

# Reflexivity or Assessment? The Role of Self-Reflexivity in the Assessment Process

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## Abstract:

If ours is a “postmodern” world, then it is one in which safety and quality are managed by ubiquitous assessment tools, evaluation reports, controls, and continuous oversight. Our food is subject to seemingly countless protections and controls, all presumably designed to secure high safety and quality. Yet, recent and recurrent food scandals, including those in the organic food chain, should remind us of endemic failures or “normal accidents” which occur despite attempts to control for just such events. In this paper, we suggest that focusing on the ethical, systemic and governance issues may be more productive and broadly empowering than only increasing the range and variety of control mechanisms.

We suggest that reflexive processes could offer important alternatives to currently dominant control mechanisms. These processes are grounded on: ethics with respect to the IFOAM principles that offer an overall framework; system dynamics that focuses on the nature and extent of personal and organizational interrelationship between human, cultural, economic, technological and natural environments; and, governance that draws attention to participatory rather than a “top-down” approaches, and represents one means for thinking about “acting responsibly”.

## 1 Introduction

In the past decade there has been a remarkable increase in the number and extent of organic food certification processes, rules, laws, and control mechanisms for production and supply (Toke and Raghavan 2010; Vogl et al. 2005; Birks 2002). Increasing fraud; food safety scares; clear labelling; pinpointing responsibility for accidents and mistakes; building trust; and, economic interests are among the most common arguments for greater regulation of the organic agri-food chain. However, the increasing complexity and globalisation of the agri-food chain that specifically affects smallholder farmers (Fischer and Hartmann 2010; v. Braun and Díaz-Bonilla 2008; Friedland 2003; Pimbert et al. 2001) ensures that neither processors, traders, sellers nor consumers are able to oversee the life-cycle of a food product (Schaer 2009; Sahota 2009). The control and certification processes do not reduce this complexity, but are instead, perceived to complicate it through various bureaucratic requirements. And there is empirical evidence that there is a lack of consistency between the diverse audits and certifications when applied in practice, which lead to different results (Albersmeier et al. 2012). Similarly, the organic discourse increasingly focuses on certification protocols and procedures that are designed to “control” and “regulate”. Such protocols and procedures essentially transfer responsibility from individuals and groups to (often) anonymous and bureaucratic structures. Consequently, there is less attention to the issues of individual responsibility and the underlying ethical and political questions regarding how the organic agri-food system could or should be organised to reduce the extent and cost of anonymous control mechanisms.

Table 1 provides a preliminary categorization of two contrasting paradigms for control and certification. In this paper we argue for replacing the linear model with a self-reflexive one. We highlight the potential of an alternative concept as a means to contribute to quality in a growing organic movement where anonymous control systems have become more and more prevalent and contradictory to one of the original ideas of the organic movement to foster the voluntary adoption and individual responsibility.

**Table 1. Two paradigms for control and certification**

Paradigm	Cognitive concepts	Concept responsibility on	Regulative strategies
Linear thinking	Independent norms, rules, laws	Delegated to an institution-externalized	Hierarchical
Self reflexivity	Ethics, systems, governance	Shared by the owners - internalized	Heterarchical

In this paper we seek not to question, but to explore new ways of thinking about the need for control. We draw on Rudolf Steiners social threefolding approach<sup>1</sup> (1999, 1996) which inspires us to consider new ways of thinking about control and certification mechanisms. This concept of social threefolding defines the purpose and the relationship of three societal subsystems – economic, juridical and socio-cultural – as a framework for discussion how individuals should assume responsibility for themselves and their community. We suggest that assuming this responsibility is a result of self-reflective processes.

To define and study the role of self-reflexivity in the organic movement, we divide our paper into three parts. Following Table 2, we identify the selected pressures that drive the demand for increased control and certification mechanisms. The second part of this paper looks to the concept of “self-reflexivity” as a basis for opening an inquiry into what could be alternative modes of managing the organic agri-food system. We specifically examine how we might draw upon a set of ethical principles (e.g. the IFOAM principles), systems dynamics, and a concept of governance. In doing so, we seek to draw attention to more ethically- grounded approaches to managing organic agri-food production and marketing, to the systemic relationships between the behavior of actors, processes, environments, and to the participatory development of OAFS. In our third part, we discuss different initiatives in the organic movement where self-reflexivity is expressed through new forms of practices of collaboration between farmers and consumers.

