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Developing a framework for radical and incremental social innovation in rural areas

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ABSTRACT

Social innovation (SI) has been championed as an integral feature of community-led rural development. However, the choice of the term "innovation" prompts a number of questions about the intensity and novelty of SI initiatives. In this paper, these issues are examined through the lens of radical and incremental innovation theory. By analysing features of radical and incremental SI, we can better understand the different social reconfigurations that can respond effectively to a range of rural needs and opportunities. The article aims at explaining the meaning and operationalisation of radical and incremental SI in rural areas. A multiple case study method was adopted for the research. Empirical data was gathered from two initiatives located in rural areas of Spain and Scotland and the main methods used were semi-structured interviews and qualitative content analysis. The findings illustrate how radical and incremental SIs can lead to sustainable development and social change. However, they imply social reconfigurations of different intensity that respond to the different attitudes and aspirations of the actors involved. The paper shows three diverging development trajectories for SI initiatives and discusses the role of conflict, skills and planning in these processes. Further, the more fluid nature of SI compared to technological innovation is clarified. In the conclusion we argue that public actors should identify the different aspirations of local actors and set the stage for the activation of the local society. In radical SI processes, conflict management mechanisms and new skills need to be promoted.

1. Introduction

Rural development paradigms have focused on the importance of networks for over a quarter of a century (Lowe et al., 1995; Murdoch, 2000). This period has seen changing socio-cultural and demographic trends reconfiguring rural community networks with new participants introducing different values, skills, connections and coordination mechanisms. The expansion of telecommunications has extended the reach of rural networks but it is easy to focus too much attention on the technology and underplay the importance of the second component of "smart villages" – the human and social capital of their inhabitants (Slee, 2019). Contemporary thinking about smart rural development continues to recognise the importance of connections within and between rural areas for capturing local opportunities and exploiting place-based assets (Naldi et al., 2015; OECD, 2018). This is where social innovation (SI) is a vital process supporting rural communities to adapt to external and technological changes, and to be more resilient (Cheshire et al., 2015).

SI has been increasingly adopted as a means to improve social capital, social development, and overall territorial development beyond a pure economic, technological, and market rationale (Moulaert et al., 2010). In this paper, SI is understood as a reconfiguration of social relations between territorial actors that leads to new forms of action to meet social needs and opportunities (Neumeier, 2012; Secco et al., 2017), whose main result is the creation of social value (Bosworth et al., 2016).

There is an emerging body of literature that underlines the relevance of SI in rural development (Neumeier, 2012; Bock, 2016; Bosworth et al., 2016). This growth of interest mirrors renewed emphasis on place-based assets, networks and the local scales for rural development (Horlings and Marsden, 2014; Vercher et al., 2020). In rural areas, SI is highly reliant on civil self-organisation (Bock, 2016; Lang and Fink, 2019), processes that can reconnect rural communities internally, and build new connections across the socio-political environment that can contribute to sustainable development and social change (Bock, 2016; Herraiz et al.,

[;] SI, Social Innovation; BCT, Birse Community Trust; CC, Cooperativa del Camp.

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2019).

Calls for SI from public institutions are numerous (European Commission, 2010), and the past decade has seen this spread rapidly into rural policy domains too (European Commission, 2021). Nevertheless, the choice of the term "innovation" prompts several questions about the novelty of the activities, the expected intensity of social reconfigurations, and the resources required to transform ideas into reality. To develop a stronger theorisation of SI in rural areas, these issues are examined through the lens of radical and incremental innovation theory, where the newness of technology, business models and network constellations can all be transformational to differing degrees.

Essentially, incremental innovation builds on existing development trajectories while radical innovation opens new trajectories, triggering new allocations of resources to activities that realise higher value (Sandberg and Aarikka-Stenroos, 2014). Thus, radical innovations require different skillsets, conditions and capabilities (Hu and Hughes, 2020), and needs to be driven by people with a different mindset to the prevailing conventions in a sector (Cattani et al., 2014). The outcomes of radical innovation are likely to see considerable transformation of established organisational structures, patterns of activities and routines (Colombo et al., 2017).

