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Social innovation and sustainability; how to disentangle the buzzword and its application in the field of agriculture and rural development

Social innovation is often appointed as an essential part of agricultural and rural innovation. Everybody seems to agree that social innovation is important but what exactly is meant by the term remains often unclear. This paper aims at clarifying the meaning and significance of the concept by going back to its root in innovation science and policy. It appoints three main interpretations of social innovation, referring to the social mechanism of innovation, the social responsibility of innovation and the need for innovating society. Studying its application in the field of agriculture and rural development reveals that social innovation is rarely referred to when agriculture as a singular economic activity is concerned, but prominently present in discussions about rural development. Here social innovation may be referred to when identifying society's need for more sustainable production methods, the necessity for collaboration and social learning, and the scope of change needed for revitalising (rural) society. Often, however, social innovation is presented as a tangle of interdependent processes and beneficial outcomes. Its fuzziness contributes to its discursive power in discussions about agricultural politics and the significance of sustainability, but also hides the valued-loadedness of social innovation. As a result its critical potential becomes neutralised. For gaining more insight in how to more effectively support social innovation, it is important to disentangle the social innovation jumble, to unravel the diverse interrelations and to explore and monitor its functioning and contribution to processes of social change and renewal.

Keywords: social innovation, responsible innovation, critical innovation, rural development, sustainable agriculture, rural governance

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Introduction

Social innovation is often appointed as an essential part of agricultural and rural innovation. One might call it one of the buzzwords which has become popular and pops up in policy arenas and features as a container carrying a plethora of meanings. Everybody seems to agree that social innovation is important but what exactly is meant by the term often remains unclear (Neumeier, 2012; Pol and Ville, 2009). This paper aims at clarifying the concept by analysing its origin and variable interpretation and application. By focusing on its relevance in agriculture and rural development, it seeks to unravel the different but overlapping definitions in use and to reveal its most characteristic and distinctive features. Disentangling the social innovation jumble, unravelling the diverse interrelations and monitoring underlying processes is important for gaining insight in how to more effectively support social innovation.

The following section discusses the origin of the concept of social innovation and its use in the context of innovation today. A threefold categorisation is presented which provides insight and creates order in the multitude of applications and interpretations. The paper then focuses on the significance of social innovation in the field of agriculture and rural development. In the discussion the critical elements of social innovation are underscored and the need to monitor and evaluate the process of social innovation more closely, differentiating between its different aspects in order to better understand and support social innovation, is stressed.

Methodology

The paper summarises the results of a literature study on social innovation and its significance for the transition towards sustainability in agriculture and rural development, commissioned by the Collaborative Working Group of the European Union's Standing Committee of Agricultural Research (SCAR). The literature study focused on recent publications reporting on (social) innovation in the rural context in the global North, starting with a quick scan of its roots in more general recent literature on (social) innovation.

Defining social innovation

The concept of social innovation is born from the ongoing debate and critique on traditional innovation theory with its focus on material and technological inventions, scientific knowledge and the economic rationale of innovation. It points to the need to take notice of society as a context that influences the development, diffusion and use of innovations (Edquist, 2001; Lundvall, 1992 in Fløysand and Jacobsen, 2011), but also points to the fact that innovations bear risks as well as opportunities for society (Pol and Ville, 2009).

Three main interpretations of social innovation may be distinguished, underlining:

1. The social mechanisms of innovations,
2. The social responsibility of innovations, and
3. The innovation of society.

These different interpretations highlight a specific aspect of social innovation but also underscore a specific value. Social innovation is, hence, not a neutral concept as its interpretation reflects a more or less critical stance towards the functioning of society.

