How farmers learn about environmental issues. Reflections on a socio-biographical approach.

Abstract

At the time of our research, protests of farmers against new environmental policy measures received much media attention. News reports suggested that farmers' organisations rejected the idea that modern farming techniques cause damage to the environment and even tried to undermine attempts to reconcile the goals of modern agriculture with environmental objectives. The aim of our research is to gain insight into the kind of learning farmers engage in when confronted with such complex and delicate situations. For our empirical research, we chose to combine a biographical and a social constructionist approach. We focus on how farmers learn to connect to various narratives about the issues at stake and on how these narratives are constructed through everyday encounters within the diverse networks to which farmers belong. As this article demonstrates, of particular interest for researchers is the kind of learning that occurs in response to differences in opinion. Accordingly, we introduce a new metaphor, called 'learning as response', which helps to understand how farmers may learn, again and again, to respond 'as singular beings' to the ambiguities and differences they encounter in their everyday professional life.

Key words

Metaphors of learning, environmental adult education, socio-biographical research

Introduction

The prominent role assigned to environmental learning within contemporary international policies such as Agenda 21 and initiatives such as the UN Decade of Education for Sustainable Development offers a unique opportunity for teaching, researching, and learning about sustainability. As Sumner (2003) has indicated, 'learning is at the heart of the sustainability project because sustainability is such an enormous challenge that requires creative solutions' (Sumner, 2003, p.25). Nevertheless, the research on environmental adult education is still very sketchy and the observation made by Clover and Hill in 2003 that the research materials available on how adults learn about sustainability is rather limited, still applies today (Clover

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and Hill, 2003). This article aims to contribute to this emerging field of adult education research and elaborates on a survey we conducted in the Flemish part of Belgium on the way farmers learn about sustainable farming.

In the late 1990s demonstrations of farmers against new environmental policy measures received widespread media attention in Flanders. Farmers' organisations allegedly rejected claims that modern farming methods cause environmental damage and did not hesitate to undermine attempts to reconcile the interests of modern agriculture with those of the environment. In an exploratory phase of our research it became very clear that the simple diffusion of environmental knowledge to farmers does not result in more sustainable farming practices. On the contrary, farmers often experience this kind of information as an insult and a threat to their profession. The data from our exploratory interviews show how farmers struggle to participate in the public debate because it (implicitly) puts into question the significance and value of particular identities as farmers. This challenged us to investigate in depth the kind of learning farmers engage in when responding to such complex situations. We chose to investigate the interaction between farmers' self-understanding and the problematic public debate more thoroughly. Accordingly, we wanted to understand how this interaction could also stimulate farmers to consider their own responsibility towards a more sustainable society.

In the first part of this article we consider the question of what 'learning to live sustainably' is about and reflect on our effort to analyse this learning as a dual process of individual engagement and social practice. We show why we chose to analyse farmers' learning to be embedded in both a biographical and a socio-cultural process and reflect on the main methodological issues of our empirical research. In the second part we present some of our findings regarding the biography and networks of fourteen farmers and in the last part of this article we open up the discussion and deepen our understanding of the kinds of learning farmers are involved in.

Learning to live sustainably

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Learning, Sumner (2003) writes, must become a way of life if we want to find a way out of the problems posed by ecological degradation as well as a way toward a more sustainable future. Sumner (2003) states very clearly that this learning is influenced by the prospect of a future that is increasingly determined by a corporate and globalised world. To break out of the vicious circle of this dehumanising and environmentally damaging evolution, the pursuit of standardized economic, political and technological solutions should no longer be considered sufficient. This puts additional stress on society and in particular on groups of people who find themselves in the middle of what Clover and Hill (2003) have described as a personal-political tension. According to them, environmental issues provoke such a tension in the following circumstances:

[T]hey are felt at individual, family, and community levels, and for many, constitute a struggle for existence and identity. They are political because they arise from the ideological frameworks and economic development strategies of capitalist globalisation. (p.89)

Here we can also refer to Giddens (1991), who characterised the issue of ecological destruction as an issue of life-politics.

