

Constituting context: organic farming and the provision of public goods

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Abstract

In Galicia, an autonomous region in north western Spain, as a result of politically induced mass emigration population is scattered and communal, mountainous land increasingly abandoned. In organic farming, practitioners respond to this social, economic and ecological crisis. In the margin of society, they transform endogenous development potentials into new and often stable relations with the outside world: otherwise abandoned land is actively used; and autochthonous breeds recovered and organic products sold in short supply chains. In this paper we translate the design principles and experiences of such an innovative farming system into a research agenda that is anchored in principles of self subsistence and high levels of autonomy regarding the use and reproduction of ecological capital. We enlighten how Galician cattle breeders govern progress: how organic farmers can guarantee the continuity of their farm businesses by the production of positive external tradeoffs, and how their business orientation embodies a prospect for regional development. As Galician policy makers and scientists are insufficiently linked to existing rural collectives and communities, we recommend action research on the identification, transmission and translation of endogenous knowledge and the creation of cooperative structures.

1. Introduction

The modernisation of agricultural food production has caused and is still causing the undeniable decrease of the natural resource base (Altieri 2002, Toledo 1990; 2002). This is expressed by the fragmentation of landscapes (Baudry et al. 2003), the decline in numbers and diversity of farm land birds (Beintema et al. 1997, Birdlife International 2004, Duncan et al. 1999), a decrease of N-efficiency in agricultural systems (van der Ploeg et al. 2006, Verhoeven et al. 2003) and losses of soil fertility and soil organic matter (Cunfer 2004, Cunfer and Krausmann 2009, van Apeldoorn et al. 2011). Combined with a series of food crises such as mad cow disease, food and mouth, avian influenza, swine fever and blue tongue disease (van der Ploeg 2006) this indicates that the contemporary globalised food system is in severe crisis.

In Galicia, in the north western part of Spain, massive, policy induced migration of over the last decades has strengthened this crisis (Domínguez García et al. 2012). It caused an exodus from rural Galicia and led to the abandonment of 'Monte', traditionally a multifunctional mountainous zone covered by trees, bushes and scrub (Soto 2006, Domínguez García 2007), and a dramatic decline of attention on endogenous knowledge on the interrelations between the elements of the farming system (Swagemakers and Wiskerke 2011), closed nutrient cycles (Verhoeven et al. 2003) and the optimisation of traditional landscapes in general (Antrop 2005). Consequently, the possible integration and interrelations of Monte and other elements of agricultural food production are hampered. In the margin of society, innovative practitioners work on the reintegration of elements of this otherwise abandoned and marginalised resource base (Domínguez García et al.

2012, Swagemakers et al. 2012). In this paper we carry out an exploratory assessment on the use and incorporation of Monte as advocated by a cooperative of organic cattle breeders, and discuss its potentials and constraints. Finally, we generate general remarks on the governance of regional development in our globalizing world.

2. Sustainable regional development

Organic farming holds a prospect on guaranteeing the sustainable provisioning of food and food security, regional development and a wide range of public goods (Darnhofer 2005, Milestad and Darnhofer 2003). In the conventional domains of economics and development studies, limited to its interpretation in monetary terms and money flows, sustainable development is most often understood within the optic of self-sustained growth. It should, however, be assessed in terms of the availability of physical stocks, the quality of end-products, the generation of labour, and the capacity to maintain and/or improve the quality of the natural environment (Daly 1990, Naredo 1996). The provision of public goods such as landscapes, farm-land biodiversity, soil life and stability, the availability of water, water and air quality, resilience to fire as well as social goods including food security and rural vitality (Cooper et al. 2009) are intrinsic to agriculture food production but not necessary 'pure' public goods. However, as no one should be excluded from food and these related public goods, we argue food production is best to be optimised along the principles of safeguarding public goods, for which a fundamental re-orientation of interrelations between society and economy is required (Haberl et al. 2009). This re-orientation should allow for processes of change that last in the long-term and can be assessed as an 'open evolutionary process of improving the management of social-ecological systems' (Rammel et al. 2007:9). Thereby the systems' capacity to adapt (Holling 2001, Stagl 2007, van der Ploeg 2008) and its ability 'to reconcile the impacts of human activity on the environment' (Murphey 2000:2) are important dynamics. These should be interpreted and analysed as multi-product, multi-actor and multi-level process (van der Ploeg et al. 2000). In an alternative model (Lang and Heasman 2004, Marsden 2003, Sonnino and Marsden 2006, Wiskerke 2009) nature and society are re-connected: dynamic agro-ecosystems (Altieri 1999) are perceived as the 'materialised connections' between nature and society (Holloway et al. 2007, Sevilla Guzman and Martínez Alier 2006). Through co-production between humans and nature, i.e. the specific interaction and mutual transformation of humans and living nature (Toledo 1990), farmers continuously reproduce and reshape the natural resource base (van der Ploeg 1997; 2003; 2008, Gerritsen 2002, Swagemakers and Wiskerke 2011). These agro-ecosystems can be improved by the agency of actors (Giddens 1984) or when practitioners (including consumers) pay more attention to the optimisation of their performance (Warde 2005).