The social mechanisms of innovation

It is now common knowledge that innovation takes place within specific social and cultural contexts and networks of social relations. They stimulate and support the development of 'inventions' (Fløysand and Jacobsen, 2011), but new technologies and products also affect social relations, behaviour and attitudes (Pol and Ville, 2009; Phills *et al*., 2008). Innovations are, hence, socially, culturally and territorially embedded (Fløysand and Jacobsen, 2011). In order to become adopted new products and new technologies need to fit into a specific social context with a specific organisation of social relations and specific norms and values and accepted behaviour patterns. Businesses recognise the socio-cultural nature of innovations and take variation in taste into account when introducing new products or processes. Here one may think for instance of the introduction of foreign food, that generally enters in an adapted form, in taste as well as presentation. This can be done by making dishes fit into the usual menu-structure of a 'proper meal' (i.e. a 'burger menu') or by adapting the original recipe and offering for instance 'grilled sushi' (Lang *et al*., 2009).

Recent theories of innovation use the concept of socio-technical innovation to explicate the inseparability of the social and technical in processes of innovation (Smith *et al*., 2010). The construction and introduction of new technologies always involves changes in the interaction of 'things' (artefacts), actors and 'ways of doing' (institutions) and effects and is affected by how society is organised and functions. This is the most evident in the case of 'system innovations' that go beyond the introduction of a new product or process but change the context, manner and meaning of how something is done, and lead to fundamental changes in many areas of society (Smith *et al*., 2010; Moors *et al*., 2004). Automobility is such a system innovation, which includes much more than the invention of the automobile.

> The regime of automobility, for example, includes not only paradigmatic technological design for cars, but also the specialised road planning authorities, the institutions of the 'driving licence' and 'motor insurance', the lobbying capacities of car manufacturers and oil companies, and the cultural significance of automobility. In combination, these elements form a socio-technical regime that stabilises the way societal functions are realised, and gives shape to particular patterns of producing and consuming mobility. (Smith *et al.*, 2010, p.440).

Based on these insights a new (systemic) analytical framework is developed – the multi-level perspective on socio-technical transition (MLP) – that explains why, how and where innovations may occur and lead to wider transitions, what preconditions innovation and how such a process may be fostered by innovation policy, for instance by offering room for social learning, cross-sector collaboration and experimentation (Smith *et al*., 2010; Moors *et al.,* 2004; see also next paragraph).

The social responsibility of innovation

In classic economic thinking innovation is considered important because of its ability to increase profit and encourage economic development (Voeten *et al*., 2009; Pol and Ville, 2009). Still today innovation is often associated with industries developing new products and new technologies driven by their wish to maximise profit. At the same time, technological innovation is increasingly met by scepticism and concern about for instance their potential risks for human safety and the environment. The on-going controversy around genetic modification may serve as an example here (Carolan, 2008). There is also a growing call for a different kind of innovation that helps solving important social problems. In addition, it is recognised that innovations may serve some groups more than others and that it is important to evaluate the social impact of innovations and to find out who are the winners and losers in innovation processes (Pol and Ville, 2009). All this may be summarised under a call for social or socially responsible innovation: innovations that are ethically approved, socially acceptable and relevant for society. Socially responsible innovation calls upon businesses to invest in society and to come up with socially relevant innovations, as part of their corporate responsibility for 'people and planet' and not only 'profit' (Phills *et al*., 2008).

Some theorists argue that the process of innovation has to change as well (Geels and Schot, 2007). Social innovation requires new – social – methods of innovation, characterised by processes of co-design or co-construction and collaboration with society. As a result the range of innovation-actors changes and research and development are no longer the exclusive domain of science and business; with the inclusion of users the roles of, and relationships between, science, market and (civil) society change. The Dutch Innovative Medical Devices Initiative (www.imdi.nl)[1] is an interesting example for such a project. Here researchers of various disciplines cooperate with physicians, technologists, as well as with producers and users of medical devices in eight centres of excellence. Their aim is to develop new medical technology that responds to the demands of an ageing society while remaining affordable. Their exchange and combination of knowledge becomes an important element of the innovation process as it goes beyond the creation of more knowledge. It regards processes of social and creative learning (Wals, 2007) that change perspectives and ways of looking at things, values and behaviour, and in doing so guide the development of socially acceptable and relevant products and processes.