Life-politics concerns political issues which flow from processes of self actualisation in post-traditional contexts, where globalising influences intrude deeply into the reflexive project of the self, and conversely where processes of self-realisation influence global strategies. (p.214)

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This tension between the personal and the political is central to our analysis. While farmers were often presented as protectors of the environment, nowadays their practices are increasingly linked to pollution and environmental damage. Public debate leaves farmers with the impression that society is ever more sceptical about their profession. As a consequence, they feel increasingly disgraced by media reports criticising their occupation. When Pongratz (1992) interviewed fourteen German farmers in the early 1990s about their attitude towards environmental issues, he noticed that these farmers were indecisive. During the interview they continuously moved between a defensive position and a position of self-criticism, challenged as they were by ecological points of view. In some cases, the farmers argued very strongly that agriculture did not harm the environment at all. However, with respect to other questions the farmers admitted that modern farming techniques did have a negative impact on drinking water, the quality of the soil, biodiversity and other aspects of the environment.

In order to fully grasp the learning that occurs when faced with such a personal-political tension, we were inspired by attempts to understand the difference between what Wertsch (1998) refers to as 'compliant learning' and 'deeper or richer kinds of learning'. Billett (2005) uses these concepts in his research on education in the workplace. The first type of learning is superficial and the result of social pressure to achieve certain economic goals and to acquire the skills needed to keep one's job. The second type of learning 'requires effortful engagement buoyed by interests and intentionality' (Billett, 2005, p.197). In relation to this second type of learning Billett (2005) rejects a humanist account of the individual's sense of self which is considered to be fixed and coherent and argues for a post-structuralist account that regards subjectivity as indefinite, contradictory and in progress, constantly reshaped through the discourses in which the individual engages. This accurately describes the core challenge not only workers in industry, but also farmers are confronted with. Given the negotiated relationships between farmers and environmental issues and the challenge to engage in a public debate governed by others, it is important to view the involvement of farmers in terms of individuals reshaping their

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‘sense of self’ within the competing points of view of a public debate. And as Glastra and his colleagues (2004) have stated ‘Questions such as “Who am I” and “Whom do I want to be” can become quite haunting existential questions’ in a society that is crowded by a multiplicity of strangers and often disconnected others (Glastra, Hake and Schedler, 2004, p. 294).

Peter Alheit (1999) developed interesting insights on learning in view of these personal-political questions. He has particularly tried to understand how every adult composes his/her own life story in a never-ending search for coherence, thereby integrating new experiences with existing actions and dispositions. He refers to “a sort of inner semantic” of our accumulated experiences, an “experiential code” which organizes new experiences and gives our life a sense of continuity, in spite of the fact that it is changing all the time and that our personal uniqueness is threatened again and again (Alheit, 2005, p.206). In this biographical dynamic, experiences derive meaning from one’s own experiential code, yet at the same time, particular experiences may also redirect this inner semantic. It is clear that these changes are often fairly slow processes that do not result from single experiences, but rather spring from a variety of experiences over time. The definition of what makes an experience a ‘critical experience’, leading to such a change in one’s sense of self, often occurs ad hoc: when someone has found a new form of coherence between the actions and dispositions s/he already internalised. These transformations tend to follow their own direction and Alheit and Dausien (2002a) point at the multi-layeredness of biographical reflection and the possibility of surprising transformations ‘that in many cases are not foreseen by the “learner” himself, nor are they “understood” until after the event’ (Alheit and Dausien, 2002a, p.232). Terms as ‘seeking movement’ or a ‘diffuse directedness’ are ‘more appropriate here than cybernetic models involving some well-targeted “self-management” that for its part is oriented to institutionalized pre-givens (e.g. the acquisition of knowledge)’ (Alheit and Dausien, 2002a, p.232).

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Learning as a never ending search for coherence in one's own life story, is for Alheit strongly influenced by social practices and the particular discourses people participate in within all kind of different settings. (Alheit, 1999). As the biographical micro-world and the systemic macro-structures are drifting further and further apart, the meso-level of all kinds of organizations, associations and practices becomes the key space where adults engage with particular discursive horizons. In a similar way, Bélanger (2003) relates to such processes and practices when he refers to the notion of ecology of environmental learning. In the context of late modernity, he writes, the key to significant environmental learning is a cultural dynamic in which a learner "can live in creative tension and reflexive relationship in his or her environment" (Bélanger, 2003, p.81). He also observes that the hidden agendas of all kinds of social networks which adults are part of at different stages of their life cannot be considered neutral in terms of environmental learning. These learning environments 'tend to have either a repressive effect or the ability to strengthen learning and progressive initiatives to make change in society' (Bélanger, 2003, p.81). Accordingly, the environmental learning of farmers emerges in the continuous flow of farmers' everyday interactions in all kinds of situations where people encounter each other, while they work, travel, explore, discuss, or relax and where in these conversations the environmental crisis is discussed rather implicitly, while at other occasions this issue is at the centre of these daily interactions. And as Alheit (2005) tries to make clear, the array of discourses farmers are exposed to does not only influence individual engagement. Modifications within biographical learning also contain opportunities for the transformation of the interactions and discourses in the social practices at the meso-level.

