to invent a new blueprint for better accountability practices, but rather to understand the specific processes taking place within a given AEG assemblage and then to encourage the creation of new alliances to strengthen those processes that are most likely to foster experimentation and knowledge. It thereby obliges us to take the multiplicity of transformational processes seriously, as a starting point for developing innovative accountability practices.

1. Introduction

'To err is human' is how the management team of IP-Suisse, a Swiss sustainable-food label, answered one of its members during its most recent general assembly. The member, a beef farmer, had just expressed his disappointment with the way he was treated by an industrial slaughterhouse when he delivered an animal to it. The slaughterhouse had refused to pay the higher price guaranteed by the label, saying the meat was too fatty for the label's standard. But a few days later, in a nearby supermarket, the farmer recognized his animal's meat (traceable thanks to a unique animal-specific tracking number) being sold under the label after all. Not only that, but the meat was also advertised as having been aged for three weeks, which he knew to be impossible because the animal was still alive on his farm three weeks earlier. When the director tried to explain that this was the result of human error and that the case had been reported to the supermarket, no one at the meeting seemed very happy. The pronouncement of 'to err is human', in particular, provoked a wave of exasperated murmuring throughout the audience.

This anecdote is drawn from an ethnography of the assemblage of actors within the farmers organisation IP-Suisse. IP-Suisse was founded in the 1990s by a group of farmers who anticipated the environmental turn in agricultural markets and policies. It created a standard and a food label around the notion of 'integrated production' (IP), as a middle way between conventional and organic agriculture. The farmers organisation went on to become a central actor in the Swiss agri-food system. The short anecdote above points to the power relations that developed in this process, revealing several problematic aspects of how, within the current practices of agri-environmental governance (AEG), how some agents are held more accountable than others. It also highlights the importance of ways of knowing food and farming. What knowledge is produced through standards and certification, and what the actual and potential uses of that knowledge are, become key questions for understanding what these schemes concretely produce in the everyday life of the people involved in them. I will argue in this paper that answers to these questions are important parts of what accountability – understood as the generation of information about efforts made in relation of a moral duty to act for better food futures – becomes when enacted in

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concrete assemblages. In this text, I will therefore differentiate between accountability as a principle, a governance logic, and accountability in practice, which is the translation of this logic in specific contexts, institutions, and actions.

Certification and standards are key instruments in the contemporary governance of food systems, a structure that flourished after the food crises of the late 1990s and has developed in parallel and in association with the deployment of sustainability claims for food products (Campbell et al., 2012; Fouilleux and Loconto, 2017). The concept of ‘tripartite standards regimes’ (TSR) (Loconto and Busch 2010) encompasses the multiple layers of control mechanisms related standards and certification: standards making, certification of compliance, and accreditation of certifiers and control procedures. With food labels converting standards in actual promises made to the consumers, TSR has become an essential instrument producing accountability in food systems – i.e. an accountability practice – with the claim of ensuring that promises of fairness and sustainability are kept, by producing information all along the value chain. In this context, the development of accountability practices, based on diverse artifacts, has become essential in the legitimization of governance instruments (Kraft and Wolf, 2018).

In this paper, I want to discuss the relation between power and knowledge in TSR resulting in specific processes that shape and transform food systems by enacting specific accountability practices. Power relations define who is actually accountable to whom, what to be accountable for, and how knowledge is generated, as information, to attest compliance. Conversely, the information generated serves to influence power relations. Finally, specific accountability practices result in diverse processes of knowledge production, or learning processes, among the actors involved, which can be consistent or not with the moral duty and explicit commitment to act for better food futures. How do these accountability practices reframe power relations by the generation of knowledge, as information? How do these power relations influence in turn the knowledge, as learning processes, produced in TSR? These questions point to the co-constitution of power, knowledge, and accountability through complex and multiple social relations in AEG practices. They are therefore essential to understand the effects of accountability as a governance logic and to produce guidance for the design of governance practices that contribute to better food futures while avoiding as much as possible undesirable side-effects.

To address this co-constitution of power, knowledge, and accountability, I draw on an assemblage approach to governance (Forney et al., 2018). Drawing on Callon’s (2017) conceptualization of market assemblages (*agencements marchands* in French), I refer to agri-environmental governance assemblages (AEG assemblages) as heterogeneous aggregate of elements that coalesce around a collective purpose which is to offer solutions to environmental issues related to agricultural production. An assemblage perspective highlights the relational nature of governance and accountability and allows us to reframe the debate over the effects of accountability practices by focusing on the multiples and contrasting experiences of the agents participating in the assemblage.

I will first discuss knowledge and power as constitutive aspects of accountability in TSR, arguing that an assemblage approach to AEG can offer new insights into these issues. I will then apply the assemblage approach to the case of IP-Suisse: first, by relocating it within a broader AEG assemblage in Switzerland that I call the ‘IP-Suisse assemblage’, where multiple actors and projects meet and interact; and second, by identifying and analysing a multiplicity of processes that are simultaneously developing within the IP-Suisse assemblage around issues of empowerment (as a translation of power relations) and learning (as the creation of new knowledge). The picture of the IP-Suisse assemblage that emerges is complicated. I will highlight the diverse nature of the assemblage by showing how the power of retailers is at least partly counterbalanced by a more subtle collective processes of farmers’ empowerment. Similarly, beyond the concentration of AEG learning processes around administrative knowledge in public and private

schemes, new ways of farming and new forms of cooperation in the value chains emerge as the actors reassemble around accountability practices. Finally, I will conclude with a discussion of how existing processes of empowerment and learning unfolding in an AEG assemblage can serve the construction of more sustainable food systems through renewed practices of accountability.

2. IP-suisse, a farmer-led accountability practice

As was true in many other countries, the post-war agricultural policy and governance system in Switzerland was subjected to a number of stresses at the end of the twentieth century. At the global level, negotiations around the General Agreement on Tariffs and Trade put a lot of pressure on protectionist state interventions and agricultural subsidies, which were central to the organisation of both the market and value chains. At the national level, political challenges emerged to both the costs of overproduction and the environmental impact of a productivist approach to agriculture. After decades of being uncontested, Swiss agricultural policy went through a period of dramatic transformation during the 1990s, a time marked by multiple crises. At the same time, markets and value chains were being reorganised according to new rationales, with labels for sustainable food products gaining ever more importance. The birth of IP-Suisse, as a farmer-led accountability practice, is part of this transformation of the Swiss agri-food system, with a definition of “sustainability” largely related to the reduction of pesticides use and the promotion of diversity on farms.

IP-Suisse was founded in 1989 by a group of farmers in the canton of Bern. These forerunners were apparently already feeling the winds of change that had started to blow through Swiss agriculture. As a current member of the management team explains, they anticipated the changes in policy as well as the growing demand for environmentally friendly food, thinking:

This is all great, we will implement environmental schemes ... But the consumers, they won’t notice anything. So from the beginning there was the idea: how can we include in the reflexion an added-value for our products?” (IP-Suisse, management team member, nov. 2015).

