

What makes organic agriculture move - protest, meaning or market? A polyocular approach

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Abstract:

Many different actors have hopes and aspirations for the future of organic agriculture. They have different perspectives on organic agriculture with different understandings of what it is and what makes it move. Each perspective entails a certain understanding of organic agriculture featuring certain concepts and values and a particular logic or rationality. We describe three perspectives based on protest, meaning and market. No perspective is the 'right' one and, we claim, different perspectives cannot be merged. We therefore suggest a polyocular approach that may facilitate a broader understanding of organic agriculture by enabling us to handle different perspectives, and which may be helpful in various discourses on the future of organic agriculture and how it may be influenced.

Introduction

Organic agriculture has become an important and widely discussed issue in recent decades. Organic agriculture has long been functioning as a protest against the development of conventional agriculture and as part of the protest against the development of western industrialised society. Today it also functions as an established, alternative agricultural movement that promises more sustainable practices, multifunctionality and benefits to rural development. Moreover, organic products provide consumers with alternative choices and the organic market attracts new players to organic agriculture.

Due to this success there are now many hopes for the future of organic agriculture. Many different actors, such as policy makers, farmers, small agro-businesses, idealists, researchers, agro-food corporations, supermarkets and consumers, seek to influence the future of organic agriculture in accordance with their goals. These actors have different views of what organic agriculture is and what makes it move.

Thus, we claim, there are different perspectives on organic agriculture. This is hardly a spectacular claim, but our commitment to investigate and develop this claim is perhaps a bit unusual. Different perspectives can be identified, we claim, where each perspective entails its own view of what kind

of object organic agriculture is; what its environment is, what its trajectory and dynamics are; and how it can be influenced. And each perspective entails a certain understanding of organic agriculture featuring certain concepts and values and a particular logic or rationality.

In this paper we suggest that a polyocular approach will facilitate a broader understanding of organic agriculture by enabling us to handle different perspectives – and that this will be helpful in various discourses on the future course of organic agriculture and how it may be influenced. We first briefly explain what we mean by a polyocular approach and why we think it will be useful. Next, we outline three perspectives on what organic agriculture is and what makes it move, which we think should be observed in a polyocular approach: organic agriculture as a protest movement against the mainstream; as a logo-poietic system based on shared meaning; and as a market niche. Finally, we discuss the consequences of taking on the different perspectives and sketch some conclusions and future prospects.

Why polyocular?

The term ‘polyocular’ is formed as an extension of ‘binocular’. It literally means to use many perspectives on the same thing – not only to see more aspects, but also to gain insights from the differences between them (see further in Noe and Alrøe 2005b). To see why a polyocular approach is needed, we must expand on the claim above that there are different perspectives on organic agriculture. We claim that:

- There is no one right perspective that fully reveals organic agriculture.
- Each perspective offers some insight on organic agriculture.
- It will always be possible to take on a new perspective.
- No perspective is an island (e.g., you may hold different perspectives in succession).
- Different perspectives cannot be merged.

This means that we can try to observe several perspectives in one (second order) polyocular approach – but the different perspectives cannot be merged to one. But it does *not* mean that:

- Any perspective is as useful as any other.
- We cannot approach a better, or fuller, or more balanced, or more subtle understanding.

We cannot fully substantiate these claims here, so we have to refer to previous papers that elaborate on a systemic philosophy of cognition, science and agriculture from different angles.

The claims can be formulated as fundamental conditions for seeing something – or more precisely for cognizing something in the sense of the coordinated, systemic process of observing/perceiving, (inter)acting, and understanding/representing (Alrøe 2000). The formulation of these conditions demands that we are a little more precise about what we mean by ‘something’ or ‘object’. In the semiotic language of Charles S. Peirce, we need to distinguish between the *immediate object*, the object as we see and understand it, and the *dynamical object*, the object in itself or the really efficient object, which our representation refers to but which is not fully captured in the immediate object (see further in Noe et al. 2005, Noe and Alrøe 2005).