Suffice it to mention that our choice for this double focus on individual engagement and social practices is part of a much broader and on-going scientific search for robust ways to integrate the individual and the social within adult learning theory (see for example: Hodkinson, Biesta and James; 2008). Traditional theories on adult learning 'invariably privilege one of the two poles of the individual–society dualism: the psychological/humanistic pole which stresses the

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agency of the subject, and the sociological/critical theory pole which stresses how the subject is determined' (Tennant, 2008, p. 151). With our research we want to analyse the array of discourses farmers are exposed to in their social environment, but also how each farmer engages with these discursive horizons in his own particular way and eventually stimulates the formation of new social practices, new forms of interaction and even changes social structures. Both the structuration theory of Giddens (1991) and Bourdieu's concept (1998) of habitus presented to us some inspiring claims. It helped us to understand how farmers learn as social individuals, how their life history and also the past history of the practices they participate in strongly influence their current learning, how social structures interpenetrate these life histories and the practices they are part of but at the same time how the learning situation in these practices and societal structures are deeply influenced by the way people act and construct their stories. In this sense we agree with Hodkinson, Biesta and James (2008) that even when the focus is drawn on communities of practice in the Wengerian sense, the significance of the social nature of individual learners is often not fully recognized. The social is seen as a characteristic of the learning situation and not as a constituting element of the person who is learning. As a consequence, wider socio-economic and political contexts of this learning are lost out of sight. In this sense our empirical research is an attempt to gather data on different scaled maps of learning (Hodkinson, Biesta and James (2008) and to look for the particular interaction between these different maps, the individual life history of farmers, their practice related networks, and their socio-economic status. In our data collection, the narratives of the farmers were of particular interest. Yet, in addition to that we also used questionnaires and interviewed representatives of farmers' organizations, environmental movements, civil servants and advisors of farmers at the level of the Flemish region and the level of the two regions where we selected the farmers for our interviews..

Researching farmers' learning: research methodology

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The core of our research was based on two extensive interviews with fourteen farmers. We selected the fourteen farmers in two different locations in Flanders. In one area, there were a lot of conflicts among farmers and members of the environmental movement. In the other area, farmers and members of the environmental movement had found a way to collaborate on projects fostering the ecological development of the local region. In each location, we selected three groups of farmers according to three particular ways in which farmers were dealing with the public debate at the time. The three ways of engagement represent different types of practices and networks of dealing with the issue of an ecological sound agriculture in Flanders. A first group represented farmers who participated in formal and informal platforms about local and regional environmental policy. A second group consisted of farmers whose farmland was in areas where the European, Flemish or local government planned different forms of nature development. Finally, we also included farmers who were experimenting with new ecological technologies on their farm, or farmers who were known as ‘pioneers in sustainable technology’. Four of the fourteen farmers were what we called ‘conference farmers’, five farmers were representing the ‘project farmers’ who (were forced to) participate in a nature development project and two farmers were selected as ‘pioneers in sustainable technology’. One selected farmer combined the position of ‘conference farmer’ and ‘project farmer’; another farmer combined the position of ‘project farmer’ and ‘pioneer in sustainable technology’ and still another one combined the three types of dealing with the public debate.

We invited these farmers twice to talk about their early experiences as a farmer and how the environmental issue became part of their professional life. In these interviews farmers were also asked about their social network: how they were involved in it and how it has developed over time. The interviews were organized cyclical which means that after each interview the data were analyzed and used as an input for the following interview. In this respect, the interviews “... constituted cumulative data sources, revealing ever more refined pieces of the ‘life puzzle’” (emphasis in the original, Cole, 1991, as cited in Kelchtermans, 1999, p. 3). The main advantage