They did not feel that the traditional market structures and agricultural knowledge system were prepared for this dramatic turn, so they decided to create a new association and a food label with the explicit goal of having their environmental practices create added value for their products in the market. This objective was also to exert some control over the types of agricultural practices that would be promoted in this time of change. In other words, this group of farmers decided to take anticipate an environmental turn, proactively opening a middle way between conventional and organic agriculture. This was enacted through the development of set of agricultural good practices formalized in a standard, associated to accredited certification, and a food label, following the principles of TSR (Loconto and Busch 2010). By doing so, farmers made themselves accountable to their market partners and consumers according to a standard they designed themselves in collaboration with environmental NGOs and certifiers, and based on the principles of integrated production. The food label, with its red ladybug logo, made this commitment visible and resulted, in turn, in premium prices for these farmers’ products.

The first grains bearing the IP-Suisse label were available on the market in 1993. Early on, the association entered into a collaboration with Migros, one of Switzerland’s two major retailer groups, that facilitated its expansion and development. Today, IP-Suisse is active mainly in the markets for grain and meat, along with other, more marginal products such as oilseed crops (rapeseed), fresh milk, and quinoa. The organisation has around 18,500 farmer members (out of a total of 51,000 farms in Switzerland). IP-Suisse offers an alternative to both conventional and organic production, which has won over several actors

in the Swiss food system. It provides around 80% of the flour used for Migros's bakery products. The flour used in Swiss McDonald's burger buns is IP-Suisse certified. As of 2017, the Nestlé chocolate factory Maison Cailler has exclusively used IP-Suisse 'hay milk' in its milk chocolate. In 2016, the Swiss hard discounter Denner (a supermarket chain belonging to the Migros group) initiated a new partnership with IP-Suisse, resulting in the marketing of a large assortment of sustainable products including meat, bakery, rapeseed oil and dairy products. In addition to these big players, IP-Suisse partners with a significant number of smaller processors and retailers. Sometimes this includes the creation of specific labels that combine IP-Suisse standards for agricultural products with specifications for processing, as for instance in the label 'Naturel', used by artisanal bakeries.

The IP-Suisse standard, as mentioned above, developed first around the notion of 'integrated production'. Concretely, 'integrated production' offers a balance of productive and economic goals with environmental objectives, notably in the strong limitation of chemicals (i.e. integrated pest management). IP-Suisse also focused its actions and communication on the promotion of biodiversity. IP-Suisse farmers have to implement specific actions, which are part of the standard, to foster biodiversity on their farms. These actions, like the general standard, were defined by IP-Suisse itself, in dialogue with environmental NGOs and research institutions, mainly under the supervision of the Swiss Ornithological Institute in Sempach (a private non-profit foundation). The list of possible actions is long and diverse. It includes building habitats for small animals (e.g. piles of stones or hedges); planting heirloom varieties (e.g. old breeds of potatoes); maintaining flowering meadows between crops; having high-biodiversity meadows; dedicating large plots of land to biodiversity promotion; etc. In order to account for these various contributions to biodiversity, IP-Suisse has developed a system of points, every specific action translating into a given number of points. Farmers have to achieve a minimum of 17 total biodiversity points to receive certification.

3. Reframing accountability through power, knowledge, and assemblage

3.1. Power and knowledge in accountability and tripartite standards regime and public policies

Looking at TSR from an accountability perspective helps to clarify its relation with power and knowledge. Notably, Bovens's (2007) offers a relational approach to accountability as "a relationship between an actor and a forum, in which the actor has an obligation to explain and to justify his or her conduct, the forum can pose questions and pass judgement, and the actor may face consequences" (450). As I will develop below, this definition is unsatisfactory because it dramatically reduces the complexity of the relations that exists around accountability in practice. Nevertheless, it implicitly points to the dimension of power (with the idea of control and sanctions) and knowledge (with the centrality of information). Bovens also offers a framework for assessing accountability, based on three perspectives which are more particularly useful for my purpose.¹ First, the Democratic Perspective assesses accountability through its contribution to popular control over the action of the government (or other powerful actors). Here, information and knowledge are the means to secure democratic control in the food system. Second, the Constitutional Perspective focuses on the role of specific and autonomous institutions that aim at preventing corruption and abuses of power. Finally, the Learning Perspective looks at effectiveness and its enhancement, by asking how accountability stimulates learning and helps to achieve desirable outcomes (e.g. societal,

¹ While Bovens constructs his framework in the context of government and public institutions, I suggest that the main ideas can easily be applied to a wider set of actors involved in AEG.

environmental). The three assessment perspectives offered by Bovens interestingly articulate the notions of accountability, power and knowledge: knowledge is a basis for democratic contestation and control through accountability; abuses of a dominant position are limited through the constitution of separate accountability institutions; accountability practices result in learning processes and the creation of new knowledge.

Bovens's conceptualization of accountability finds interesting echoes in the study of accountability practices in agri-food systems. Critical agri-food studies clearly identified the development of tripartite standards regime (Loconto and Busch 2010; Fouilleux and Loconto 2017) that precipitated a shift in responsibility to private actors and third-party certifiers, while beforehand government was formerly in charge of guaranteeing the standards for food safety and security (Campbell et al., 2011; Hatanaka et al., 2005). In my introductory anecdote above, the contrast between the farmer being refused the label's premium for the meat and the absence of any consequence for the retailer clearly illustrates that power relations define how accountability practices in TSR can produce an unbalanced situation in which those who hold power suffer no consequences for their failures, while weaker actors are automatically punished. Such accounts resonate with Bovens's Democratic Perspective on accountability. They reinforce the well-established conclusion that the power of retailers within food systems has increased dramatically over the past decades (e.g. Clapp and Fuchs, 2009; Dixon, 2007) and that standards and own brands by supermarkets play a role in this growing control (Burch and Lawrence, 2005). From this perspective, TSR has above all contributed to reinforcing already existing processes of dominance, where powerful actors transfer most of the burden of accountability to upstream actors. Unbalanced power relations in food systems can therefore be seen as a threat to a well-functioning, democratic, application of accountability. However, a more positive interpretation could focus on how this specific farmer uses the knowledge generated in accountability practices to confront a retailer and exert pressure on the organisation. This recalls the fundamental idea that the information created and flowing through accountability practices empowers both customers and producers by forcing large industrial players to also be accountable for their actions. This claim has been strengthened by studies looking at alternative and participatory accountability practices (Home et al., 2017) that aim to recover 'the properly social and dialogical nature of responsibility relationships' through the co-creation of a 'genuine' accountability (Wallington and Lawrence, 2008: 277). This discussion reflects also Bovens's Constitutional Perspective that points to the importance of specific institutions or instruments to mitigate power relations in accountability practices. In addition, knowledge also plays another fundamental role as learning processes contributing (or not) to better food futures. On the farmers' side, sustainable agriculture is generally described as knowledge intensive, and accordingly requires specific forms of knowledge that farmers might not possess (Ingram 2008; Siebert et al., 2008). Research on the organic sector (Rosin and Campbell, 2009; Sutherland and Darmhofer, 2012), as a key example of TSR, has shown that the adoption of environmental values by farmers is a progressive process where learning is fostered by a sense of meaning and self-interest. A parallel branch of scholarship has also stressed the importance of learning processes in the transformation of agriculture through public policies. By analysing farmers' resistance to the development of top-down AEG practices – which also rest on accountability practices –, those contributions highlight the confrontation between diverging forms of knowledge applied to agriculture and the environment. They stress the failure to integrate local practices and knowledge in top-down AEG practices (e.g. Burton et al., 2008; Carr and Wilkinson, 2005; Home et al., 2017). Effective learning – in terms of a real contribution to desirable societal and environmental outcomes, as Bovens (2007) puts it – depends on the capacity of AEG instrument to mobilize farmers and on autonomous sense-making processes on the farms (Forney, 2016). Also echoing Bovens's Learning Perspective, Park