The following conditions are fundamental in the sense that they cannot be overcome, and as such they substantiate our call for polyocularity:

1. What we see depends on how we see it – and the same thing may therefore be seen in different ways.
 - Any cognition is necessarily a reduction since it is based on a specific context.
 - Any dynamical object has a surplus of possibilities for cognition – there is no complete cognition.
2. We cannot be sure that we see the same thing – even though we say we do.
 - A name or a description creates different interpretations or understandings of different immediate objects for different people – or for different perspectives.
 - Immediate objects refer to objects in themselves, and dynamical objects ‘kick back’ in our interaction with them.
 - But none of the immediate objects as they are represented in the various perspectives are the same as the dynamical object in itself.

First condition: What we see depends on how we see it

Any cognition is necessarily a reduction since it is based on a specific context. Niels Bohr defined ‘phenomenon’ as including the apparatus that is used to observe the phenomenon. He advocated the exclusive application of the word phenomenon to refer to the observations obtained under specific circumstances, including an account of the whole experimental arrangement (Bohr 1985: 27). In the language of Peirce, Bohr’s ‘phenomenon’ is a term for the immediate object with its semiotic and interpretational context. We generalize Bohr’s definition to include the broader cognitive context, entailing not only the observational context, but also the intentional and societal levels of context (see table 1).

Table 1: Three levels of cognitive context (modified after Alrøe and Kristensen 2002).

<i>Level of context</i>	<i>Description</i>	<i>Examples</i>
Observational context	Conceptual and technological tools for observing the phenomenon	Cognitive schemata, concepts, models, instruments, labs, etc.
Intentional context	Motivations for observing the phenomenon	Values, principles, aims, goals, problems, etc.
Societal context	Those who want to observe the phenomenon	Particular social groups, organisations, ‘the sponsor’, ‘science’

The condition that any cognition depends on a context also means that we may see the same thing in different ways: Any dynamical object has a surplus of possibilities for cognition – there is no complete cognition.

According to Bohr it is not possible to comprehend the evidence of quantum phenomena, obtained under different experimental conditions, within a single picture (Bohr, 1949). The evidence from different experiments must be regarded as complementary in the sense that only the totality of phenomena exhausts the possible information about the atomic objects. The complementary views of light and electrons as both particles and waves are well known. In the same sense, we argue that when we see organic agriculture as a certain kind of object, we also already employ a certain perspective. Organic agriculture regarded as a protest movement against mainstream, as a logo-

poietic system based on shared meaning, and as a market niche are complementary phenomena and no single perspective exhausts what we can know about organic agriculture.

Second condition: We cannot be sure that we see the same thing

There is a long way from communicating about something to that thing in itself. When we talk about organic agriculture, using ‘organic agriculture’ as a name or using a more detailed description, this will create different interpretations or understandings that stand for different immediate objects for different people – or for different perspectives. This is the lesson of Peirce’s semiotics (see figure 1). (And the idea is radicalised by Luhmann (1995: 143): “communication *is possible only as a self-referential process.*”). The immediate objects that are represented in the different perspectives do refer to objects in themselves, and dynamical objects do ‘kick back’ in our interaction with them, but none of the immediate objects are the same as the dynamical object in itself.

When we refer to dynamical objects such as “organic agriculture”, we must acknowledge the paradox in wanting to speak directly about dynamical objects when all that we can represent are immediate objects. We may interact with the dynamical object through experiments, observations and practical, experiential interactions and in this way we can seek to establish that we ‘carve nature by its joints’ in our representation of it, and that we actually refer to the same dynamical object when we want to do so. But this is never unquestionable. Different perspectives will often ‘carve nature’ in different ways and our ontological structurings of the world never fully capture the dynamical world as it is.