## 2 Control and certification system - driving forces

Several factors influence the demand for expanded control and certification mechanisms in the organic agri-food chain. In general it is commonly argued that with the growth of the organic agri-food system there is need to extend the control and certification to assure traceability<sup>2</sup> (e.g. Schulze 2008). Table 2 describes some domain specific causes for these demands.

**Table 2. Domain specific causes driving control and certification**

Domain	Causes
Production	New plant and animal diseases in the production, storage, conservation and processing
	Farmers tend to substitute their conventional practices with organic-approved products and practices
	Intensification of the production - farmers tend to practice short term ecologically critical instead of long term fully accepted strategies
	Introduction of new technologies and techniques with unknown impact on product quality

<sup>1</sup> Rudolf Steiner puts the individuals responsibility in the centre of this concept. The social threefolding [http://centcost.org/Lib/CERTCOST/Deliverable/D14\\_D11.pdf](http://centcost.org/Lib/CERTCOST/Deliverable/D14_D11.pdf) (01.03.2012)

	Industrial produced beneficials, instead of providing habitats in the land use system
	GMO seeds mixed with organic seeds / plants affected by GMO crops
Processing	Increased use of new additives
	Increase in the development of new processed and convenience products
Research	New technologies to prove and to control quality lead to the application of new methods in the control process
	New research results
Certifier associations	Economic interests - lobbying through certifiers e.g. at european level
Consumer	Increase of societal sensitivity for ethical issues
Trade and Market	Increase of internationally traded products - lack of traceability with globalization
	Consolidation of storage, processing and selling of products of different origin in one company (risk of wrong declararation)
	Price difference between non-organic and organic products
	Increase of new labels ask for new criteria for differentiation of labels
	Food diseases which are ubiquitous and not to separate to non-organic or organic products
	The increase of marketing strategies in the non-organic sector, dealing with selected organic qualities
	A product or process does not fulfill the basic standards, but is sold as an organic product
Media	Increase of available information and knowledge / increase of critical consumers
	Mis-information and mis-interpretation of the organic idea, organic rules etc.

To summarize, the causes that cut across all the domains are:

1. Efforts to combat deliberate fraud and willfull negligence
2. Potential risks from non-willfull negligence, ignorance, and accidents: any contamination in the process chain
3. The increasing difficulty in distinguishing between organic and non-organic on technical grounds that do not acknowledge the IFOAM principles
4. New production and processing challenges
5. Developed instruments for verification of organic quality
6. Developed assessment instruments to prove quality
7. Corporate interests (the issue of power and influence on the organic movement)
8. Consumer awareness
9. Organised frauds (scandals)

Behind these causes we recognize and understand the influence of powerful political and corporate interests. A discussion of the different roles and strategies of these actors lies outside the scope of this paper. Instead, we want to note that these actions jeopardize the assurance of organic quality and lead to the loss of consumer trust, a loss of solidarity among partners in the organic agro-food chain. The mainstream approach these issues extends control and certification systems.

In contrast to this perspective the next section outlines an alternative way of thinking about control and certification that might provide a basis for trust and solidarity within the organic movement.

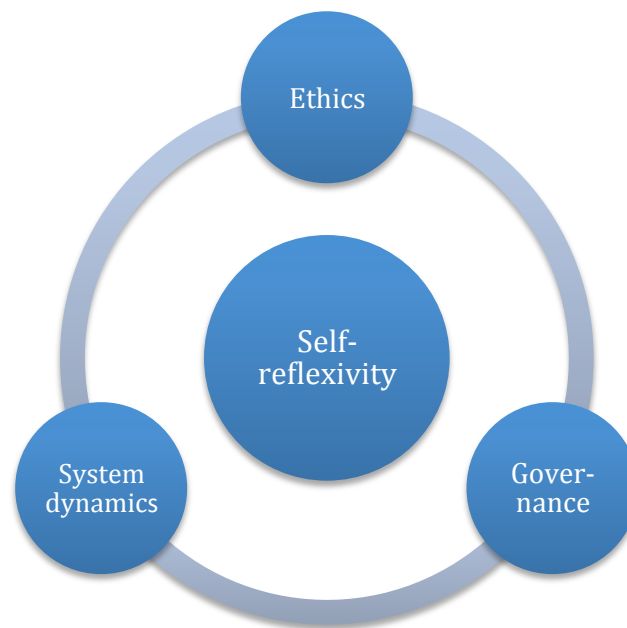
### 3 Conceptualizing self-reflexivity

In contrast to the current modernist use of control and certification to secure quality and safety of organic food (linear thinking), a self-reflexive process<sup>3</sup> could inform how practices might contribute to quality and safety in the organic system.