and Kramarz (2019) point to the ‘accountability trap’, a single-minded focus on tools, measurements, and control rather than on building knowledge in order to reach the desired outcomes for the environment and rural life. In other words, accountability can produce multiple types of knowledge, and some might be unwanted or not directly related to achievement of desired outcomes. Looked at this way, accountability practices, including TSR, can constitute material and ideational resources for a reconfiguration of power relations (Rossi et al., 2019), also thanks to learning processes oriented toward more sustainable food systems. In sum, accountability practices in AEG are fundamentally embedded in relations of power where the creation and circulation of knowledge plays a central role, both in the rebalancing of power relations and in the promotion of more sustainable agricultural practices.

3.2. Applying assemblage thinking to governance and accountability practices

In a discussion with Claire Parnet, Deleuze defines an assemblage as “a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them across ages, sexes and reigns – different natures.” He adds that what makes the unity of the assemblage is “co-functioning: it is a symbiosis, a ‘sympathy’.” (Deleuze and Parnet 2002: 69). Beyond this first general definition, Callon (2017) offers more comprehensive synthesis of what characterizes assemblages: the heterogeneity of elements; the intricacy of discourses and material entities; the ability of each element to follow its own trajectory, to enter other assemblages, and to be analysed as an assemblage itself; intense interactions; and the absence of simple and unequivocal determinations. Importantly, Callon (2017) insists on an additional characteristic, which makes “agencement” (usually translated as assemblage in English) more than a complex configuration of elements: assemblages are defined by a specific collective action, or strategic purpose (“*visée stratégique*”), at play (p. 402). Callon focuses on market assemblages (*‘arrangements marchands’* in French) which action is to establish bilateral commercial transactions (p. 403). This paper focuses on AEG assemblages understood as complex aggregates of heterogeneous elements – human and non-human – that are organised around a collective purpose, which is to propose solutions for environmental issues related to agricultural production.

A few attempts to use assemblage theory to better understand AEG practices in agri-food systems exist in the literature (Loconto 2015; Rosin et al., 2017; Legun and Sautier 2018; Konefal et al., 2019). Interestingly, Loconto (2015) and Legun and Sautier (2018) point to the construction of governance assemblages through actors’ interactions and strategies rather than by analysing the effects of isolated instruments. Applied to accountability practices and TSR, this principle means that a standard and its triple dimensions (standard making, certification and accreditation) are approached in their relations with other practices and actors, such as agri-environmental schemes from public policies, strategies developed by economic actors, etc. Drawing on Dépelteau’s (2015) relational sociology (and not explicitly on assemblage theory), Darnhofer et al. (2019) proposed to approach, the organic sector as constituted “through the relations in which it is engaged” (203). In this sense, the organic sector not only emerges through these relations with multiple other actors, “it also co-produces these relations and is thus not determined by them” (203). This paper also contributes to a relational approach to AEG, from an assemblage perspective, moving away from linear definitions of accountability based on the principal-agent dichotomy, as used for instance by Bovens (2007), and highlighting the multiplicity of interactions related to accountability practices.

Assemblage thinking is useful to articulate conceptually power and knowledge processes in accountability practices, without overlooking this complexity and relationality in AEG. Elements of an assemblage are not obedient followers of the collective purpose that frames the assemblage. They act and produces “forces”, following Callon’s word, in order to influence social relations and thereby the assemblage itself. In other words, elements of assemblage exert agency. Yet, Bennett (2010) neatly describes how the assemblage then combines these individual intentions and plans into the production of a distributed or confederate agency. As McFarlane (2009) phrases it, agency in assemblage ‘both forms a coalition and yet preserves something of the agency or impetus of each element’ (566). How much the potential of elements to influence others and the broader assemblage is realized varies significantly and relates fundamentally to questions of power. The forces exerted in the assemblage are made of combination of agencies, from voluntary alliances or coincidental synergies of agendas, that give them power. As synthetically formulated by Konefal et al. (2019), power in assemblage is “shared, plural, shifting, and contested”. From this perspective, accountability practices influence AEG assemblages by opening possibilities for new alliances and combination of – human and non-human – agencies.

Information and learning processes are important elements in this game of influence and power. On the one hand, new information produced through accountability practices can be mobilised, as allies, in power struggles. On the other, learning processes can be understood as outcomes of the distributed agency of the AEG assemblage. They contribute then to reshape the assemblage and reframe the definition of its collective purpose. These dynamic relations between power and knowledge in accountability practices reflects what Callon (2017) calls the intricacy of discourses and material entities – or the enunciative and machinic dimensions in Deleuze words – in assemblages. At the same time, they shed a specific light on the continuous processes of change that characterize assemblages (Anderson and McFarlane, 2011), calling attention to future evolutions and potentialities and emphasizing the temporality of the social and framing multiplicity in assemblages not “in terms of not only what ‘is’ but what ‘could be’” (Lewis et al., 2016:14–15).

Let me sum up in four points what it means to apply an assemblage approach to power and knowledge in accountability practices. First, the assemblage approach requires locating specific schemes within a broader AEG assemblage to understand how they interconnect with other governance practices. Second, it calls for an integrated analysis of knowledge and power, as two essential aspects of accountability that develop in the interplay between concrete relations (the machinic, the content) and narratives (the enunciative, the expression). Third, the assemblage approach points to the multiplicity of outcomes emerging from accountability practices. AEG assemblages produce diverse and competing forces – or processes – that have to be acknowledged, as all of them contribute to defining what accountability becomes in this specific setting. Fourth and finally, returning to the emphasis on possible evolutions and potentials, an assemblage approach leads to an analysis of the consequences of these processes of change and opens a discussion of the various potentialities contained in accountability practices and their possible contribution to better food futures.