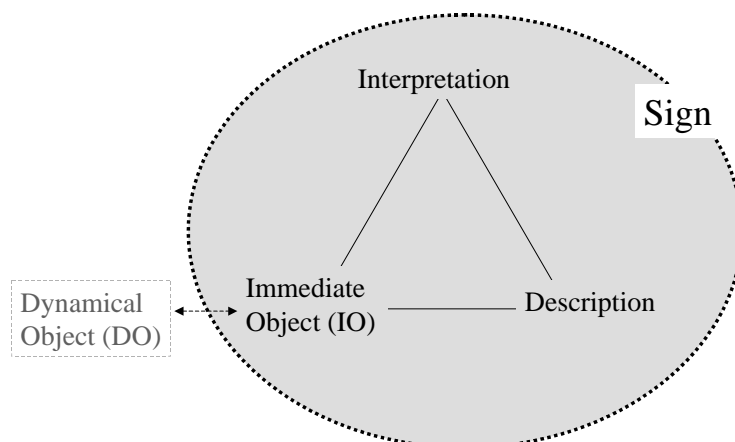


Figure 1. A Peircean view of the semiotic relationship between description (or name, or representamen), interpretation (or understanding, or interpretant), and immediate object (or the object as we see it, or the object as the sign represents it), with a reference to the dynamical object (or the object in itself, or the really efficient object) (see further in Noe et al. 2005).

We may think that we can simply go to the farms themselves to find the ‘real’ organic agriculture. But does organic agriculture consist of farms only? And if we think so, how do we decide whether a farm is organic – is it sufficient or required that it is certified, or guided by organic principles, or deeply antagonistic to conventional farming? And if not, what makes a consumer, for instance, part of organic agriculture – buying all organic, once in a while, or merely contemplating to buy due to shared values or common antagonism?

The uncertain reference to “organic agriculture” as a dynamical object adds to the complexity of pursuing a polyocular approach. Still, if we do not pursue it, we are left with the unfruitful task of arguing which perspective is right. Only some form of polyocularity will enable us to resolve conflicts between perspectives in order to better understand and influence the dynamics of “organic agriculture”.

Three perspectives on organic agriculture

Concepts such as protest, alternative, market, brand, ideology and religion have been used to characterize organic agriculture. In this section we outline three perspectives and their view of the structure and dynamics of organic agriculture. We do not at all claim that no other perspectives can be found; but we do think that these three are rather widespread and useful for a broader understanding of organic agriculture. There is not much in terms of documentation of the actual usage of these perspectives here, but we hope the present description will be sufficient to initiate a discussion.

A protest movement

Organic agriculture is often characterized as a protest against modern industrialized agriculture similar to other protest movements against various aspects of modern society. The protest perspective shows organic agriculture as a social movement:

“Those engaged in the movement are involved in *collective action focusing on conflicts, which are arranged around an oppositional contest over a particular social stake*, in this instance food and farming. The final element of the movement is the use of protest ...” (Reed 2005)

In this view organic agriculture is therefore an entity that is defined merely through its negation of (certain aspects of) modern mainstream agriculture – and which is therefore inseparable from the mainstream, united only by its dissociation from it. The environment of the protest movement is the mainstream and what makes organic agriculture move, the ‘driving forces’ so to speak, are aspects and developments of mainstream agriculture that are perceived as problematic.

It is in the nature of the protest that the reactions to mainstream developments are often conservative, trying to reverse some of the modern trends and, to some degree, recreate agricultural systems of the past. In this respect, the heterogeneous protest is related to the principle of precaution, which seeks to avoid irreversible, harmful developments. Both can be seen to say “No!” to new trends and technologies. But while precaution can be a strong driving force in protests, protest as such can be against anything unwanted, not merely the unforeseeable and irreversible.

There are four well-known No!’s in organic agriculture: no use of artificial fertilizers, pesticides, or food additives, and (the more recent) no to genetically modified organisms. But organic agriculture has also been seen as a less specific protest against industrialisation, rationalization and globalisation.