The innovation of society

Social innovation is also referred to when indicating the need for society to change as a prerequisite for solving pertinent problems such as discrimination, poverty or pollution (Gibson-Graham and Roelvink, 2009). Here the focus is on changes in social relations, people's behaviour, and norms and values. Social innovation is then combined with concepts such as social empowerment and inclusion, social capital and cohesion. The Stanford Centre for Social

[1] For a description in English see: http://www.nwo.nl/nwohome.nsf/pages/NWOP_8BKJRG

Innovation departs from such an interpretation and defines social innovation as *Any novel and useful solution to a social need or problem, that is better than existing approaches (i.e., more effective, efficient, sustainable, or just) and for which the value created (benefits) accrues primarily to society as a whole rather that private individuals*.[2]

Similar calls for social innovations can be found in various government programmes. Also the Europe 2020 strategy document defines social innovation in the sense of social inclusion as one of its priorities. To design and implement programmes to promote social innovation for the most vulnerable, in particular by providing innovative education, training and employment opportunities for deprived communities, to fight discrimination (e.g. disabled) and to develop a new agenda for migrants' integration to enable them to take full advantage of their potential (EC, 2010, p.18).

Stressing the need to include and give voice to socially deprived groups underlines the political and critical element of innovation and its significance in a search for a better world, with more social justice and equality (Gibson-Graham and Roelvink, 2009). The extent of change envisioned may differ; some propose a substantial turnover of society whereas others aim for the improvement of existing practices. Social innovation is also strongly related to the innovation of established processes in politics and governance. Following Moulaert *et al*., (2005) social innovation needs innovative governance, which allows for the inclusion of non-traditional, marginalised actors, integrates various policy issues and centres on area-based development. It should invest in civil society and community development and support collective action, self-governance and political empowerment.

In summary

Social innovation is a complex and multidimensional concept that is used to indicate the social mechanisms, social objectives and/or societal scope of innovation. The social mechanisms of innovation refer to the fact that the development, diffusion and use of innovations always occur within the context of society and in interaction with social relations, practices and norms and values. As a result it is important to evaluate the social impact of innovations as there are generally winners and losers. Innovations should be 'social' in the sense of socially acceptable, relevant and ethically appropriate. This may be achieved by socialising innovation methods and reorganising innovation as a social and collective learning process with the purpose of the common definition of problems and common design and implementation of solutions. Finally, social innovation refers to the inducement of reorganising and improving society. In the latter case, the concept of social innovation is not only an analytical and academic concept, but also used in a normative way, stressing the need for social and political change, with clear differences, however, in the scope of change envisioned. It is, hence, important to be aware of the political element of (social) innovation and to analyse which kind of (social) changes are considered desirable and deserving governmental support and which not.

Social innovation in agriculture and rural development

The term social innovation is popular in the context of agriculture and rural development but its use and the importance attached to it differ according to the domain and scope of innovation referred to. Social innovation is most frequently used in the context of rural development as it is here where the need for social change is perceived as most evident. When rural development is concerned, the social is presented as a core element of innovation, also in the sense of engaging society in developing new solutions. When it comes to strictly agricultural development in the sense of production efficiency, social innovation is generally considered of less significance. Here a technology-oriented definition of innovation predominates (Moors *et al*., 2004). This has also to do with the different scope of innovations referred to above. Agricultural development, as such, is primarily built on business innovation and deals with new products and processes or new strategies, structure or routines (Pol and Ville, 2009). These technological or organisational innovations are developed and/or adopted by individual businesses in order maximise private profits. Rural development regards the innovation of socio-economic systems and seeks to meet unmet public needs and to create public value where markets and common socio-economic policies have failed (Phills *et al*., 2008).