4. Researching the assemblage: methods and approach

At the level of methods, applying an assemblage approach to AEG governance implies a focus on relations and connections as a guiding thread in exploring the constitution of AEG practices. In a certain way, this approach is related to multi-sited ethnography that ‘follows the

thing' in a research process 'designed around chains, paths, threads, conjunctions, or juxtapositions of locations' (Marcus, 1995: 105). The IP-Suisse organisation served as the starting point for a series of semi-directed interviews with human actors who participate in the governance assemblage, from the farm to the retailing sector: farmers (8), farmers organisation representatives (3), food factory representatives (3), retailer representatives (2), administrators (1), environmental NGO representatives (1), extension service representatives (2), scientists (1) and certification body representatives (2). In addition, direct observations were made at public events and meetings related to IP-Suisse. Finally, an extensive set of documents and written material was gathered and analysed to complement the information collected in the interviews: publications in the media (notably the agricultural newspaper *Agri*), documents supplied by research partners (internal reports, support for public presentations, marketing material) and official reports published by the federal administration. This dataset was analysed following an iterative and inductive approach. Interviews were coded using qualitative data analysis software (Nvivo™) in order to identify salient categories.

Of course, any attempt to study an assemblage will always be partial and limited. While my point of departure and central focus was the IP-Suisse organisation, my exploration of the broader governance assemblage was guided, first, by the central position given to this farmers organisation and food label in my research and, second, by the selection of two of the major products certified by IP-Suisse: wheat and beef.

In addition, this research builds on a long-term ethnography of farming and agriculture in Switzerland, initiated in 2002 and ongoing across multiple research projects. These projects have focused on the relations between farmers and farming organisations, and on the progressive deregulation and greening of agricultural policies and private governance, with a particular focus on the dairy sector (see author 2007, 2010, 2013, 2016; author et al., 2014, 2016, 2017).

5. The IP-Suisse assemblage: analysing accountability practices within the broader AEG context

As an organisation, a certification and a food label, IP-Suisse is fully embedded in the recent history of AEG in Switzerland. Some interconnections with prominent actors (the state, particular industries, retailers) have already been briefly mentioned. A closer look only makes the centrality of these entanglements more obvious, revealing a dense assemblage of actors and practices around IP-Suisse that I will call the 'IP-Suisse assemblage'. This IP-Suisse assemblage differs from the farmers organisation IP-Suisse in that it also includes other agents involved in the governance of agriculture and food in Switzerland.

The creation of IP-Suisse happened during the incubation years of the 'new agricultural policy'. A first significant step in this process was taken in 1992, when the legal foundation was laid for a system of direct payments to farmers. Since then, farmers who voluntarily provide specific environmental services have been entitled to public monies. With the new agricultural law of 1999, the direct payment system was generalized. The new regulation defines the 'required ecological services' as adhering to a basic environmental standard that gives a farmer access to federal subsidies. In addition to this basic subsidy, farmers can also engage in specific schemes and actions that qualify them for additional payments, such as environmentally friendly (e.g. no-till) farming or particularly demanding biodiversity promotion (such as the maintenance of flowering fallows or extensive meadows). The system of direct payments has regularly undergone adaptations since it began.

The connection between this new policy and IP-Suisse goes far beyond the similarity in timing. Indeed, the two instruments and their standards co-evolved and influenced each other. Both were initially inspired by the notion of 'integrated production'. Today, IP-Suisse farmers have, of course, to follow the national standard for agricultural policy. In addition, most of the actions included in IP-Suisse's biodiversity points system are also part of the direct public payment

system. As a member of the IP-Suisse management team summarized it, 'everything you do for the agricultural policy, you can use in the standard, and vice versa' (IP-Suisse management team, Nov. 2016). For farmers, these synergies increase the incentive for participation. For the same environmental practice, they get both a direct payment from the state and a premium on price from the private label.² As a result of this complementarity, or even redundancy, both the state policy scheme and the label become more attractive to farmers.

This agri-environmental turn in agricultural policies went hand-in-hand with progressive deregulation and a deep reorganisation of markets and value chains. The step-by-step removal of state price controls and market subsidies resulted in a deep transformation of power relations in agri-food chains and increased competition between actors. At the same time, European food systems, including in Switzerland, were facing a loss of trust from consumers in response to several food security crises. Industries and retailers responded by implementing quality standards and engaging in food labelling schemes. The close collaboration between Migros and IP-Suisse was formalized at the national level in 1997, after a few years of regional experimentation. Migros's main competitor, the retailer Coop, had already entered a partnership with the organic food label Biosuisse in 1993. These two examples illustrate a strong trend toward differentiation of 'quality' in food products based on sustainability principles and/or provenance. The development of the Protected Denomination of Origins, mostly in cheese production, is another clear example of this 'quality turn' (Goodman, 2003) within Swiss food systems. For IP-Suisse, the partnership with Migros has played a key role. Not only did it serve the retailer's interest in being able to claim a commitment to sustainability, but it also contributed to the rapid establishment of IP-Suisse as a leading food label on the Swiss market.

The need to respond to the loss of trust and the necessity for greater accountability for food system failures have certainly also been key motivations for industrial processors to participate in the IP-Suisse assemblage. Accountability practices make visible their commitment to a more sustainable food system. They unroll all along the food chain, all the way back to the farm. Downstream actors (processors and retailers) can use this system as leverage to influence the agricultural basis of the value chain. This was clearly presented as a central point by this representative of a large meat company:

As a company, where we have the highest environmental impact is clearly in meat. That's why we have these strong collaborations with organisations like IP-Suisse, to improve the agricultural part. (Meat company sustainability manager, Jun. 2017).

But improving and highlighting the environmental friendliness of the company and of the value chain is not the only benefit of participation for industrial actors. The case of the milling industry shows how the accountability practices can also offer efficient solutions to general issues of quality and quantity management. Since the dismantling of the state's post-war control over agricultural production, the industry has been confronted with the challenge of finding new ways to guarantee the milling characteristics of the grain. Another important challenge has been managing the quantities of the various types of grain. Partnership with IP-Suisse offered a solution at the national level, as pointed out by this industrial miller:

² A 2017 estimate for one IP-Suisse farm showed that 1 ha of wheat – following the Swiss standard for extensive production and with a yield of 60 quintal – entitled the farmer to a direct payment equivalent to 6.5 CHF per quintal (approx. 400 CHF per hectare). In addition, the premium derived from the IP-Suisse certification, following a very similar standard, was then around 5.5 CHF per quintal. The farmer's own estimate indicated that he would have to produce 20 quintals more per hectare to make a conventional production more profitable (IP-Suisse farmer A, Jan. 2017). Note that a similar calculation could be made for certified organic production, as that also qualifies for premium prices and direct payments.