This section offers a conceptual base for self-reflexivity and discusses how it provides a critical foundation for rethinking the current trends toward further expansion of control and certification system.

We look at self-reflexivity through three theoretical lenses (Figure 1): key ethical concepts defined in terms of the IFOAM principles, i.e., an applied ethical orientation on „how to act“; system dynamics as a methodology to sensitize us to the relationships in and between systems; and, governance or, how to create and develop new forms of collaboration, information and knowledge exchange and with thus transparency and trust between farmer and consumer.

This self-reflexivity approach cannot avoid all the conflicts noted above (Table 2). However, it could contribute to limiting conflicts, and the loss of transparency; it could also help to ground the development of solidarity and trust in the organic system. Furthermore this approach could encourage a deeper commitment and better understanding of the organic system, thereby avoiding a further increase in the current control and certification system.



**Figure 1. Conceptualization of self-reflexivity**

#### 3.1 The ethics of IFOAM principles

The IFOAM principles (see table 3) strengthen our awareness of the ethical foundations of OAFS and remind us of the relevance and responsibility of individual action – as producers, processors or traders. In this section we provide insights into the deeper meaning of these ethical principles. Second we put some light on how these ethics are interpreted and applied. Finally we provide some explanations why principles and practices are not always in line or are interpreted differently.

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<sup>3</sup> see also the second-order reflexivity (Voss and Kemp 2006)

Many point out that IFOAM principles are to interpret as a set of eco-centric and holistic ethics (e.g. Lund 2001, DARCOF 2000; Vos 2000). But what is the deeper meaning of this ethical orientation?

**Table 3. IFOAM Principles<sup>4</sup>**

Principle of health: Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.
Principle of ecology: Organic Agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them.
Principle of fairness: Organic Agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities.
Principle of care: Organic Agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment.

The principles provide an ethical framework for considering responsibility for future generations but also for the partners in the organic chain in current decision processes. It is their moderate deontological position, which means that actors orient their behavior not only towards current but also future consequences for others (Schrot 2009) (see e.g. principle of care).

The risk averse precautionary approach looks at the health of the entire system rather than simple models of the harm done by single causes. The operating dictum is to do the least harm, and to be very conservative when making changes in technology. This could be misinterpreted as hindering technological innovations. In contrary there is an open space for technological innovations, however they have to meet a significant set of criteria driven by the eco-holistic ethics of the IFOAM principles.

The approach is eco-holistic, not reductionist. Eco-centrism means that only ecosystems as a whole could claim a moral right (Schlüns and Voget 2008). Holism means that all living and non-living natural phenomena do have a moral right to live. Furthermore, humans are part of nature and are responsible for all living things (Cohen et al. 2007; Meyer-Abich 2006). That is, an eco-centric and holistic perspective expresses the respect for systems as a whole and all individuals and parts of a system.

With respect to nature, the term “process conservation”, discussed originally in the field of nature and resource protection, describes the maintenance of natural processes over space and time (see more in detail Gorke 2006; Jedicke 1998, 233). Transformed and applied towards the organic agro-food chain, we can argue that IFOAM principles extend this term beyond human – nature relation, towards social and economic systems (e.g. the principles of health, care), without, however, claiming that systems maintenance is something carved in stone.

To summarize: the IFOAM principles provide a far reaching set of ethical orientations. To transfer these ethics into practice goes far beyond exclusively personal interests. Therefore the question arises how farmer apply these ethics. For that we reflect as entry-point the diverse motivations of farmers to convert to organic agriculture. Second we look at the historical development of the principles and the relevance of their societal environment.