For what regards the sustainability challenge the scope and direction of change is highly contested, and likewise is the need and desirability of social and business innovations. This is clearly reflected in for instance discussions about the Common Agricultural Policy (CAP) (High and Nemes, 2007), where 'agricultural modernisation' and 'multifunctional rural development' meet as conflicting paradigms or 'innovation models', and different solutions to the sustainability challenge. Those who support multifunctional rural development foresee the need for fundamental social changes – in organisation, behaviour as well as values – and attach great importance to social innovation as an essential part of the solution and part of a collective learning process (Knickel *et al*., 2009). Those who support agricultural modernisation have generally high expectations of scientists and their capacity to develop and design new technologies. They refer to social innovation in the sense of responding to social needs such as food safety and food security. Others use social innovation as synonymous for 'critical innovation' (Pol and Ville, 2009) and as a pledge for the creation of alternative systems of production and consumption.

The ambivalent use of social innovation complicates the definition and description of its significance and meaning in the field of agriculture and rural development (Neumeier, 2012). It also hinders scientific research and limits our insight into social innovation processes, which is essential for more effectively supporting social innovation (Reed *et al*., 2010; Klerkx and Leuuwis, 2009). In order to reduce and disentan-

[2] Stanford Graduate School of Business: Center for Social Innovation http://www.sdgrantmakers.org/members/downloads/PhillsSan%20Diego-Social%20Innovation.pdf

gle the 'social innovation-jumble' we make again use of the three-folded categorisation of the concept introduced above.

Social mechanisms – co-production of rural innovation

In the past, social mechanisms were considered as important when reaching the phase of diffusing agricultural innovations, when extensionists transferred new knowledge, products and/or technologies to farmers and convinced them to accept and use them (Leeuwis and van der Ban, 2004). Traditional Agricultural Knowledge Systems (AKS) are based on this approach (Dockès *et al*., 2012).

The new systemic approaches stress the importance of social mechanisms as basic elements also during the development phase. Innovations are seen as born from collective and creative learning processes and the mutual exchange of knowledge. All innovations are, hence, social as well as technical, and require social learning. Learning is no longer structured as a linear transfer of knowledge from teacher to student, but becomes a shared, social and circular process, in which the combination of different sources and types of knowledge creates something new (Oreszczyn *et al*., 2010; Stuiver *et al*., 2004). This type of learning is in itself innovative as it allows for a new (cross-border) constellation of actors to collaborate, who come from different backgrounds and have different interests (Tovey, 2008; Fløysand and Jacobsen, 2011).

Here social innovation is put on a par with collective and creative learning. At the same time it is also more than an innovation method, as it also produces (social) innovation in the sense of new skills, products and practices, as well as new attitudes and values, and new social relations between for example citizens and farmers (Rist *et al*., 2007; Bruckmeyer and Tovey, 2008).

The EU LEADER programme is a good example of an innovation policy that is based on this approach. Some even present LEADER as synonymous with social and cultural innovation (Dargan and Shucksmith, 2008). Starting as an experiment in some European regions, it has been mainstreamed as a cross-cutting axis for the local delivery of rural development plans in the present CAP (2007-2013). LEADER represents a territorial, participatory and endogenous approach to rural development. Following its philosophy it is important to enable the inhabitants of rural regions to realise their own development plans, making use of local resources and local knowledge. LEADER facilitates local capacity building and the growth of confidence and self-esteem among citizens as well as a positive collective identity (Dargan and Shucksmith, 2008). It also supports the creation of local and extra-local networks (Convery *et al*., 2010; High and Nemes, 2007; Dargan and Shucksmith 2008; Lowe *et al.* 2010). In doing so LEADER intends to create favourable conditions for the social mechanisms of innovation to function.

There are other examples where novel practices are born from the interaction and exchange of knowledge and experience between social groups that did not use to interact, such as farmers and citizens. Well-known examples regard environmental cooperatives in which farmers collaborate with citizens (Wiskerke *et al*., 2003), or consumer buying groups where urban consumers enter in stable relationships with farmers (Lamine, 2005).