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of this cyclical interviewing process is the fact that it enables a fair amount of correlation between data gathering, interpretation and analysis of the interviews, even at the very moment of conducting the interview itself. In addition to these interviews with fourteen farmers, all the farmers also received a questionnaire at the moment of the initial contact. They were asked to return their answers before the first interview. The aim of this questionnaire was to collect socio-economic data about each farmer (age, number of family members, level of education, type of farm etc) and to find out if and how the farmer was a member of particular organizations. We had also a closer look at the public debate in the two regions where these farmers lived and worked. We analysed documents (e.g. newspaper articles and the annual programmes of several local organisations) and conducted interviews with the main actors of the public debate in the two regions. The interviews had four main topics: the type(s) of farmers in the area, the main environmental issues and possible conflicts in this region, the existing forums of deliberation and cooperation and finally, about other important actors to be interviewed in this area. In one of the two areas, we got the opportunity to attend six meetings of a policy planning process on a local nature development project. Some of the farmers we interviewed participated in these meetings. As we couldn't compare these data with observations of a meeting in the other area, we used these data as background information to better understand the central issues in relation to agriculture and environmental issues at that time.

All interviews with the farmers were digitally recorded and transcribed word for word. We included both verbal utterances and non- and para-verbal behaviour aiming at a minimal loss of information. The protocols (transcriptions of the interviews) were subsequently coded via the use of descriptive codes summarizing the content of the paragraph, and a limited set of interpretive codes, referring to the dynamic of biographical learning (critical incidents, critical persons, experiential code) and the participation in all kinds of practices (discursive horizons, kinds of interaction within each practice and with the outside world). The process of coding

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initiated the interpretation of the interview data in terms of deepening the sensitizing concepts. The further analysis of the data occurred in two steps. The vertical data analysis consisted of a cyclical reading of the data, developing interpretations and checking the veracity of these interpretations by re-reading the data and also connecting these interviews with the data we had gathered with the questionnaires and via the interviews about farmers and the public debate within the two regions. This analysis resulted in the writing of a profile on the networks and biography of each of the farmers. This text was organized around a fixed structure, explicitly resembling the different hallmarks in the interpretation process: starting with the descriptive biographical data, we then focused on critical incidents, networks and persons in their stories to arrive at the analytical level of the interpretive reconstruction of the nature and the scope of the learning processes these farmers were involved in. The profiles were completed using 'thick descriptions' ensuring the basic conditions for thick and hence accountable interpretations (Geertz, 1973; Denzin, 1989). The profiles provided the basis for the horizontal (comparative) analysis, using the technique of 'constant comparison', in casu the cyclical re-reading of the profiles and the checking of interpretations with the data (Glaser & Strauss, 1967). The horizontal analysis of the data resulted in a set of common themes and patterns of learning among the biographies and the networks of the fourteen farmers.

A socio-biographical perspective on farmers' learning

In the analysis below we provide an insight into the set of common themes and patterns we arrived at regarding the way farmers learn to deal with the complexities of the public debate on agriculture and environmental challenges. First, we discuss the data of the biographical interviews and show what kind of narratives the farmers have learned to construct about themselves in response to the public debate on agriculture and environmental challenges. Second, we focus on the data we gathered on the networks of the fourteen farmers and show at which occasions these narratives emerge and what practices promote their further development.

Narratives on environmental issues

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We can distinguish five different storylines through which the farmers we interviewed learned to develop answers to central questions such as ‘what does the environmental issue mean to me?’, ‘why should I bother?’ and ‘who are these others to me?’. During the interviews it already became clear that all the farmers initially tell stories in which they try to minimise the problems related to the environmental issue, that in fact they deny that there is an issue at all to discuss. It is the story of farmers who experience the debate on environmental issues as an attack by strangers, an attack by groups of people who are alien to modern agriculture. It is *the narrative of the ‘anxious spectator’* who feels quite vulnerable and experiences little involvement in the debate.

I’m now going through one of the most difficult periods of my life as a farmer. What has happened is that I have to ask myself why farmers must disappear? I have been taught that a country is rich when it has the capacity to produce its own food. A Flemish minister once said that there was a lot of resistance against the closing of the coal-mines because people thought they could not live without coal. Will the Minister of Environment now take the same decisions with regard to Flemish agriculture? (farmer 1).

Occasionally, during the interview, three farmers combined this narrative of the anxious spectator with quite a different narrative, the exact opposite even. They portrayed themselves as farmers who fight back and who try to undermine the attempts to reconcile the tension between modern agriculture and environmental concerns. We call this *the narrative of ‘the defensive corporatist’*. These farmers, for example, referred to the role they play in the local council with regard to environmental policy. As inhabitants of a particular municipality, they have a mandate to express their opinion on environmental issues in this council. These three farmers told us that they use these meetings to *‘beat off the attacks and play a tactical game with words, so that they aren’t confronted with all kinds of green measures and projects in which farmers feel sidetracked.’* (farmer 2) In line with the narrative of the anxious spectator, these interviewees

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express the feeling that the environmentalists and environmental policy makers want to set back the clock for farmers. Yet, the difference with the narrative of the anxious spectator is that the defensive corporatists claim their right to use modern technology, to live and to work according to modern standards like any other citizen.