Members of the organic movement are commonly believed to represent a “reflexive” societal group. They are aware that ecological risks do not arise externally, but are driven by society and individual action. In the early years of the organic movement, the motivation to convert to organic was frequently an ethically grounded decision

<sup>4</sup> [http://www.ifoam.org/about\\_ifoam/principles/index.html](http://www.ifoam.org/about_ifoam/principles/index.html)

(Padel 2005), including a conscious awareness of the ecological impacts (cf. Beck 1997), and new forms of risk reducing agricultural practices.

Research on farmer motivations to convert to organic farming today, however provides a more complex picture. Cranfield et al. (2010, 292, modified) synthesizes four types of motivations. All types stand as models, which in practice arise in mixed forms:

- Type 1: find an economic solution for the farm: economic survival, market strategies, farm reorganization;
- Type 2: take care for the environment: nature protection, water protection, soil fertility;
- Type 3: avoid risks and to increase health: to exclude unhealthy methods, to recover health; and
- Type 4: follow and fulfill idealistic motives: to live a self-realized, spiritual, religious, value driven life.

Some farmers follow what we might refer to as “purely profit” approach (type 1), which helps us understand in part some of the causes driving certification and control described above. Besides a fundamental need to farm profitably, profit-oriented farmers recognize the importance of competition, power, shareholder value, unlimited growth etc., - all neo-liberal values that are also central to the non-organic industrialized agriculture. This infusion of the neo-liberal values into the organic system is not surprising because organic is embedded in capitalistic market logic.

Type two and three refer to the principle of ecology and health and care respectively. Some argue that the integration of ethical issues in organic farming makes economic sense. While others argue that ethics should not be misused for marketing purposes (Gössinger and Freyer 2009), which represents mainly the forth type. These farmers adopt a more reflexive approach with a commitment to ethically grounded practices beyond the basic standards. Interestingly type 4 does not offer insights about the type of practices, which are linked with that type. Instead this type is referring to the ethical and spiritual background of practices.

In general the open formulation of these principles<sup>5</sup> and the Basic Standards, provides space for individual interpretations, which leads to different strategies and practices as also Kaltoft identifies in her empirical study of farmers’ values about nature (1999). Specifically it is also the principles character which is an affirmative “human should”...act in a certain way. Basic Standards in contrary include both – a “must” and a “should” or “recommended”, while certification asks for a concrete “must”. That ethics could be not formulated as a must, is described by Jean Piaget: “we can only talk about moral understanding and behaviour, if those ethical orientations... have not the character of a compulsion from outside, but guarantee most of freedom for all members of a community. Only a rule, which fulfil this gap, is a moral rule” (see Pieper 1994: 20).

But there is also a second explanation why principles are so differently applied in concrete practices in the organic movement (cf. Kaltoft 1999; Etzioni 1997). From a historical point of view, the organic ethics had their development in a time where non-organic agriculture and food systems in the 1960’s started step-by-step to exclude traditional practices (“Enttraditionalisierung”) and values in favor of modern techniques. In contrast, ethically oriented organic farmers continued with part of their traditional practices and values combined with modern approaches (cf. Beck 1986: 113ff). The IFOAM principles stand for sets of values, combining adapted traditional and modern practices (cf. Beck 1986: 120). Kaltoft (2001, 154) argues in this context,

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that the organic movement combines pre-modern, modern and reflexive modern perspectives. With that organic also integrates a broader value set, which is reflected through the four types of Cranfield et al. (2010). Further more, external conditions, e.g. regional specifications, professions and social networks lead to the different of value interpretations and related practices. Likewise, influences from non-organic agro-food systems challenge the organic practices and ethics (see the causes in table 2). To understand the impact of interrelationships between systems therefore is the second dimension of a self-reflexive approach discussed below.

### **- System dynamics**

In this chapter we seek to identify characteristics and functions of the organic agri-food chain by applying system dynamics.<sup>6</sup> With this perspective we try to make explicit that systems dynamics teaches us how to organize the organic system to reduce control and certification mechanisms, to cope with the challenges listed in table 2 and to regain trust and transparency in the organic system.