Social objectives – responsiveness to market failure and unmet social needs

The call for responsiveness to unmet social needs and expectations is a strong driver for innovation of the agro-food system (Lowe *et al*., 2010). Recent food scares are a good example, but also loudly uttered concerns about genetic modification, animal welfare and environmental degradation and declining biodiversity exemplify this public call. Continuously returning are also critiques that point at the damaging effect of the globalisation of agricultural production and trade on developing countries. Finally, the social and economic decline of rural areas has been pointed out as one of the externalities of agricultural modernisation and the traditional production oriented agricultural support systems.

> Likewise, as consumers have prospered, they have become much more discerning and judgemental about the quality and wholesomeness of their food and the treatment of animals and nature in its production. As a consequence, the ethics of intensive farming have been called into question, and the discourses of commodity productivism challenged by those of 'slow food', organic, welfare-friendly and food chain localization. (Lowe *et al*., 2010, p.288).

The above reflects a call for social innovation in the sense of socially responsible agri-rural innovation, which is, however, received in various ways, reflecting different approaches to innovation and a variable appreciation of the existing system of production and consumption. At the one hand we see attempts to meet social concerns by way of new technological designs that reduce the negative effects. This is often achieved through more efficiency and reduction in either energy demand or polluting emissions (i.e. bio-economy, precision agriculture and intensive sustainability) (e.g. Tilman *et al*., 2011). Representatives of society may also be consulted about their concerns and engaged in the development of new products or technologies. Such consultation processes have for instance accompanied the design of new stables for pigs and poultry (Grin *et al*., 2004; Bos *et al*., 2012). The purpose is to find ways to reconcile social concerns with the requirements of modern production and to find solutions within the dominant system of production and consumption.

The promotion of a new (rural) paradigm of place-based agri-food eco-economy and multifunctional, integrated development is a more radical response to social concerns that calls for critical (social) innovation and attempts to change the agri-food system as a whole (Marsden, 2012; Horlings and Marsden, 2011). It seeks to replace what is indicated as the 'bio-economical', productivist modernisation paradigm by a system in which agriculture is place-based and relocated into 'the regional and local systems of ecological, economic and community development' (Marsden, 2012 p.140). Farmers no longer aim to maximise production against minimal costs but instead develop new products and services, such as local, high quality food, nature conservation as well as rural

tourism and green care (Roep and Wiskerke, 2004) and in doing so meet newly emerging social needs[3].

Social transformations – Changing (rural) society

When rural development and agriculture are concerned, social change is always implied. Changes in urban and rural lifestyles drive and demand innovations. It is, for instance, often argued that concerns about animal welfare typically arise in rich, urbanising societies, where citizens became estranged from farming (Boogaard *et al*., 2010). But also in the social mechanism of innovation and co-production of innovation, social change is implied through the crossing of rural-urban boundaries and re-establishment of their relationships, as well as the development of new attitudes and values (Neumeier, 2012).

But social change may also be the explicit purpose of innovation processes. Social innovation is then appointed as desired outcome – a renewed, revitalised society - as well as instrument and strategy to rescue rural societies through collective engagement. This is most prominently the case when rural development, in the sense of local development, is concerned and when the objective is to re-integrate rural societies that are perceived as marginal. Attention is then focused on the social fabric of rural areas that is considered as too weak as to assure its survival, and in need of revitalisation or 'innovation'. It includes concern with depopulation and the weakening of the social structure as a result of an ageing and masculinising population (Manos *et al*., 2011). In addition, there is worry about the need to mobilise and educate the population so that they become capable and willing to engage and re-create their society, and worry about the obstruction and 'hi-jacking' of change through powerful local interest lobbies (Convery *et al*., 2010; Vidal, 2009; Dargan and Shucksmith, 2008).

Social innovation, hence, refers to society as the arena where change takes place, as well as the need for society to change. It is, however, important to closely look at the scope of change envisioned. The call for a sustainable agri-food eco-economy, and 'real ecological modernisation' (Marsden, 2012) may serve as an example for a call for radically changing society and its systems of production and consumption. In the promotion of this 'innovation' the social is at the core of the innovation itself. The reorganisation and redefinition of the agri-food economy requires the substantial innovation of relations of production and consumption relations, of norms and values as well as behaviour, and the principles of agri-food governance (Marsden, 2012).