Someone else can use modern technology to work with. In factories workers now work in a totally different way compared to twenty or thirty years ago. But farmers should continue to work with a horse and cart or even with a wheelbarrow. It is as if society doesn't allow farmers to be part of technological progress. (farmer3)

What we found particularly striking was the way in which six farmers sometimes combined one of the above-mentioned storylines with a narrative reference to issues of ecological responsibility. Two farmers told us stories about how they experiment with sustainable technology on their farm. We call this *the narrative of the 'green pioneer'*.

In the last two years we were confronted with new environmental norms. As a farmer, I know, for example, that the highest possible return of milk production will exceed particular norms imposed by this policy. So, I want to know more about technological innovation which can restore a balance between economy and ecology. (farmer 4)

Two other farmers told stories which reflect the position of *'a socially committed farmer'*.

These farmers talked about their search for a more socially responsible way of farming and how they had decided to run their farm as a personal statement against the almost inhuman race for modernisation in agriculture. *'I wanted to keep a balance between the number of cattle and the land I have as a farmer. ... I didn't want to be part of a development towards intensive cattle breeding.'* (farmer5)

Two other farmers created a mix of the four different narratives mentioned above. Moreover, they combined this with the storyline of *the 'mediator' farmer*. They told us about their role as an intermediary between the world of the farmers and the world of the environmentalists. One farmer, for example, elaborated on how he became a member of a local environmental movement and was moving back and forth between the discourse and concerns

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of the farmers and those of the environmentalists in the region where he lives and works.

Another farmer explained how he tried to collaborate in a regional project on sustainable development, thus personally demonstrating that the opposition between an ecological and an economic discourse could be redefined in terms of new perspectives for the development of the region. *'I started to position myself in a more vulnerable way, also towards my own peers, the farmers. I began to introduce the proposals of the environmental movement and tried to explain them'.* (farmer 6) This storyline of the mediator farmer also shows how the learning in relation to environmental issues emerges within the interaction between biographical learning and particular practices of the public debate. Because of their biographical strategy of combining different storylines, these farmers also search for an active participation in practices where they are stimulated to break through the particularly influential narratives of the anxious spectator and the defensive corporatist.

In the storylines of the green pioneer, the socially committed farmer and/or the mediator, we can also identify particular critical events. At first sight, these critical events are diverse and have nothing to do with environmental issues. Yet, these critical events all have in common the concern about conditions of change and the courage to voice one's own conviction. One farmer, for example, explained how he, as the son of a local politician, frequently attended political meetings.

It was during the time that a few business people wanted to make money with housing projects and tried to make a deal with local politicians about the allotment of land. At one occasion, I heard how one local politician had the guts to stand up against these business people. It was a discussion, or better a fight, that you could see in a movie: one good guy who dares to say what was right and who dares to say no to people with power. (farmer 7)

Other farmers talked about how they succeeded in protesting against the construction of a gas pipeline on their farmland or against the sale of their land. As they discussed these experiences of protest and action, they portrayed themselves as farmers who can think and act in a

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responsible way. Often the farmers themselves linked this biographical learning to the particular ways in which they were participating in the ongoing debate on environmental issues. For example, they told us about a bus trip to the Netherlands, where they visited farmers who experiment with sustainable farming. They explained how eager they were to understand the technology used. But during these visits these farmers also grasped the opportunity to discuss the tensions and dilemmas typical of the professional activities of farmers today. Such discussions created a discursive horizon in which storylines about tensions and contradictions are connected with a search for a viable and sustainable future as farmer. In the next part, we focus on the networks of the fourteen farmers and further analyse the interaction between biographical learning and the impact of discursive horizons where the public debate about farming and sustainable development is articulated in different ways.