If radical innovation requires unconventional thinking, any truly place-based approach to rural development in a democratic society would surely stifle and resist radical forms of SI. However, places that are lagging in terms of economic performance or community well-being require interventions to enact change. In these contexts, policy approaches have emphasised the need for locally-rooted approaches to development supported by strong external networks, sometimes termed "neo-endogenous" (Lowe et al., 1995) or "nexogenous" development (Bock, 2016). Rather than an external shock created by an outsider, more radical forms of SI require processes of negotiation through networks that build an appetite for change. Drawing again from business literature, radical innovation requires organisational arrangements that favour the creation and singular recombination of new knowledge (Colombo et al., 2017). Translating this to SI implies the need for social organisational structures that are open to change, comfortable with risk and willing to experiment with new ideas.

This radical and incremental lens has been applied mainly to business innovation (Tushman and Anderson, 1986; Audretsch and Aldridge, 2008), with literature on radical and incremental SI scarce (see Fontan et al., 2008; Marcy, 2015; Polman et al., 2017; Marques et al., 2018; Sarkki et al., 2021), particularly within rural studies. Hence, this article represents a first attempt to explain the meaning and operationalisation of radical and incremental SI in rural areas. By analysing features of radical and incremental SI, we respond to calls to provide new insights on the intensity of change where SI operates (Kluvankova et al., 2021) and we aim to better understand the different social reconfigurations that can respond effectively to a range of rural needs and opportunities.

This paper is structured as follows. Section two conceptualises SI before section three distinguishes between radical and incremental (social) innovation. Section four then presents the methods and data used in the empirical study that generate the results from two rural initiatives, which are set out in section five. Finally, sections six and seven discuss the findings and conclude.

2. Social innovation as reconfiguring of social relations

SI initiatives emerge when *triggers* of a diverse nature and scale make actors initiate action. Triggers are events with potentially positive or negative impacts that accentuate *needs* and *opportunities* to the point of activating a response (Secco et al., 2017). A wide range of socioeconomic problems affecting rural communities can be addressed by SI initiatives. In many cases, positive rhetoric has characterised SI as a set of creative solutions to social needs arising from civil society and leading to demand-led projects (Martens et al., 2020). Where communities have

abundant human and social capital, SI offers great potential for rural development that addresses people's aspirations by responding to local opportunities and wider challenges (Bosworth et al., 2016; Nordberg et al., 2020).

SI is context-specific and expressly perceived as innovative within its local *context* (new-to-the-community innovations) (Van Dyck and Van den Broeck, 2013). Local context includes economic, social, environmental, and institutional elements that enable or constrain SI emergence and development (Secco et al., 2017). The social structure is particularly central in determining actors' capacity to act (Cajaiba-Santana, 2014). Likewise, social and human capitals are usually highlighted as key territorial resources in promoting networks, coordination and knowledge exchange (Esparcia, 2014). Given this diversity of rural contexts, SIs can take diverging development paths (Kluvankova et al., 2021), and generate different development trajectories in their localities, and potentially beyond.

The dominant process in SI occurs when a critical mass of *actors* (individuals and organisations), attracted by compelling narratives (Vercher et al., 2021), starts a *reconfiguration of social relations* that leads to implementing different *practises*. Such reconfiguring can take place in three dimensions: networks, attitudes, and governance arrangements (Secco et al., 2017) (Fig. 1). These three dimensions express the "who" (networks), the "why" (attitudes), and the "how" (governance arrangements) of SI. Not every SI undergoes major reconfiguration in all three dimensions, although a change in one of them will probably induce changes in others (Secco et al., 2017).

Firstly, the *reconfiguring of networks* involves new actors and/or new roles within an initiative's network. The larger the number and diversity of actors, the higher the number of agendas and resources, and the greater the SI potential (Estensoro, 2012). Some actors play a key role within networks as innovators, promoters or followers, while others bring external support. Some actors may also resist, especially in transformative processes, e.g., agribusinesses in agroecology innovations (Rosset and Martínez-Torres, 2012), or big energy firms in community energy initiatives (Hewitt et al., 2019).

Secondly, the *reconfiguring of attitudes* is the distinctive element of SI compared to other types of innovation (Mumford, 2002). Attitudes are personal; they reflect evaluative judgments of facts and objects that express the way someone is willing to behave or act (Agarwal and Malhotra, 2005). Values (beliefs about what is good and bad, and what really matters in life) and motivations (the reason why we do something in a particular way) are two main components of attitudes. However, attitudes are also influenced by social norms, formal institutions or the history of communities.