I would say that the strength of IP-Suisse, beyond the brand and the sustainability, is that it makes it possible to organize the market for others. This gives stability to the market. This provides us with the security of a follow-up to the collecting centre and to the farmer, in the form of the certification. (Industrial miller, management team, May 2018).

Many other actors have contributed to the general evolution of the Swiss agricultural sector, in particular actors in the agricultural knowledge system. Extension services, agricultural school programmes and research centres have adapted their activities to the new objectives set by policies and markets. Technical and production-oriented knowledge have lost their hegemony, and a new emphasis has been put on quality, market strategies, management skills and profitability. This agricultural knowledge system is also closely connected with the IP-Suisse assemblage.

The first place where its contribution becomes clear is at the agronomic level: for instance, in the experimentation with and development of new varieties of grain that will meet both the environmental objectives and the needs of the milling and baking industries. Secondly, research has played a key role in the definition and legitimization of the specific environmental actions related to the standard. The implications of research for the whole assemblage are well exemplified in the development and adoption of the hay milk standard adopted by IP-Suisse. The organisation IP-Suisse wanted to expand its activity to dairy products, as dairy farming is a central sector of the Swiss agriculture that was not integrated initially. Research has been essential in the setting of the standard, also as a result of the strong involvement of a professor of agronomy who was a keen supporter of pasture-based systems. IP-Suisse provided a very general vision, but the definition of the standard was delegated to researchers:

If you ask about IP-Suisse, they don't want to be involved in this [the technical definition of the standard]. They look for someone external, who will provide advice and make propositions. 'How to define the production system, so that it fits with the image they claim in the advertisements.' (Researcher A, Dec. 2016).

The financial support of a research agency (the Swiss Innovation Agency) was then crucial for the funding of experimentation and research on which to base the standard. At the same time, in order to really break through, the standard needed the commitment of a large retailer to ensure access to the market.

In sum, IP-Suisse emerged and continues to develop in the context of the deep reconfiguration of a broader AEG assemblage. When I use the term IP-Suisse assemblage, therefore, it is not in order to claim that this farmer-led label by itself defines the dynamics of the whole Swiss AEG assemblage. Rather it serves to emphasize the many overlaps and synergies among the actions of various actors of IP-Suisse as a farmers organisation and food label. Through their participation in the IP-Suisse label, these actors follow a variety of objectives, and the related accountability practices do much more than just 'certify' end products for consumers. As a result, I argue, the accountability cannot be correctly understood without taking this embeddedness into account. This is also true for all of the above-mentioned governance practices that have developed within this assemblage: each of them is inevitably shaped by its relations with the others and shape them in turn. From an assemblage perspective, it makes no sense to look at any of these AEG instruments in isolation.

6. Multiple dynamics of accountability in the IP-Suisse assemblage

The synergies within the IP-Suisse assemblage described above do not represent a tale of harmony and egalitarian collaboration for the common good. They are as much made up of tensions between diverging interests as they are of shared objectives; they are shaped by a number of power relations and therefore also negotiations and struggles. As one farmer, a member of IP-Suisse, put it while commenting on the event at

the meeting described above: 'We say partners ... but partner or enemy, it's not always clear!' (IP-Suisse farmer E, Mar. 2019). A closer analysis centred on power relations and knowledge creation offers a more differentiated picture, characterized by contradictory processes.

6.1. Beyond retailer power: farmer empowerment

Because the partnership between Migros and IP-Suisse dates back to the very beginning of IP-Suisse, the whole organisation of the label and certification has been shaped by this partnership, which is obviously characterized by an imbalance in power. As highlighted in the literature (e.g. Clapp and Fuchs, 2009), within current food systems, an important share of the power is concentrated in the hands of large retailing groups. This can also be clearly seen in the IP-Suisse assemblage: the Migros group buys 80% of the wheat and a large share of all the other products certified by IP-Suisse. It also controls the processing facilities through which these products transit. Finally, as one of two major retailers at the national level, it is a significant gatekeeper to the market. This power at the level of the organisation of the value chain – we could in the materiality of the assemblage – allows for the deployment of another power at the discursive – enunciative – level that is made visible in Migros's own brand, 'Terrasuisse', for IP-Suisse products, rather than IP-Suisse's official brand and logo (the ladybug).³ The short story told in the introduction exemplifies farmers' resentment over the power of this retailer. One farmer, who was for a time a member of the board of the farmers' organisation, is quite adamant about the influence of the retailer on decisions made by the IP-Suisse management:

Everything that happens at IP-Suisse is Migros's decision. . . . For me, IP-Suisse has no power at all. They just follow Migros's orders! (IP-Suisse farmer B, Jan. 2017).

The farmers' feelings that they are being controlled is a repercussion of the fact that most IP-Suisse standards concentrate on regulating farming. By contrast, there are no specific rules governing processing, only rules about the strict separation of certified products along the value chain and the required proportions of certified products included in the final product. Accountability in TSR involves all of the actors in the value chain. However, the focus of accountability in practice tends to be oriented upstream. In addition to the usual inspections, controls are generally activated at the initiative of the retailer, requiring all the upstream actors – processors, intermediaries, and farmers – to be accountable of their action and able to prove their compliance with the standard. The attention and control system of the entire assemblage is always focused on the production side of the chain, with an emphasis on knowing what is done at the farm level. It is easy then to see one of the basic processes within the IP-Suisse assemblage as turning of accountability practices into a tool used by the retailer to control its supply chain. Basically, the farmers and intermediaries are made accountable to the downstream actors for their compliance with the certified standard.

However, IP-Suisse farmers have different views of how Migros uses its power. Some, as we have seen, are very critical. Others take a more nuanced view, while remaining well aware of the imbalance in power:

Even if they [Migros] are the ones who mostly set the rules, there is a discussion and we can inform them about our worries, what we can do, what we cannot. Well, there is a discussion, and that's good. (IP-Suisse farmer C, Jan. 2017).

This farmer sees the IP-Suisse assemblage as creating a new arena in which he can have a voice and engage in collective discussion with other, often powerful, actors. Farmers, through their representatives (but not directly nor individually), can make claims and voice their positions. This points to a different process developing within the

³ This reflects Migros's general strategy for its own brands, which is also applied to organic products. In contrast, the other major Swiss retailer, Coop, applies a more transparent strategy of co-branding, for instance with the label Biosuisse for organic products.

assemblage: one of a relative empowerment of the farmers, at least in comparison to their position within non-certified value chains. As I will explain, this empowerment relates to at least three elements: IP-Suisse's control over the standard; the multiplicity of power relations in the assemblage; and IP-Suisse's gatekeeping role in access to farmers.

First, IP-Suisse's partners value the idea that farmers are 'in control' of the standard. This is reflected in a comment by an industrial miller about IP-Suisse's decision to experiment with a ban on the use of herbicides:

It's important that the farmers are at the wheel. They decide whether they want to ban glyphosate on their own label. (Industrial miller, management team, May 2018).