Protests may also lead to innovation and new development paths based on a variety of alternative goals and ideals. But when a protest movement begins to undertake common goals and ideals and shut out other motivations for protest, it is no longer a mere negation. These aspects are not really visible from the protest perspective and, we suggest, better observed from a logo-poietic perspective.

A logo-poietic system

Organic agriculture is often described as an ideology, or even a religion, and many within organic agriculture describe it as a movement with certain goals and principles. To characterize what kind of entity organic agriculture is in this perspective and what makes it move, we find it useful to regard it as a logo-poietic system or network.

The term 'logo-poietic' is based on the notions of 'autopoiesis', the self-organisation and self-creation of cells and living organisms, and 'logo', a Greek word for meaning or meaningfulness: Logo-poiesis describes meaning as a self-organising principle (see further in Noe and Alrøe 2003, 2005a, 2005b).

In the logo-poietic perspective, *organic agriculture is a system that creates itself and holds itself together by the continuous reproduction of a common meaning (or meaningfulness)*, expressed in shared worldviews, core principles, goals, standards and practices. (Or more precisely, it is several, more or less related systems or networks organised by related, but not quite similar, meanings, such as biodynamic and organic agriculture.)

As a self-organising system, organic agriculture is not dependent on mainstream agriculture. The environment of the logo-poietic system is its Umwelt (see Alrøe 2000), that is, the world as it sees it and interacts with it, and mainstream actors, technologies and resources are enrolled in ways determined by the movement itself (Noe and Alrøe 2003). In this perspective, the driving forces that make organic agriculture move are not the external conditions but the internal processes of meaning. Influencing the future of organic agriculture therefore goes by way of influencing the reproduction of meaning within the system.

Key challenges for organic agriculture as a logo-poietic system are thus, on the one hand, how to grow and to mobilise new actors and technologies into the network of organic agriculture without losing the internal coherence, the sense of direction, and the integrity of principles and practice. Here the formulation of core principles and standards serve an important guiding role.

And, on the other hand, how the mobilisation of organic agriculture into global markets, multinational corporations and agricultural policies will influence the reproduction of meaning in the movement – whether it will erode the principles and conventionalize organic agriculture.

A market niche

Organic agriculture is often considered a part of the global market system like any other kind of special agricultural production.

In this perspective, organic agriculture is a market niche based on standards that specify the special conditions for production and processing, certification and control of the production and processing methods, and branding of the products as alternative brands. Hence, it shares a focus on standards as a key element in organic agriculture with the logo-poietic perspective, but for different reasons.

The environment of organic agriculture as a market niche is the globalised market. The key concerns that standards, certification and branding, respectively, are directed towards are to define the market niche, to avoid unfair competition, and to aid consumer recognition and choice.

Driving forces in focus are differentiation from other brands, barriers to trade, and consumer preferences and perceptions.

Key challenges are the pressures from power relations in a globalised market. Large-scale, effective production methods, sustained supply of uniform products, growth, and financial strength are important abilities in this regard. Another challenge is to maintain consumer trust and loyalty, in a market where branding is a major factor and transparency is often considered a drag.

Discussion of the three perspectives

With regard to the need for a polyocular approach, it is important to consider what the consequences are of one perspective dominating the discourses on the future of organic agriculture, and of neglecting certain perspectives.

By focusing on the three perspectives above we have already neglected other possible perspectives. We trust this can be amended in future discussions, and for the purpose of advocating a polyocular approach the main thing is to indicate the usefulness of observing more than one perspective.

One may argue that different scientific disciplines each have their own perspective on organic agriculture. This may be true to some extent. It is certainly true for subject areas where there is a strong differentiation into isolated disciplines. But in the case of organic agriculture, firstly, there is at least an aspiration for cross-disciplinary research and, secondly, we think that the most interesting (and most influential) perspectives are those that are shared by a range of different actors and not just found in a single discipline.

In this section we will discuss the differences entailed in the three perspectives with regard to a few selected issues.