2.1 Social-ecological configurations

The farm configurations we focus on are situated at the intersection where society and the natural ecosystem meet; farmers rebalance the natural and cultural aspects of their farm practices and, hence, perform differently in terms of 'capital accumulation' (Bourdieu 1986) than farmers who follow innovation trajectories as advocated in the modernisation of agricultural food production. Innovation provided by the expert system differs from adaptation processes within existing, real systems carried out by knowledgeable and experienced farmers. In general farmers optimise their strategies and farm system in a continuous process of adaptation (Holling 2001, Stagl 2007, van der Ploeg 2008), including the mutual adaptation of the social and natural environment of the farm, and based on personal interests of thought or their biography (Baars 2002). But different optimisations, different 'styles of farming' (Boonstra et al. 2011, Domínguez García 2007, van der Ploeg 1991; 2003), result in different performances regarding the recovery, use and improvement

of ecological capital (Swagemakers and Wiskerke 2006; 2011). The internal optimisation of local resources is differently valorised and activated, and consequently performs differently. As a result, we hypothesize that the provision and degree of the quality of the produced public goods differs. Agro-ecosystems can be further strengthened by new producer-consumer relationships (Sevilla Guzmán and Martínez Alier 2006; Holloway et al. 2007), a process of social interaction that Marsden and Smith (2005) have defined as ecological entrepreneurship. 'Target groups' play an important role (Bruckmeier and Tovey 2008) and support should be organised for the construction of an institutional environment that encourages social learning (Ernstman and Wals 2007). Such a process can take shape in a formalised organisational entity but most often has an informal, veiled 'appearance' (Long 1999).

2.2 Rural progress: the learning region

In order the endogenous development potential to improve and be useful to a wider community of practitioners, scientists should support and assist the innovative practitioners in their search for sustainable regional development and economic progress. Thereby farmers and scientists should meet under the conditions of equality and mutual exchange of knowledge and experience, in which experiential learning (within and between the both groups) works as a mutually reinforcing process (Baars 2007; 2010). This type of dynamics, in turn, is to be integrated in a wider social-organisational perspective on the support for learning and innovation in rural areas (Domínguez García et al. 2012; Wellbrock et al. 2012). In the next section we explore a system approach to meet the sustainability challenge (Kölling 2009) and identify the need of organising political and scientific support.

3 Organic beef cattle farming in Galicia

Galicia is an important woodland area (Díaz Maroto and Vila Lameiro 2008) and has specialised in cattle farming in the last decades (Domínguez García 2007). Often Monte remains abandoned and without a proper and/ or efficient use (Soto 2006) while the social mechanisms that possibly could lead to its utilisation remain underdeveloped (Domínguez García et al. 2012). In this section we hypothesise that the appropriate management of Monte could possibly turn the diminishment of public goods (notably: soil fertility, maintenance of farmland biodiversity and the resilience to fire). We explore how organic farm practices hold the promise to improve the integration of land-use functions by carrying out a preliminary analysis of the interrelations of the maintenance of Monte, farmland biodiversity and organic beef production. A distinctive and distinguishable social-ecological system is advocated by Biocoop, a cooperative of organic beef producers which aims to meet the theoretical standards of sustainable regional development.

3.1 The Biocoop cooperative

In 1998, the cooperative has been founded and since then grew from 11 to 70 members of whom 30 have the right to participate in the decision making processes. It has developed from a regular farming cooperative into a specialised producer of organic farm techniques and focuses on selling its beef products in direct-marketing circuits. Biocoop provides organic fodder and management advice on organic production methods and requirements, mediates information on preventive and curative medication and anti-parasite medication, sells solar and electric fences, provides seeds and organises the transport of animals to the slaughter house. The technicians of the cooperative provide administrative support for applying for agro-environmental subsidies and fulfilling the Galician organic council regulation (CRAEGA). On demand, Biocoop organises meat products to be delivered within 48 hours as 'client portion in Darfresh system' (vacuum packed 'fresh' meat)

to individuals, organic shops, big supermarkets and consumer associations) and to butchers and restaurant owners who appreciate the quality of the meat derived from the autochthonous breeds.