System dynamics serves as a methodology to describe and comprehend complexity, non-linearity, and feed-back-mechanisms of systems (Forrester 1994a, 245). It is based on the methodology of general systems theory (Von Bertalanffy 1973) and cybernetics, which draws attention to the need to cope in dynamic and complex situations. By definition, system dynamics sensitizes us to looking at the interrelations between production, economy, market and socio-cultural issues. More specifically it provides detailed insights into the organic system and its environment: First, it encourages us to identify and to develop those systems arrangements, which reduce the risk of practices that might be inconsistent with the ethical principles. Second, it sensitizes us to multiple ways of thinking how to cope with the causes affecting the organic agro-food-system. Third, it allows us to identify leverage points in order to precaution against unwanted events that are contradictory to the standards. Fourth, a systems perspective allows us to interpret critical determinants as systemically driven risks, which demand a re-organization of the organic agro- and food system. Fifth, systems dynamics draws our attention to steering influences on the system from outside and how to regulate systems. Sixth, this perspective sensitizes us to the relationship between organic and non-organic systems. Seventh as a result, it allows us to develop and organize more reliable organic systems structure and functions that limit the extent of control processes.

System dynamics as such also provides an analytical framework to understand the potential impacts of any above-mentioned critical causes (see table 2). The combination of different systems perspectives allows us to understand and to interpret functionalities and the complexity of systems (cf. Luhmann 1989, 3). As Latour (2005) would argue, systems dynamics also sensitizes for the relationship between human and nature or what he would characterizes as the actor-actant relationship. Lund provides a good example with reference to animal welfare problems, how systemic thinking is applied for describing and solving complex problems (2002, 23): "The systemic view ... offers possibilities for new approaches to solve problems, making ... breeding and management strategies, or changes in consumer attitudes and purchasing patterns, important tools for improvements." Despite its advantages, it is important to remember that systems descriptions offer us a simplified interpretation of reality (cf. Bossel 2004, 51).

The idea of system dynamics differentiates among, and allows us to describe different sub-systems in the organic agro-food-chain from different perspectives and with different analytical tools (Ackoff 1994, 175ff). It sensitizes us to the organization of the organic agro-food-chain in different sub-systems that are commonly labeled as

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<sup>6</sup> we apply both terms - system dynamics as a methodology and systems thinking as an approach to reflect systems

production, processing, trade, and consumption. These sub-systems in turn, can be sub-divided into sub-subsystems (e.g. plant -, animal production etc.) and their characteristic key elements (e.g. plants, compost etc.). From a hierarchical perspective, systems or elements could be dependent or independent (variables) from others, or organized as cyclic phenomena (Dörner 1989, 112). Between different elements exist different types of relations (cf. Ulrich & Probst 1991, 43) (e.g. carbon transfer from plants to animals to stable manure to soil fertility). The advantage of thinking in terms of system dynamics is that there is nothing predefined and that offers an analytic flexibility. It is the person who applies systems dynamics, who decides how the system is structured and borders defined.

Besides the technical-material-natural dimension, system dynamics also allows to draw our attention to social interrelationship between producer and consumer. Both the producer and the consumer are in a certain sense part of the organic system, each with their own language, codes, symbols and expectations, and following their own interests. These interests define their relationships and certainly influence the capacity for building trust among consumers and producers. However, the interface between both actor groups is their understanding of, and interest into organic.

A methodological component of system dynamics is cybernetics, which provides us insights on how systems are guided, differentiated into two guiding types - steering and regulating. The idea of system guidance through humans or any technology implemented through humans is to guide a system target oriented (Ulrich & Probst 1991, 78ff; Ulrich 1970, 120). In contrast to other authors (cf. Milling 1984, 4; Forrester 1972, 15), we interpret steering as a means of internal and external guidance, and regulating as an internal capacity to be able to react on changing conditions and environmental influences through feed-back-loop organized exchange processes. The notion of steering and regulating sensitizes us to analyzing the capacity to sustain a system with respect to fulfilling the organic guidelines and the principles.

To understand this theoretical concept of guidance, we add some practical examples with respect from an economic perspective. Organic farms in Europe are steered through subsidies, however the farmer decides how to organize the farm within this framework. To a certain extent farmers are able to react on price loss through diversifying their production and market strategies. In production terms, the more farmers invest in soil fertility, the more they are able to cope with drought periods. This process could be steered from outside if subsidies were linked with humus increasing farming methods; it is steered from inside, as the farmer organizes the farm based on a long-term humus oriented cropping system. Regulation is given if the farmer is able to bridge extreme drought periods with irrigation techniques or is diversifying seed strategies combining drought sensitive with drought robust varieties.