The relation to the mainstream

A protest movement will always be more or less antagonistic towards what it is protesting against. The protest perspective has led to some very antagonistic relations indeed, not only in farming, but also in processing, retailing and science, resulting in flame wars and lawsuits (e.g. the recent lawsuit against COOP Sweden). Antagonistic relations can be barriers for learning from the alternative (knowledge transfer from alternative to mainstream) and vice versa, research cooperation, etc.

Since the logo-poietic system rests on its own principles, it can exist independently of the mainstream and maintain a relatively flexible and unproblematic relation to conventional agriculture as an alternative option for farmers, businesses, consumers, etc. – a relation that features cooperation instead of antagonism. But there may be conflicts due to mainstream activities that counteract the principles of organic agriculture.

From a market perspective the existence of alternatives in the market is basically good for growth and trade and the relation is therefore fully unproblematic: organic agriculture is incorporated or at least attempts are made to do so, though there may be conflicting interests in patenting, competition, marketing, etc. From the logo-poietic perspective this incorporation, on the other hand, threatens to erode the principles and the meaningfulness that they express.

Stability/viability

From the logo-poietic perspective there is a built-in promise for stability and viability in organic agriculture, because of the focus on sustainability in the principles.

The protest movement has no independent coherence, stability, and viability – except by way of its opposition to the mainstream. When the mainstream improves on a protest issue the protest movement must move to another issue or die out.

From a market perspective, the niche of organic agriculture may not be viable, but this is not important – the market system does not care about any particular brand, as long as there are new brands that can take over.

Growth and trade

The market perspective can help organic agriculture grow by way of utilizing the market system and if it is neglected, organic agriculture may remain a very small niche on the market. As a logo-poietic system, low growth is not a problem per se, but growth that helps pursue the principles and goals that organic agriculture is organised around, is good.

Hence, the logo-poietic view does not go against growth, but growth must not happen at the cost of meaning (principles, values, goals, etc.). There is a fairly obvious risk that this may happen. Growth in modern agriculture is connected to distant trade, commodification of hitherto commons, involvement of large agro-food corporations and external social and environmental costs. From the logo-poietic perspective, these are serious challenges to organic agriculture (see further in Alrøe et al 2005).

Since protest works against the mainstream, growth of the protest movement is inherently good – as long as the movement retains its opposition and does not blend with the mainstream.

From a market perspective globalisation and free trade is good and unproblematic. Trade brings organic products beyond local markets to the many urban consumers of today's world. From the logo-poietic perspective the globalisation of organic agriculture is good in the sense that the meaning is spread around the globe. And certified trade can be an option for political consumers to participate in the reproduction of this meaning by way of their consumer choices. But there are also aspects of globalisation that work against this very meaning (as outlined above).

Non-certified organic agriculture

From the logo-poietic perspective, non-certified organic agriculture (agriculture that follows the principles of organic agriculture, but is not based on certification, trade and premium prices)

promises an alternative development path in rural areas of low-income countries (Halberg et al. 2005). And non-certified organic agriculture is less prone to many of the pressures that threaten to erode the principles of certified organic agriculture.

From a protest view, non-certified organic agriculture may play the role of opposition as well as certified organic agriculture, whereas non-certified organic agriculture is not even visible from the market perspective – it cannot play any role in the market.

Purpose of standards and principles

From the protest perspective, the purpose of standards is to specify the differences to the mainstream. This may also be useful from the market perspective as an element in creating a market niche.

Where the market perspective sees standards as a way to define the market niche, the logo-poietic perspective sees standards as a guide to assist the reproduction of a shared meaning. The principles, and the connection between principles and standards is therefore of key concern here, whereas the market is only concerned with principles if they can be used for branding purposes.

Conclusions and prospects

Many different actors have hopes and aspirations for the future of organic agriculture. They have different perspectives on organic agriculture with different understandings of what it is and what makes it move.