The networks of farmers

As mentioned before, we asked farmers and also members of their networks to elaborate on the extent to which environmental problems are an issue in the daily interactions of these farmers. Our data offer an inside view into six different networks of farmers: the *social network* of family, friends and acquaintances; the *media network* of farmers' magazines, newspapers, public radio and television; the *policy network* of local councils, local civil servants and politicians; the *commercial network* of salesmen selling products to the farmers; the *vocational training network* and the *union network* consisting of members of the farmers' organisation. We analysed the ways these different networks dealt with the public debate at that time and how the discourse of those particular networks interacts with the narratives that we identified in the previous section.

Our analysis clearly shows that, at the time of our research, the corporatist discourse was predominant in the networks of all the farmers. Both the union network and the vocational training networks primarily encouraged farmers to defend themselves against the negative perception of their profession. These networks influenced the farmers, not so much with regard to the core environmental issues, but rather with respect to all kinds of environmental policies

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that were about to be implemented. They produced an '*alarmist and tenacious discourse*'.

Alternative perspectives were rejected and considered irreconcilable with the corporatist viewpoint. It was a 'no negotiation' perspective. Nevertheless, we observed that some of these networks did offer solutions for particular environmental problems. They stimulated farmers to use ecologically sound technology, or also encouraged them to create a greener image by planting trees and shrubs on their land. However, the underlying message was still uncritically in favour of an advanced, high-tech way of farming and the need for further expansion and intensification of Flemish agriculture. Most actors of the vocational training networks, commercial networks and union networks did not want to enter into an argument with the farmers. Or as one farmer observed, '*these people think in an economic way. They don't put themselves at risk in a discussion with their clients. They confirm our experience of being a scapegoat*'. (farmer 8) Furthermore, they never clearly articulated their ideas about the future of agriculture in Flanders.

When you ask what our future as a farmer is in Flanders, no one can answer this question. The vocational training consultants and the representatives of the farmers' organisation don't give us any clear advice' (farmer 8).

This kind of communication prevented a confrontation with the multiple views and perspectives available on these issues. Moreover, within the social network of friends and family, the alarmist discourse was confirmed and reproduced. The information which they gathered from the media about the environmental issue further increased their experience of powerlessness.

When you watch the news on television or read the newspaper it is always about a fire here, a toxic cloud there, an accident with a tanker there etc. What society now asks from the farmers is just a drop in the ocean. (farmer 1)

However, the interviews revealed that some of the networks of the farmers also promoted another message than the 'alarming and tenacious' discourse mentioned above. In some cases, some interviewees got inspiration from what we called the '*responsive and developing*

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discourse'. Our analysis enabled us to identify how particular networks co-constructed this second discourse. It also helped us to understand better the learning within the storylines of the green pioneer, the mediator and the socially engaged farmer. In trying to explain their openness to environmental concerns, some of these farmers referred to their encounters with a particular salesman or a particular vocational training officer who interrupted their farmer's common sense and criticised current agricultural practices. In these encounters another, more ecological perspective on farming today was being processed. Important in this respect is the dialogue with people not belonging to the agricultural world and who represent an alternative discourse. One farmer explained how he used to cut the trees on his land and how, as a result of talking to people of the environmental movement, he decided to replant the trees. He said that he could now understand why some people appreciate trees on farmland. The reason why he got in touch with people from the environmental movement was that he had decided to become a member of a new farmers' organisation which tried to stimulate the debate between farmers and environmental activists. Set up this citation from Farmer 9

This new farmer's organisation is prepared to engage in an open discussion with members of the environmental movement. ... They don't avoid this. They also reaffirm this in their communication with the farmers. Most farmers speak of the 'green ones' without knowing who they really are. (farmer 9)

Five farmers who talked about their search for a more sustainable way of farming also chose to engage in activities of local cooperation on regional development. They lived in the area where farmers and members of the environmental movement manage to collaborate on ecological projects in their region. At first, we tended to ignore these examples of cooperation in our analysis, as their significance is very modest in comparison to the objectives of the environmental projects of the Flemish and the European government. Their targets are rather limited: developing ecological management procedures for the local dumping site, for example, or obtaining local subsidies for the pruning of trees on farm land. However, after a while we began to better understand the opportunities for reflection created by these activities. With