In summary

All three interpretations of social innovation are prominent in the context of agriculture and rural development and often used in combination. Generally the focus is on promoting social innovation as an important motor of change, referring to the social mechanisms of change as part of the process, new and yet unmet social needs as desired outcomes, society as the scope or arena where change takes place as well as indicating the scope of (societal) change envisioned. Also in the rural context the concept of social innovation is complex and multi-dimensional and often referred to as one big tangle of related and undifferentiated processes and outcomes that all together are portrayed as beneficial and desirable for the public good. It is the latter which makes social innovation a popular buzzword that, due to its positive notions, is often used to mobilise support. A call for 'social innovation' may, however, come from advocates who promote radically different directions of agricultural and rural change. For some social innovation indicates their wish to consult society when developing new products and processes, others use it to call for society to change. The lack of clarity and fuzziness of the term hides the value-loadedness of the social innovation and neutralises its critical potential.

Discussion

This paper aimed at unravelling the jumble of social innovation concepts in use and more particularly its interpretation and significance in the context of agriculture and rural development. It demonstrated that social innovation is rarely referred to when agriculture as a singular economic activity is concerned, but is very prominently present in discussions about rural development and the transition towards sustainability. In these discussions all three interpretations of social innovation are in use and often mixed up when referring to social innovation as one big tangle of interdependent processes and beneficial outcomes. Its fuzziness contributes to its discursive power in discussions about agricultural politics and the significance of sustainability. Social innovation is, hence, often used as an argument and strategy for promoting quite different directions of change.

The transition towards more sustainability and related discussion about 'agricultural modernisation' and 'multifunctional rural development' as opposing solutions is a good example of this. It also demonstrates that the position and function of 'social innovation' within the two programmes differ. It embodies the main message of the 'paradigm of multifunctionality' and 'eco-economy' – the renewal of our system of production and consumption, the development of new production and consumption practices, guided by new attitudes and values. Here the interpretation of social transformation and the innovation of society presides. The paradigm of 'agricultural modernisation' and 'bio-economy' strives for repairing the current system, so that it may better serve the needs of its citizens. Here social innovation fulfils a more instrumental function: innovators should engage citizens in their practices so that the new products and processes better meet their expectations and needs. The emphasis then lies on the social mechanisms and objectives of innovations, and not the innovation of society.

Social innovation may, hence, mean quite different things, and may be used to convince others of the need to realise quite different outcomes. Several authors argue for the need to agree upon one definition for the sake of research

[3] Combined with the ideas of endogenous, territorial development the multifunctional paradigm presupposes collective civic actions as a motor of change and as such also refers to social innovation in terms of the previous section. Farmers and other rural actors who exchange knowledge and ideas, combine their products and practices and in collaboration revitalise the rural economy by creatively responding to the call for agricultural and social change (Vander der Ploeg and Marsden, 2008).

and scientific progress as well as for the sake of supporting policymakers more effectively (Pol and Ville, 2009; Neumeier, 2012). The question is if this is really possible as long as social innovation is a buzzword, which adds legitimacy to messages of different kinds. What we can do is agree upon its main elements and interpretations and case-by-case check which interpretation is prioritised, and which meaning underscored (or pushed to the back) when applied in specific contexts and why. Based on the previous analysis, we consider its rootedness in critical innovation as a truly essential feature. Social innovation presupposes a critical attitude towards existing systems and their inherent failures, as well as a search for social justice and the public good. What to change and how, is a question of debate.

Independently of how radical are the changes proposed, social innovation is considered essential as instrument and process to realise a transition towards more sustainability. This underlines the importance of better understanding how it works and how the process related with social innovation may be effectively supported. For gaining more insight in how to more effectively support social innovation, it is important to disentangle the social innovation jumble, to unravel the diverse interrelations and to explore and monitor their separate and shared functioning and contribution to processes of social change and renewal.

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