Further more there are strong interdependencies within socio-techno-economical defined systems, which provide some factors a hierarchical position against others.

- Soil fertility and industrial inputs: only with living soils actors are able to reduce the dependence on mineral fertilizers and agro-industrial products;
- Consumer behavior and marketing potential: only a more holistic consumer understanding of product quality beyond appearance, e.g. small apples, buckled carrots would be accepted;
- Trade standards and farmers income: only if traders are sensitized to the natural and production limitations in organic systems to meet what have become accepted commercial technical standards (form and size of a vegetable), the trade of organic vegetables could be significantly increased.



How tolerant is the organic system against threads? If not all members along the food chain fulfill the intrinsic needs and rules of the organic approach the whole system is threatened. If one actor refuses the rules, it puts others under pressure. As identified in Table 2 above, if some start cheating the system this would encourage others to do likewise. This example underlines the systemic dependencies in the organic agro-food-chain: the organic food chain is threatened when not all actors follow the rules. And this is in fact the vulnerable characteristic of the organic system.

A continually increasing supply of processed products /convenience food in the organic sector over the last ten years has created another area of complexity.<sup>7</sup> The more a product is processed with several ingredients from different origins (sub-systems), the more difficult it is to communicate the products organic reliability, and the more control and certification activities are to activate. To communicate this complexity in the absence of social interaction between those who produce and who process and those who consume, is limited. This means that instead of relying on personal relationships, the consumer delegates the creation of trust to an anonymous control and certification system. When producers and processors are locally organized, there is a potential of a social relationship among them.

System dynamics encourages studying complex organic systems and teaches us how and where to define system boundaries so that organic systems can be analytically and practically manageable. For example, systems thinking trains the actors to understand and to reconstruct system complexity, but also to identify those dimensions, which provide transparency (Richmond 1994). It helps also to identify those systems, which become too complex and thus create a guarantee of transparency through an increase of control and certification systems.

Systems knowledge is also useful for identifying strategies to reduce the risk from fraud, for example, by creating food chains that are transparent for all actors in a food system. The more each actor is able to gain insights into the production and food chain, the less will be the demand or need for complex control and certification systems.

What are the lessons learned from system dynamics for understanding control and certification? The organic system is both, open and closed, depending on the subsystems, the observer and the standpoint and interests. But there is always the question how to manage the permeability of the boundaries in order to maintain the integrity of the system. It is open, because it is part of a broader system. It is close, because it tries to seek to be independent from external inputs. But it also means, that steering and regulating capacities represent an entry point to think about ways for assuming responsibility for the quality of the organic system. Therefore we could conclude that system dynamics offer us insights, which are necessary to adequately apply our ethics in practices.

### **- Governance**

Having discussed ethics and systems, it is now important to review what kind of social construct is required to regain transparency and trust, without further increasing investment into bureaucratic control and certification systems. The specific question is how to organize collaboration beyond governmental regulatory control and certification mechanisms. Thus, we combine the idea of governance with the systems approach and the ethics.

We use governance to describe the systemic relationship between state, administration and societal actors, beyond the steering and control mechanisms

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<sup>7</sup> e.g.: [www.gov.mb.ca/.../food/consumer\\_trends\\_conv](http://www.gov.mb.ca/.../food/consumer_trends_conv) Consumer Trend Report Convenience (01.02.2012)

regulated by the state. We appreciate the definition by Kooiman (1993, 253, cited in Benz 2004, 17), as a framework to describe an alternative perspective on organizing trust based ethically driven organic agro-food-collaboration or networks: „Instead of relying on the state or on the market, socio-political governance is directed to the creation of patterns of interactions in which political and traditional hierarchical governing and social self-organization are complementary, in which responsibility and accountability for interventions is spread over public and private actors“.

Trust is defined through social relationships in different social fields of interactions (Luhmann 1989: 4). Therefore, trust is a key factor that differentiates agro-food chains. The difference is the potential to create trust between the different actors. The longer the distance between the sites of production, processing, marketing and the consumer, the more agro-food-chains become anonymous and trust decreases. The more organic food trade becomes internationalized, the fewer there are opportunities for face-to-face communication. In contrast regional and local organic value chains could provide a potential for personal interrelationship and face-to-face communication activities and therefore contribute to trust building.