Second, the partial empowerment of farmers also takes place through the involvement of other actors in the assemblage, which breaks up the unidirectional power relation. Many other players engage in this dance. Obviously, as described above, the state exerts a major influence on the IP-Suisse assemblage. Less directly, the certifier, as a long-term partner, also contributes to the development of the IP-Suisse standard in dialogue with the farmers' organisation:

So now, they [IP-Suisse] have their own experts, people who have their own ideas about what could be done, what is really possible in farming practices. They are the ones who can say that. . . . But this is where we are very strong at [name of certifier], at the level of development, regulations . . . in supporting the owner of the brand in the development of programmes that are . . . certifiable. (Certifier, Aug. 2017)

In addition, the recent arrival of another supermarket chain, Denner, in the IP-Suisse assemblage has been presented by IP-Suisse representatives as a mitigating factor in their dependency on Migros. Denner now belongs to the Federation of Migros Cooperatives, which obviously limits the chance of direct power struggles between the two retailers. Nevertheless, there are internal tensions within the Migros group, and taking them seriously allows for some nuanced interpretations. At the very least, the success of IP-Suisse products in Denner shops, where IP-Suisse's own ladybug logo is used, has reinforced the popularity of the label.

Finally, IP-Suisse also plays a strategic role in the system by giving the retailers access to farmers, which is essential for other actors in the assemblage, as this representative of an industrial baker belonging to the Migros group clearly puts it:

Our main label is 'from the region', and this traceability would not be as easily implemented without IP-Suisse. They have the data: they know where farmers are, what they have produced. (Industrial baker, management team, Apr. 2017).

This function is empowering because it can turn IP-Suisse into a gatekeeper, potentially blocking the provisioning of certified agricultural products that have become central in the marketing strategies of other actors. Here, we can see a totally different enactment of accountability, where farmers become essential partners by allowing the downstream actors to give account to consumers on the promises made through the label.

The degree to which individual farmers feel fairly represented by IP-Suisse and individually empowered is uneven. Nevertheless, during the interviews many farmers expressed a feeling of belonging and identification with IP-Suisse and its principles: 'You identify with a way of working' (IP-Suisse farmer D, Jan. 2017). In sum, a first examination of the outcomes of the IP-Suisse assemblage might well confirm the idea that accountability practices result in a higher level of control exerted by the powerful, the standard and audits serving as tools for disciplining upstream actors, mainly farmers. However, by looking at the broader assemblage in which the certification scheme is embedded and at its multiple dynamics, it can be fairly concluded that contradictory processes also exist. The central position of IP-Suisse as a farmers organisation in the production of accountability helps in some ways to

empower farmers.

6.2. Beyond administrative knowledge: learning new ways of farming and collaboration

As mentioned, the state's agricultural policy and its instruments are very influential in the IP-Suisse assemblage. In spite of progressive deregulation, agriculture is still a very important political sector. The system of direct payments redistributes huge amounts of public money to farmers.⁴ The policies are organised around bureaucratic practices of accountability that are deployed to register and control farmers' claims to state money, and these accountability practices coexist with the ones associated with TSR, for instance in the case of IP-Suisse. And while they are officially separate and independent of each other, there is a lot of overlap in their implementation and practice. As standards align and audits are coordinated, from the point of view of the ordinary farmer, the boundaries between state bureaucracies and TSR tools are blurred. Moreover, they are based on a similar bureaucratic way of understanding environmental actions in agriculture, through simple numbers and boxes to tick on forms, resulting in the creation of a specific kind of bureaucratic knowledge (Graeber 2012).

The direct payments and the IP-Suisse biodiversity point system are designed in ways that give farmers little room for manoeuvring, only a choice among a selection of actions related to payments and points. The system is not made for testing, experimenting, and learning. This is bluntly exposed in a comment made by a civil servant from the Federal Office of Agriculture (FOAG) in response to a question about the role of farmers in the agri-environmental policy: 'Farmers just have to implement what we do. That is their role.' (FOAG, directorate staff, Nov. 2015). However, 'to implement' does not just mean to farm differently. First and foremost, farmers have to fill out a long list of forms and keep records, understand a variety of administrative systems, invest time in paperwork and master bureaucratic language. This is true for their participation in both policy and TSR. Every year, farmers are financially sanctioned for non-compliance with the rules. In 2016, 16% of Swiss farms were sanctioned by the state, resulting in deductions from their direct payments, for a total reduction of 8.4 million CHF, mostly for 'unimportant things, for instance forgetting to fill out a form', in the words of the FOAG.⁵

Administrative and bureaucratic skills are crucially important for intermediaries as well. The need for accountability implies the collection of samples at every step of the chain and, most importantly, the precise documentation of the manipulation and circulation of products. As this representative of a certifier says:

This is also for your own security. Because if you cannot trace an issue back, you will have to pay for it yourself. If you must reclassify a silo, or a batch, someone must pay. (Certifier, Aug. 2017).

In other words, farmers and other actors in the food chain are mostly sanctioned for imperfect reporting and declarations on the official forms and documents, rather than for violating actual environmental requirements. Being a good accountant with specific administrative skills and the discipline scrupulously to record specific actions has become essential for being a successful farmer in the IP-Suisse assemblage. This requirement includes the capacity to integrate multiple administrative systems and to identify the synergies between schemes to optimize incomes. Clearly, within the IP-Suisse assemblage, bureaucratic forms of

⁴ In average, a Swiss farm gets more than 60'000 CHF direct payments per year, for a national budget of 2,8 billion CHF per year (see <https://www.agrarbericht.ch/fr/politique/paiements-directs/moyens-financiers-pour-les-paiements-directs>).

⁵ RTS info, 16.08.2017, <https://www.rts.ch/info/suisse/8847059-les-paysans-ne-sont-pas-egaux-devant-la-reduction-des-paiements-directs.html> <https://www.rts.ch/info/suisse/8847059-les-paysans-ne-sont-pas-egaux-devant-la-reduction-des-paiements-directs.html>.

knowledge are key both to the functioning of accountability and to processes of learning and new knowledge creation and acquisition.

However, behind the piles of forms and procedures, there are still farm practices to implement and a value chain to make work. So, while the tools of governance produce a progressive abstraction of the agri-food system through bureaucratic categorisations, and powerfully favour bureaucratic excellence, other niches in the assemblage produce different types of learning, in particular in relation to new ways of farming and of working together.