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regard to the Flemish and European initiatives for environmental cooperation, the stakes were often high at that time, and mostly turned out to be too high. In such a context reflection is often limited to the top level of the organisations involved. Moreover, local deviations on statements or suggestions are not tolerated. Both the farmers and the other actors told us about a few of these seemingly trivial examples of cooperation. Yet, these simple experiences stimulated them to connect to and engage in a kind of critical discourse. This seems to work better than abstract top-down initiatives: abstract notions such as ‘biodiversity’ and ‘sustainable development’ come alive in the concrete context of a particular project that reveals the different interests at stake. The participants described how this inspired them to explore the range of possible meanings, without having to identify with one particular truth. These examples of a multilateral communication pattern suggest an increased capacity to deal with the tensions, ambivalences and contingencies of present and as our empirical data shows this capacity emerge within the interaction between biographical learning and particular discursive horizons of the public debate. Rather than searching for an ideal solution (complete, finished and self-referential), these examples illustrate a way of dealing with heterogeneity and difference. One farmer tried to capture his learning experience as follows:

I'm learning to live with the idea that others in our society value nature in a different way than I do. We have to acknowledge these differences. But the others also have to acknowledge the idea of development and change, even of the natural landscape.
(farmer 9)

The empirical data also clarifies the role of ‘brokers’ in this context. These brokers function as a mediator and stimulate the ability of the farmers to combine their inside perspective with elements of the discursive horizon articulated in the public debate. In the area where farmers cooperate with the environmental movement, the role of broker was taken up by at least three actors in the local public debate. One farmer became a member of the local environmental movement and other farmers described this farmer as a mediator. A second broker was an activist of the local environmental movement whose father-in-law was a farmer and who was

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described in the interviews as an activist with a farmer's heart. A third broker was the manager of a small business who was also a member of the local environmental movement. These brokers communicated a more complex discourse on the ecological responsibility of farmers. They rejected two widespread stereotypes about the ecological responsibility of farmers. According to the first stereotype, the protection of the environment is entirely the personal responsibility of the farmer, thus neglecting his economic dependence. According to the second stereotype, which is the exact opposite, it is not the farmer but the 'global system' that is guilty of damaging the environment and should therefore take responsibility.

Discussion: Learning democracy today

Some years after our research we were inspired by Ellsworth (2005), who writes that democracy is the absence of the superordinate expert, and by Mouffe (2005), who describes democracy as a way to deal with agonism. Neither farmers, nor environmentalists can presume to be 'tuned in to the real or true nature of things (as a dictator would claim to be) because there is deemed to be no real, or true, or absolute foundation of society' (Phillips, 2002, as cited in Ellsworth, 2005, p.94). Our analysis of the storyline of the 'anxious spectator' or the 'defensive corporatist' relates to what Ryfe (2006) calls 'narrative cohesion'. Narrative cohesion brings together various experiences into an integrated storyline. In the case of the anxious spectators and the corporatists, this narrative cohesion seems to deny the responsibilities of the farmer with regard to ecological matters. The narrative focuses on just one particular discourse emphasizing the lack of appreciation for work of farmers, especially among the ecologists. The 'socially committed farmer', the 'green pioneer' and the 'mediator farmer', on the other hand, connect to discourses with a richer narrative texture. The arguments they put forward in their narratives make no claim to be the definitive truth. Moreover, they incorporate different perspectives on the environmental issue in their narratives. They present their particular points of view, but also acknowledge that these views are critically shaped by particular contexts. All this suggests the presence of a kind of horizontal reflection which accepts that different interpretations inevitably co-exist. In other words, these farmers have learned to deal with contradictions. This kind of

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reflection contrasts with a more vertical way of thinking, which seems to pursue an Archimedean point from which reality can be interpreted on the basis of one common standard.

As the data on the narratives of fourteen farmers show, the confrontation with the strangeness of 'others' who have different perspectives on the protection of the natural environment enhances a strong dynamic of apprehension in two directions: apprehension as 'coping with fear' and apprehension as 'grasping' or 'learning' (Careri in Ellsworth, 2005, p86). The analysis of the learning experiences of farmers demonstrates, above all, the reductionist nature of what Hodgkinson (2007) refers to as the folk conception of learning or what Sfard (1998) has called the acquisition metaphor. Learning as acquisition is part of a well-defined framework and offers fixed solutions to particular problems. In the case of environmental concerns in agriculture, such clear-cut solutions could be, for example, using a particular environmentally friendly technology or planting trees and shrubs on farm land. Our data concerning the networks of farmers also show that this clear, well-defined and standardized discourse is very influential among farmers at the time of our research. Most of the networks develop one general truth about modern farming and therefore encourage their members to '*unmask the false accusations about the impact of modern agriculture on the natural environment*' (farmer 2).