We say that these perspectives show different aspects of the dynamical object “organic agriculture”. If we use a single perspective to understand organic agriculture, its future course, and how it may be influenced, this may seem efficient in the short run. But in the long run the dynamical object of “organic agriculture” will kick back and reveal the shortcomings of the chosen perspective, because we do not interact with organic agriculture as it is represented in our perspective, we interact with the dynamical object of “organic agriculture”. No perspective shows all there is to show about “organic agriculture” – it has a surplus of possibilities for new perspectives and understandings.

Therefore we need to handle more than one perspective. We have indicated how a polyocular approach enables us to do that and thereby to understand and maybe resolve conflicts between different perspectives in order to better understand and influence the dynamics of “organic agriculture”. We hope that you will find this approach sufficiently interesting to react on it, protest against it, or start using it, comment on the three perspective that we have outlined, propose other ones, or in some other way enter into a polyocular discourse on organic agriculture.

References

Alrøe, H. F. (2000) *Science as systems learning. Some reflections on the cognitive and communicational aspects of science*. *Cybernetics and Human Knowing* **7(4)**: 57-78.

- Alrøe, H.F. and Kristensen, E.S. (2002) *Towards a systemic research methodology in agriculture: Rethinking the role of values in science*. *Agriculture and Human Values* 19(1): 3–23.
- Alrøe, H.F., Byrne, J. and Glover, L. (2005). *Organic agriculture and ecological justice: Ethics and practice*. Chapter 3 in Halberg, N., Knudsen, M.T., Alrøe, H.F. and Kristensen, E.S. (eds.) *Global Development of Organic Agriculture: Challenges and Promises*. CABI publishing (forthcoming).
- Bohr, N. (1949) *Discussion with Einstein on epistemological problems in atomic physics*. In Albert Einstein: Philosopher-Scientist, p. 200-241. (Edited by P. A. Schilpp). Evanston, IL: The library of living philosophers.
- Bohr, N. (1985) *Kundskabens enhed*. In *Naturbeskrivelse og menneskelig erkendelse. Udvalgte artikler og foredrag fra årene 1927-1962*, p. 19-39. Rhodos, København. [Danish version originally 1957. English version in *The Unity of Knowledge*, New York: Doubleday & Co., 1955.]
- Halberg, N., Alrøe, H.F. and Kristensen, E.S. (2005) *Synthesis: Perspectives for organic agriculture in a global context*. Chapter 12 in Halberg, N., Knudsen, M.T., Alrøe, H.F. and Kristensen, E.S. (eds.) *Global Development of Organic Agriculture: Challenges and Promises*. CABI publishing (forthcoming).
- Luhmann, N. (1995) *Social systems*. Stanford University Press, Stanford, California.
- Noe, Egon and Alrøe, H.F. (2003) *Farm enterprises as self-organizing systems: A new transdisciplinary framework for studying farm enterprises?* *International Journal of Sociology of Agriculture and Food* 11(1): 3–14. [Available online at <http://orgprints.org/325>.]
- Noe, Egon and Alrøe, H.F. (2005a) *Combining Luhmann and Actor-Network Theory to see farm enterprises as self-organizing systems*. *Cybernetics and Human Knowing* (forthcoming). [Preprint available online at <http://orgprints.org/324>.]
- Noe, Egon and Alrøe, H.F. (2005b) *The challenge of management of multidimensional enterprises analysed from a logo-poietic perspective*. (Preprint.)
- Noe, Egon, H.F. Alrøe and A.M.S. Langvad (2005) *A semiotic polyocular framework for multidisciplinary research in relation to multifunctional farming and rural development*. Paper to be presented at the XXI ESRS Congress, Hungary, August 22–27, 2005.
- Reed, Matt J. (2005) *Turf Wars: the attempt of the organic movement to gain a veto in British agriculture*. Forthcoming in Reed, M.J. and Campbell H. (eds.) *Organic Agriculture: A Sociological Perspective*. CABI publishing.