Trust is linked with the idea of “closed” systems or systems everybody is able to overlook. Knowing the boundaries, that provide “orientation” and reduce complexity, local systems therefore help to create trust. The more open a system, the less transparency there is about a production and processing process, and the more there is a need for trust building in anonymous paper description of product origin. The more open and complex the agro-food system, the more questions arise about the reliability of a control and certification system. This does not exclude the import of, e.g. ‘high value crops from the tropics – there are already models in practice on how to establish close trust-building relationships and shared responsibility between farmers and consumers (e.g. the FAIR trade approach).

What kind of governance is required to open a space for an ethical discourse guided by the IFOAM principles, which does not deal only prediction and control, efficiency and rationality (Braun et al. 2010, 858)? The concept on “ethical regime of governance”<sup>8</sup> offers us a participatory oriented approach, where individual autonomy and human dignity, pluralism, openness, reflection and shared responsibility are the guiding principles of a public dialogue (Braun et al. 2010, 858, modified). Furthermore, there is no claim to objectivity and truth independent from that which emerges in the process of governance. Such a regime would also establish the foundation fostering shared responsibility and accountability within the organic agro-food system. This would provide an opportunity for moving beyond bureaucratic certification and control.

Governance, ethics and system dynamics are closely linked to each other, all together they can help to identify organic agro-food chain models, which are organized as such, that control and certification can be reduced. In this chapter we provide some examples of what we would call applied self-reflexivity within the organic context.

#### **4 Practicing self reflexivity**

In this chapter we seek to identify applied patterns of control mechanisms in organic agriculture, where ethics, systemic thinking or governance are of relevance. We do that without claiming a detailed analysis. We refer to relationships along the organic agro-food-chain, where “control” mechanisms in the widest sense are characterized through diverse forms of participation, economic collaborations, communication and degrees of shared responsibility.

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<sup>8</sup> Modified from governmental ethical regime (see Braun et al. 2010)

With respect to the actors involved in the organic agro-food chain, - producers, entrepreneurs, public institutions, consumers but also the farmer organization and NGOs - diverse actors participate within different structures and with specific functions, organized in networks, in collaboration or in competing positions.

Table 4 illustrates existing models in which individuals in an organic agro-food context established new forms of communication in order to regain transparency and trust without increasing investment into control and certification systems. We differentiate between types of shared responsibility and communication forms between different actors along the OAFs.

**Table 4. Practices of applied “self-reflexivity” within farmer-consumer relationships**

<b>Initiatives</b>	<b>Processes and practices</b>	<b>Responsibility</b>
Participatory guarantee system type 1	Control and certification through farmer groups and certifiers	Shared responsibility of control and certification among several actors of the OAFS
Participatory guarantee system type 2	Farmers groups, certifiers and consumers collaboration in the farm control and certification process	Shared responsibility of control and certification among several actors of the OAFS
CSA type 1	Consumer invest into the farm: a) through financing farm inputs in advance; b) through a temporary product based economic relationship	Shared responsibility on farm economy
CSA type 2	See CSA type 1 and: Consumer decides what he / she takes for the money given in advance	Consumer assume an extended economic responsibility
CSA type 3	Consumer owns the farm and employs a farmer	Consumer assume complete economic risk of the farm
COOP	Consumers own a shop and are linked with farmers through value based contracts	Consumer share marketing risk with farmers

These initiatives are not necessarily organically certified. There are also cases where farmers follow the organic guidelines, without being members of a formalized control and certification process. In those cases “control” relies exclusively on personal relationships.

Furthermore, initiatives do not follow certain ethical concepts. They could be based on IFOAM principles, or other principles developed and negotiated with the participants in any initiative. Moreover these initiatives offer some space for communicating and practicing values. Each of these types structure communication between actors differently with respect to developing shared values and shared responsibility.

Each of these initiatives also applies different economic models. The character of the collaboration is mainly related to a financial contribution or a donation of consumers towards farmers. There are temporary contracts between farmer and consumer, where consumers are committed to the farm through ex ante payment or a continuous payment on a weekly or monthly basis. In some initiatives there is no assurance of the continuity of consumer involvement. Some farmers socially based pricing to benefit low-income consumers.