But also the participation metaphor, the second perspective on learning put forward by Sfard (1998), is problematic. According to this second metaphor, learning is related to the process of becoming a member of a certain community. 'This entails, above all, the ability to communicate in the language of this community and act according to its particular norms.' (Sfard, 1998, p.6) However, as can be observed from our research, it is in the public debate about environmental issues that farmers are challenged to interact with others, and by definition these 'strangers' are not and will never be like farmers. In contrast to what is suggested in the mainstream literature on 'communities of practice' (Wenger, 1998) what is needed, in Biesta's terms, is a space that is not a consensus-oriented space. It is, on the contrary, a 'disjunctive' or a 'troubling' space that

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interrupts the common sense of people and thus creates opportunities for singular beings to 'come-into-presence' (Biesta, 2006, p.53). The stranger interrupts the self-evidence of one's identity and our community and thus invites to respond to his/her questions. We have noticed that, in their responses, some of the farmers actually created a community which is not the traditional community of look-alikes who share the same opinions and emotions, but which is, as described by Lingis (1994), 'a community of those who have nothing in common'.

In some of the networks farmers and outsiders recognise that nowadays it is impossible to learn with one unifying truth in mind, which is in this case one particular sustainable solution to the environmental challenges of modern agriculture. The farmers participating in our survey also link this view to particular experiences in their biography that have taught them to deal with other political issues, such as the purchase of land or the construction of a gas pipeline on their farm land. Following Deleuze and Guattari (1980/1987), we recognize in some of the stories of farmers a subtle sense of resistance, contradictory values, political impulses, and moments of desire. Furthermore, the notion of the rhizome developed by Deleuze and Guattari (1980/1987) can be a helpful concept to grasp the emergent character of the kind of learning occurring at the intersection of a biographical and a participatory process. By recalling such experiences, some of the farmers are able to enter into the public debate by 'putting themselves at risk', or exposing themselves to the possibility of a loss. The environmental learning of these farmers occurs 'in a movement by which one exposes oneself to the other, to forces and powers outside oneself, to death and to others who die' (Lingis, 1994, p.12). The idea of 'death' and the confrontation with 'others who die' must not be taken literally in this context. It simply means that in public debate people can actually give up the stability of their 'joint enterprise', let their identities be put into question, and are prepared to work towards a new beginning.

Environmental learning is in such cases not exclusively a process of acquiring a knowledge base to meet externally set standards, nor is it solely a process of becoming part of a community of

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look-alikes. It is, above all, a process in which people are prepared to be surprised by the points of view of others and to face the ambivalences that result from this. It is our contention that researchers on environmental adult education should develop further research on what we refer to as the relevance of a third metaphor on learning. Drawing on the work of Biesta (2006) and Wildemeersch (1991), we call this third perspective on learning: the 'learning-as-response' metaphor. This is learning which is a response to the questions of others 'who are not like us'. It is a learning in full recognition of the ambiguities and differences that exist in real life situations.

Our research model allows us to better understand how learning related to public issues is a multileveled activity. It is particularly important to consider how, in the space between the biographical micro-world and the systemic macro-structures, discourses and controversial debates on the meso-level can interrupt the taken for granted understandings embedded in biographical narratives and network discourses. In responding to these interruptions, it is necessary that citizens can act as singular beings, again and again, in full recognition of the inevitable ambiguities and differences which will continue to exist among people. Ambivalence is an inevitable characteristic of these encounters and – for the sake of democracy – practices and associations where citizens engage critically and constructively in living together in the conditions of late modernity become very important. For some farmers this is possible on occasions where they consider others as beyond their control, yet in a non-threatening way. The interaction at such occasions encourages a biographical learning which may help farmers to imagine a different future, one in which they cope with the challenges of a more ecologically sustainable way of farming and one in which they further develop a singular perspective on what such a future means to them. The metaphors of 'learning as acquisition' and 'learning as participation' can help to interpret these processes. However, these metaphors do not adequately represent the learning that occurs when people have to respond to profound differences in

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opinion and worldviews. Therefore, we put forward a third metaphor, called 'learning as response'. It refers to what Alheit (2005) has called a research programme for civil publics or what Sumner (2003) has called the search for a solid foundation of environmental learning that involves dialogue and that 'is consciously counter-hegemonic and expresses life values' (Sumner, 2003, p.25). It is our contention that researchers on environmental adult education should take into account this challenge and stimulate our understanding of both the biographical and the socio-cultural processes at work. Although the third learning metaphor needs further underpinning, we hope to have shown that it has much potential.

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