IP-Suisse grew out of the desire of farmers to engage proactively with the ongoing changes in their economic and political context. While this move was also based on an economic calculation, nevertheless the organisation has clearly contributed to a collective appropriation – including a reinterpretation – of the agri-environmental and ‘quality’ turn among farmers. Among many other things, the IP-Suisse assemblage has become a living laboratory, where farmers can engage with other way of doing and seeing agriculture. As an illustration, this farmer explains how the desire to reduce the use of pesticides initiated a complex learning process for his brother and himself:

So he [my brother] came to this method where it's not prevention, it's care. Care for the crop. You go and see; you look to see whether you've passed the tolerance threshold [for pests], and with that, automatically after a while you pass to IP-Suisse. And for the ones who want to go even further, and this is another level of difficulty, it's to go organic. Because organic is a lot more complicated! ... It's observation. It's knowing nature. (IP-Suisse farmer C, Jan. 2017)

For individual farmers, IP-Suisse offers a place where they can become more deeply involved and create new dynamics around more environmentally friendly practices. This readiness of individual farmers to engage with new farming challenges is also reflected at the collective level of the IP-Suisse organisation. For instance, IP-Suisse was contacted in 2018 by a mid-sized industrial baker who wanted to sell bread that was guaranteed glyphosate-free. The organisation launched a call to its farmer members and in under 30 h was able to secure commitments for the required 3000 tonnes of totally pesticide-free grain.⁶ More importantly, IP-Suisse is constantly revising its standards, often on its own initiative. For instance, the organisation has been working in collaboration with researchers at Agroscope, the Swiss Confederation's centre of excellence for agricultural research, on a climate point system that would be added to the existing biodiversity point system. These observations confirm that despite the dominant process of bureaucratisation of knowledge in the IP-Suisse assemblage, other learning processes still emerge, at the very concrete level of farm practices, as well as at the level of the definition of good farming, as represented in the TSR.

In addition, the proactivity and dynamism of the organisation and its members are regularly applauded by its partners. A representative of one retailer praises the ‘easy’ nature of the collaboration with IP-Suisse and its management:

Normally, if we have an idea for a product today, it takes two months, maybe one, until we have the product on the shelves in the shop. And we can change it if it does not work [sell]. And that's how it works! (Retailer, management team, Aug. 2017).

A dense network, direct access to farmers, a readiness to try new things and flexibility are qualities that IP-Suisse's partners value. Individual farmers can also activate these resources in order to launch new projects. A good example is the development of a Swiss production and value chain for quinoa, which was initiated by an IP-Suisse farmer. This project was largely facilitated using the levers offered by the organisation to convince retailers, find mills and collecting centres, locate other producers and, finally, set up a new value chain. This dynamism and

flexibility rely on the diverse and multilateral collaborations that have developed around the certification schemes, as diverse actors keep learning to collaborate in renewed and innovative ways. As we see here, the IP-Suisse assemblage produces many different kinds of learning: about how to collaborate among partners, how to farm differently, how to grow new kinds of crops, how to work together to develop new value chains based on ideas of sustainability, etc. These learning processes are all happening at a collective level, in the sense they emerge from the interactions within the assemblage. They contrast with the diagnosis of rigidity and closure that is associated with the bureaucratic side of accountability practices within the IP-Suisse assemblage.

7. Discussion: an assemblage inspired assessment of accountability practices

The picture I have painted of the multiple processes at work in the IP-Suisse assemblage oscillates between encouraging and worrisome. Powerful bureaucratising forces tend to block meaningful learning processes and reflexive approaches to the definition of governance practices, and powerful actors obviously use accountability practices as a means of control over other participants, in a unidirectional deployment of accountability. However, at the same time, I have also provided evidence of the progressive development of cumulative environmental knowledge among farmers, and counter-vailing forces that build on new ways of working together, in direct relation to accountability practices. I want now to come back to the assemblage approach developed in this paper. This approach is based on four principles described above that, as I will show, help to make sense of these contradictions and of this complexity. These principles can be seen as guidelines for assessing accountability practices and their outcomes.

7.1. Replacing accountability practices in the wider governance assemblage

Accountability practices do not develop in isolation. They are part of complex governance assemblages. In my case study, the close relation between IP-Suisse and the environmental schemes promoted by Swiss agricultural policy shapes many of the processes that develop in the AEG assemblage forming around IP-Suisse. In some ways, it mitigates the power of the retailers over the standard, while it also increases the bureaucratisation of AEG, as bureaucratic procedures permeate farmers' relation to both markets and public policies. The assemblage approach allows us to emphasize this co-evolution of certification and agri-environmental policies. In contradiction to a binary model of accountability in terms of principal and agent (e.g. Bovens 2007), the assemblage approach emphasises the diversity of social relations in accountability practices. Accountability is relational, but it cannot be reduced to a single relation. On the contrary, accountability is produced through a complex set of relations. I mentioned shortly the case of the innovative farmer who mobilised the network of actors around IP-Suisse to launch a new value chain for Swiss-produced quinoa. Interestingly, simultaneously to securing the various steps involved in growing, processing and marketing, the priority was also set on negotiating with the FOAG for the inclusion of quinoa within the direct payment system. In other words, to understand the processes resulting from a given accountability practice, we have first to identify its many relations with other governance instruments. Those might be other accountability practices, but also, for instance, environmental or market regulations, the support to specific research topic and objectives, subsidies for agricultural investments.

7.2. Power and knowledge dynamics and democratic control

Following Bovens's (2007) Democratic and Institutional Perspectives, accountability practices can contribute significantly to reinforcing democratic control in AEG assemblages by providing both information

⁶ The IP-Suisse standard for wheat already bans the use of fungicides and insecticides, but tolerates the use of herbicides before sowing. In 2019, it started a progressive move toward a totally pesticide-free production.

on the conduct of the powerful and autonomous institutions that can counter its power. From an assemblage perspective, farmer empowerment develops at the interface of the two interdependent dimensions: the materiality of social relations and the processes of learning and sense-making. In the case of the IP-Suisse assemblage, the dominant power of the state and the retailer is partly countered in instances where farmers can engage with other actors and simultaneously be empowered and develop new knowledge, for instance when experimenting the glyphosate-free production of wheat in partnership with an industrial bakery. In this case accountability practices contributed to transform the assemblage, notably by facilitating the connections between diverse actors thanks to the dynamic network developed by IP-Suisse as an organisation, and by connecting IP-Suisse farmers agricultural knowledge and experience to bakers' desire for pesticide-free cereals, all this resulting in new alliances and joining of forces. Similarly, IP-Suisse certified dairy products receive new publicity thanks to the partnership with a new retailer, allowing finally the fulfilment of the joint project developed between researchers and the IP-Suisse organisation. Here again, these new alliances based on set of existing learning processes – the development of a specific standard for grass-based dairy production in collaboration with farmers and scientists – contributed to rebalance power relations in the assemblage. This potential for more autonomous development and learning is closely related to synergies and the alignment with the interest and objectives of other actors, illustrating the collective dimensions of agency within the assemblage, where counterpowers result from the convergence of multiple limited agencies.