Collaborations are defined through contracts with rules and responsibilities for all partners. Within that context one could argue that such initiatives contribute to further

types of regulation. However the members themselves develop and implement these regulations. In doing so, they are the owners. Different initiatives can embody different models. They can range from partly informal to highly formalized contracts.

More “radical” is a double responsibility model for the consumer. In this model it’s the consumers responsibility to select products directly related to the amount paid. The second part is that the consumer agrees to balance purchases between scarce and abandoned products.

In summary, each of these initiatives is different from the mainstream of agro-food systems because of shared value basis, the potential for face-to-face communication and the contract based shared responsibility specifically with an inclusion of the consumers.

Different models raise different issues and embody different limitations. They are dependent on the individual engagement of all collaborators, often unpaid, some are confronted with fluctuations in membership, some are time consuming for consumers and farmers too, and none of them are conflict free between individuals.

But the more the organic agro-food-initiatives are growing, the less they provide for face-to-face communication and participatory processes between farmer and consumer. To keep their specific quality of low administrative input into control and certification, therefore these initiatives are limited in size. However there is an alternative to communicate even: when all products are coded with the name of the producer of the product through QR-Code (Quick Response) technology, the consumer can immediately identify the producer and communicate with the producer electronically. However the outstanding question is: how does this practice allow for the development of trust, in comparison to the face-to-face communication?

What is new with these? The idea of steering and control differentiate between the farmer-supermarket-model and these farmer-consumer participatory initiatives. The farmer-supermarket-model is driven by hierarchically organized control systems (see also table 1). In farmer-consumer participatory initiatives control is not hierarchically organized, but is part of an ongoing process between farmer and consumers of defining values and practicing them (cf. Benz 2004). In this process trust emerges from shared, exchanged and communicated values.

## **5 Concluding thoughts**

The entry point of our paper was the observation that there is an increasing demand for further developing control and certification systems in the organic agro-food chain due to increasing fraud, threads from non-organic methods and additional risks to the growing organic movement. We classified the causes into different domains that are unavoidable threats, those linked new challenges, and those, which might be avoidable.

Our question then was, if there are any alternative models to cope with this development, instead of further investing into control and certification apparatuses. For that we introduced into a model which we titled self-reflexivity, conceptualized through three theoretical lenses, which are ethics, system dynamics and governance. Each dimension of the self-reflexivity approach provides its own and independent contribution for rethinking strategies that strengthen organic quality and safety. But they are also interdependent and closely related to each other. Ethics offer value guidelines on how to create systems relationships and responsibilities and how to create ethical communication between different actors. System dynamics informs in detail where ethics are of relevance and apply an overview of the systems structure and its relevant elements. Further, system dynamics informs us about relevant actors how they are related. Systems are often not predictable in their development, but systems dynamics provides techniques to identify risks and frauds and options to

cope. The perspective on governance offers us insights into opening the space for new forms of trust building and shared responsibility beyond the control and certification system.

Then we discussed various types of well-known farmer-consumer collaborations that provide new forms of trust building and shared responsibility along the organic agro-food-chain, instead of applying further control and certification mechanisms. These types all contain elements of our self-reflexivity approach, however employed in different settings. These initiatives have far reaching implications for the engagement of all actors. That might be one of several reasons, why their application in practice is currently limited.

Our final conclusion, which we formulate as a hypothesis is, that initiatives with reduced control and certification mechanisms in an organic agro-food chain demand mainly for local and straightforward structures to secure transparency and to develop trust mainly based on “knowing each other”. This is a first precondition to reduce the risks listed in table 2. There is further need for farmers and consumers to engage financially or act idealistic through voluntary engagement into this relationship. To develop such engagements, the concept of self-reflexivity as defined in this study, helps people to understand how to manage quality in the organic agro food chain without extending control and certification mechanisms. To really understand they have to practice and to experience in such an initiative. But we also assume that the more products are processed or the larger and more anonymous the structures are, the less options to reduce control and certification mechanisms exist. In other words we have to decide between taken over responsibility and engagement, and delegating responsibility towards control and certification systems. More radical formulated the future of control and certification systems development is partly a means of types of the arising of new forms of societal and individual collaborations between those who produce food and those who consume it.

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