3.2 Autochthonous breeds

Over the last 60 years, the population of Cachena, Limiá, Caldelá, Frieiresa and Vianesa breeds diminished drastically. Initially some of them had to be reintroduced in specific technical centres that specialised in breed recovery, and/or taken from other countries such as Portugal. These breeds require little input of concentrates before slaughter, the smallest among them fitting to the endogenous environmental conditions of the Monte and deliver an excellent meat quality on the relatively 'poor' diet. Nowadays, farmers increasingly gain experience by recovering the breeds and develop endogenous knowledge on the management and the interrelations of Monte and maintenance of this grazing cattle. Despite these breeds fit better to the mountainous conditions and suffer less from diseases, and thus are attractive in terms of cost reduction and value added (for example, restaurant owners appreciate meat of the Cachena), many coop-farmers continue breeding the Galician rubia. This larger size breed delivers more kilograms of meat compared to the smaller autochthonous breeds (its slaughter weight is 40-50 kilogram more than a Cachena). Subsidies enable the increase of the number of autochthonous breeds. This results in gaining experience with the production potentials of these breeds among a larger group of farmers.

3.3 Biodiversity management

Subsidies create a supply that can be sold in conventional markets in which a larger public can be reached and informed on the breeds' specific characteristics. Also, consumers have easier access and the opportunity to try and recognise the differences in the quality of meat products. If the subsidies diminish, more farmers will choose again for the more productive breeds; and that whilst the use of conventional breeds will remain strengthened by subsidies. Besides hampering the incorporation of abandoned Monte in the productive system, autochthonous breeds will have more difficulties to be protected and might disappear again and with that a potential productive food system that delivers a wide range of public goods.

3.4 Political and scientific support

The formal knowledge infrastructure, and consequently the technicians providing knowledge to farmers, is oriented toward conventional farming methods. Consequently, although the conditions for organic production regionally differ, knowledge on organic production methods was obtained abroad. Support was found within private, informal networks. The provision of technical advice to farmers became a task for Biocoop. Nowadays, Biocoop functions as a 'knowledge broker' in the Galician context of organic farming. Its system approach radically breaks from conventional technical, organisational and consumption rules and is consolidating: is gradually turning into a 'protected space' *'where norms, rules, routines of production, distribution and consumption are looser and subject to a more rapid evolution'* (Knickel et al. 2009). The mainstreaming of the initiative is hampered by a lack of sufficient formal support: after many years there is still an important disconnection between the appropriate application of policy schemes, the knowledge infrastructure and endogenous rural development potentials and opportunities in Galicia.

4 Discussion and final remarks

Our explorative research among organic farmers and the identified performance potentials, calls for the implementation of programmes on the provision of public goods in which maintenance of farm-land biodiversity and diminishing the risks on (forest) fires could serve as new organising principles. Such programmes could possibly benefit to the transition towards a vivid and attractive

rural that again is managed and maintained by people. We assume action research oriented on the identification, interpretation and interrelations of cultural values, social interaction processes, and endogenous knowledge development to contribute to the continuity of farm businesses and such a business orientation to embody a prospect for sustainable regional development and rural progress more in general. If this type of interrelations would be translated to and incorporated in regional development policies and the knowledge structure these 'promising' dynamics that start establishing in practice might result in the establishment of a new global food regime and result in rural development that sustains the natural resource base (Darnhofer 2005).

Such a radical vision on rural regional development implies restructuring of the widely accepted and rooted capitalist political economy (Horlings and Marsden 2011), which perhaps won't be achieved in the short run but is definitely worthy to strive and if necessary also to fight for. Action research could contribute to the translation of the design principles and experiences of innovative farmers into a research agenda that is anchored in principles of self subsistence and high levels of autonomy regarding the use and reproduction of ecological capital. Endogenous development potentials might further strengthened when scientists explore, test, and verify the interrelations in these promising farm practices, while politicians and policy-makers pursue an objectives-led policy that allows for and stimulates the exchange of knowledge and experience between organic farmers and promotes scientific research on farming and the provision of public goods.

We think additional action research among Biocoop farmers focusing on the interrelations in their farming systems would yield promising insights on the sustainment of regional development and the provision of public goods; we propose to test the hypothesis that organic farming constitutes indeed a context for the transition toward a more sustainable global food system.

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