The introduction of new actors (from different fields or new social groups) within a network can challenge the prevailing attitude towards the initiative and drive new configurations of social relations. SI research has paid great attention to transformative processes, defined as

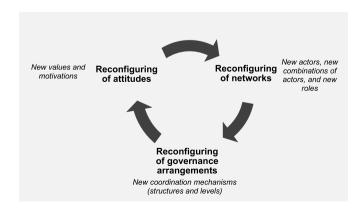


Fig. 1. Three dimensions of the reconfiguration of social relations in SI. Own elaboration based on Secco et al. (2017).

those that alter dominant institutions in the social context (Avelino et al., 2019). Attitudes are key to enabling actors to pursue their aspirations and desires for transformation. This is for example the case of some SI initiatives driven by social movements, whose members usually aspire to major socioeconomic changes, such as replacing market dynamics with community-based rules (i.e., solidarity, mutual care and support, non-monetary exchanges ...). (Klein et al., 2010).

Finally, the *reconfiguring of governance arrangements* refers to new coordination mechanisms at the network and/or territorial level. For example, to regulate over issues of common interest, actors may need to identify new ways of self-organising to navigate complex relations of reciprocal interdependence (Esparcia and Abbasi, 2020). Local communities themselves constitute an important form of coordination in which local identity and geographical proximity are shared characteristics (Nordberg et al., 2020). However, new coordination mechanisms can also be arranged in communities of practise that reach networks beyond local communities. Coordination mechanisms can be informal (conversations, events, etc.) or formal (agreements, statutes, etc.). Governance arrangements can be supported by coordination structures, e.g., social enterprises (Richter, 2019; Martens et al., 2020), and embrace different degrees of coordination levels.

Overall, triggers, needs, opportunities, context, actors, and the reconfiguration of social relations are the components of our SI framework, from which we will address radical and incremental innovation.

3. Radical and incremental (social) innovation

In order to address the novelty of SI, we draw upon business innovation literature to elaborate conceptualisation of the radical and incremental lens in the SI field. In business theory, innovations "must have been implemented and must be significantly different from the firm's previous products or business processes" (OECD/Eurostat, 2018: 78). In this regard, the radical and incremental lens help us to distinguish the degree to which an innovation is new and different compared to previous products or processes. We are aware that this terminology is not free of ambiguity as there are other concepts often used in literature with similar meaning, e.g., disruptive innovation, discontinuous innovation, or breakthrough innovation (Sandberg and Aarikka-Stenroos, 2014). However, the potential to explore how radical and incremental processes relate to each other in the SI context makes there adoption appealing for the rural context.

Generally speaking, incremental innovation is recognised as small variations or improvements of existing products or processes, whereas radical innovation encompasses new products or processes that make the prevailing ones obsolete (Tushman and Anderson, 1986; Lee, 2011). The particularities that distinguish radical innovations from incremental innovations can be examined through the following categories (Table 1): i) the market needs they address; ii) their impact in the technological trajectory; iii) the type of knowledge they use; iv) the adoption period; v) the strategy followed; and vi) the risk they comprise for companies.

Radical innovations meet emerging needs and markets, while incremental innovations try to meet existing needs and current markets with greater efficiency or with superior value propositions to consumers

Table 1Differences between radical and incremental innovation. Own elaboration based on business literature on radical/incremental innovation.

Business innovation	Radical	Incremental	Social innovation
Market needs	New	Existing	Community needs (and opportunities)
Technological trajectory	Breaking	Consistent	Development trajectory
Knowledge	Transformed	Reinforced	Knowledge and skills
Adoption time	Long	Short	Adoption time
Strategy	Stochastic	Structured	Strategy and planning
Risk	High	Low	(Social) Risk

(Tushman and Anderson, 1986). In doing so, radical innovations imply the disruption of the prevailing technological trajectory, while incremental innovations materialise at a rate consistent with the current one (Audretsch and Aldridge, 2008).