7.3. Articulating multiple outcomes

As we have seen, the accountability practices within the IP-Suisse assemblage produce diverse and sometimes contradictory outcomes. A classical approach would encourage us to select the most significant one and to make of it an ideal type. In this process, one could refer to diverse possible criteria (e.g. the most influential, the most specific, etc.). As pointed by [Callon \(2017\)](#) an assemblage approach rejects such simplifications related to unequivocal determinations and encourages us to take all of them seriously as they all contribute to defining what the IP-Suisse assemblage actually is. There is no meaningful way of settling the tensions between these somewhat contradictory processes. Therefore, the assemblage approach evacuates the possibility for simple conclusions and assessments, and purposefully cultivates a level of uncertainty.

Coming back to the short story told in the introduction, the accountability practices involved around the IP-Suisse label had diverse consequences. From the perspective of the farmer, the IP-Suisse standard for meat quality deprived him of the bonus related to the label. At the same time, the unique identifier for every animal – an element introduced in the assemblage by accountability practices – allowed him to unveil the 'mistake' at the supermarket counter. His resentment and felling of unfairness were legitimated by the flow of information through the AEG assemblage. Here, accountability produced both impunity for the retailer (its power remains largely unchallenged) and empowerment for the farmer (he could act enunciatively at the general assembly), even if unfulfilled and imperfect. Similarly, the IP-Suisse assemblage on the one hand constraints farmers' practices within ready-to-use ticking box schemes, but on the other hand strengthens their position, in terms of market access for instance, making it safer to experiment with new practices such as pesticide free cropping. Summing up, while assessing accountability practices, attention should first be paid to all the processes that have been identified. This should produce a nuanced image of the accountability practice, acknowledging the existence of both critical aspects and more positive processes.

7.4. Potentialities and the contribution to better food systems

However, assemblage thinking contribution is not limited to acknowledging ambiguity and complexity. Assemblages are multiplicities, both in terms of what they are and what they might become, and this emphasis on not only what is but what could be is an essential aspect of the assemblage approach ([Lewis et al., 2016](#)). This is where the attention paid to multiple, imperfect and unfulfilled – but still existing – processes shows its value. Seeing beyond the processes that are currently dominating the assemblage – in this case, the dominance of retailers and the bureaucratisation of environmental governance – reveals more marginal – but also more positive – forces and processes of change. The point then is to better understand what alliances sustains or inhibits them, in order to engage with their possible contributions to fairer and more sustainable food systems. In my case, I have chosen to explore this potential from the perspective of farmers' empowerment and the creation new knowledge. The point here is to concentrate attention and effort on how to nurture desirable processes in the assemblage, as a way to counter less-desirable ones. In the IP-Suisse assemblage, farmers have been able to secure some level of empowerment and control over the label through the existence of an autonomous and strong collective organisation, IP-Suisse as a farmer organisation. This observation echoes the rich literature on farmers collective autonomisation through cooperation (e.g. [van der Ploeg, 2008](#); [Stock et al., 2014](#)). In addition, I have shown that farmers' empowerment is not only about farmers' own power, but also and above all about convergences of interests and diverse and varying alliances, with researchers (e.g. in the making of standards), with food processing industries (e.g. in the management of quality and quantity of agricultural production), with retailers (e.g. in the development of new products and value chains), with the FOAG (e.g. in the coordination of standards and controls), etc. In this sense, the balancing of power in accountability practices is also about fostering coordination and collaboration between less powerful actors.

The coming together of diverse "forces" and projects is also key to creating the space for experimentation and collective engagement in new processes of learning, which is an essential element in countering some of the negative aspects of the strong bureaucratisation of the IP-Suisse assemblage. The IP-Suisse assemblage becomes sometimes a space where new knowledge emerges. In these instances, accountability practices facilitate collaboration and experimentation, notably because of the dense network of relations they have created around the common purpose that frames the AEG assemblage. Following [Bovens \(2007\)](#) again, learning processes are a fundamental objective of accountability "as a tool to make and keep governments, agencies and individual officials effective in delivering on their promises" (463). In other words, accountability should help actors to learn to act better according to their declared objectives. This contradicts a bureaucratic approach to accountability, based on rules to follow and boxes to tick. Indeed, fostering experimentation and learning within accountability practices is not an easy thing to do, as accountability generally relies on stable and fix elements that can be easily accounted for. Experimentation, on the contrary, remains open to the unexpected and might easily escape the frame and objectives of a standardized reference. A balance has to be found in the AEG assemblage, based on a dynamic and evolutive understanding of standards and dedicated spaces for experimenting and exploring new practices, as partly illustrated by the example of IP-Suisse.

8. Conclusion

Renewing accountability practices on the basis of existing processes.

In this paper, I offered a contrasted image of the outcomes of accountability practices within the AEG assemblage forming around IP-Suisse, through the lens of two constitutive dimensions of accountability: power and knowledge. Multiple and contradictory processes are set in motion, with varying consequences on power relations and

knowledge creation, which in turn produce diverging enactments of accountability. The increased dominance of large retailers and the acceleration of bureaucratisation can be considered as unwanted effect of the accountability practices. This situation – where accountability reinforces unbalanced power relations by mobilizing specific forms of information and learning processes – calls for a reinvention of accountability practices that would produce outcomes that are closer to its promises for more democratic control and better learning processes in governance (Bovens 2007). The assemblage approach suggests that the point is not so much to invent a blueprint for better accountability practices, but rather to understand the specific processes taking place within a given AEG assemblage and then to encourage the creation of new alliances to strengthen those processes that are most likely to foster experimentation and knowledge leading to fairer and more sustainable food systems. In this sense, my conclusions are a rejoinder to Darnhofer et al. suggestion that a relational perspective questions the “usefulness of generalized recommendations and highlight the role of the ability of actors to creatively seize emerging opportunities to induce and sustain change” (2001). In the case of the IP-Suisse assemblage, existing processes already push in this direction and can therefore serve as an inspiration for a reinvention of accountability. The empowerment and learning processes identified in the IP-Suisse assemblage highlight some directions that should take innovative accountability practices in order to contribute to re-balancing power relations in agri-food systems thanks to information creation and circulation, and subordinating bureaucratic simplifications and procedures to the promotion of learning and sense-making for better food futures: the consolidation of collective institutions regrouping farmers; evolutive standards that remain open to new products and practices; collective experimentations including diverse actors and producing a culture of collaboration.

The analysis of these processes shows that three elements can create a basis on which to build this renewed accountability practices: a strong collective organisation of less-powerful actors; intense networks of collaboration between actors around shared objectives; and securing spaces for individual and collective experimentation in relation to evolutive standards. Again, these three elements do not constitute a guaranteed solution. We can already say that renewed practices of accountability based on them will bring unexpected processes of change – potentially including undesirable ones – to the assemblage they will join. This is what happens in assemblages. Nevertheless, they will have contributed to better – but never perfect – enactments of accountability.

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