The path-breaking nature of radical innovations involve the creation and singular recombination of new knowledge to achieve new outcomes (Colombo et al., 2017). Knowledge refers to an understanding of information and the ability to use information for different purposes (OECD/Eurostat, 2018). Incremental innovations imply cognitive efforts that enhance the current understanding of information for new or similar purposes and, therefore, they tend to reinforce prevailing knowledge (Lee, 2011). Adopting new knowledge as part of radical innovations requires long adoption periods (Rogers, 1983). Such major alterations usually encounter considerable (intended or unintended) oppositions (Colombo et al., 2017), or require capabilities and skills that most companies lack.

Furthermore, this distinction between incremental and radical innovations has significant implications for maintaining or disrupting power balances within industries. Radical innovations are frequently linked to aggressive and unpredictable processes of creative destruction with unplanned outcomes (Dew and Sarasvathy, 2016; Colombo et al., 2017), considered to transform the status quo (OECD/Eurostat, 2018). Therefore, larger firms tend to pursue incremental innovations, achievable through relatively structured processes that consolidate their market positions (Chandy and Tellis, 1998). They often struggle to escape their institutionalised practises and mindsets to embrace the increased risks associated with radical innovations (Forés and Camisón, 2016; Ringberg et al., 2019).

Translating this logic to SI is challenging because SI is intangible, context-specific and diverse in nature. In SI, the main focus are social relations rather than products and business processes. The unit of analysis are no longer firms or industries, but local communities. Thus, the radical and incremental lens help us to differentiate the degree to which reconfigurations in social relations are new compared to previous configurations of social relations in a specific territorial context.

In order to distinguish between radical and incremental SI, we adapted the set of categories from the literature on business innovation (Table 1). Despite the limited empirical evidence on radical and incremental SI, we found some contributions that discuss SI intensity and novelty in relation to some of the categories listed in Table 1. For Polman et al. (2017: 16) "incremental SI is expected to deliver a gradual social, economic or environmental improvement, allows the utilisation of existing knowledge and competencies, is low risk, perpetuates existing social practises, and could potentially be implemented with little resistance". This definition, which could have a more radical version, captures the role of knowledge and skills in incremental SI, and links the notion of risk to resistance.

Marcy (2015) describes radical SI as the generation and implementation of new ideas about how people should organise social interactions to meet common goals that challenge the status quo. Once again, the status quo is central to distinguish between radical and incremental SI. Radical SI challenges the status quo by confronting existing development trajectories (Fontan et al., 2008), addressing asymmetrical power relationships (Marques et al., 2018; Kluvankova et al., 2021), and reshaping current institutional arrangements and cognitive frames (Sarkki et al., 2021). Other authors use the term "transformative" to refer to SIs that lead to long-term changes in social practices, agendas, institutions, beliefs and/or power relations (Castro-Arce and Vanclay, 2020; Kluvankova et al., 2021). The nature of the

¹ Technological trajectory refers to the sort of rules and preferential paths channelling the continuous changes in products and processes' performance as part of the same technological sequence. Market segmentation, product customisation and reduction of inputs are examples of preferential paths within a technological trajectory (Biondi and Galli, 1992).

needs (and opportunities) can influence whether SIs are built as an adaptation to the current status quo or an attempt to break with it.

Attempts to break with the status quo may bring about resistance (Polman et al., 2017; Castro-Arce and Vanclay, 2020). Conversely, incremental processes may achieve a broader degree of collaboration and engagement within the involved actors. However, there is a risk of marginalising those voices outside of the dominant actor group. All this will surely impact the adoption period of new forms of organising social relations as well as public actors' willingness to plan development strategies comprising radical social reconfigurations. In this regard, some authors argue that transformative SIs tend to occur in the long term, and less frequently, as a result of an accumulation of incremental and small adaptations (Kluvankova et al., 2021).

Resistance and conflict are an integral part of many deliberative processes in local development, a signal of socioeconomic changes and an indicator of novelty (Torre and Wallet, 2013). In local productive systems, innovations that question the traditional way of doing things by the different communities of practice involved may generate resistance and changes in networks (Gallego-Bono, 2016). In planning processes, conflict usually arises between established social groups and proponents of new ideas, as well as in phases in which initial expectations decline (Christmann et al., 2020). Also, conflicts can trigger collective action and new attitudes in local communities, particularly in community-outsider conflicts (Yasmi et al., 2013).

This is a first theoretical approach to the distinction between radical and incremental SI. In the discussion, we will interpret our empirical results in order to provide new insights into what radical/incremental SIs are and how they operate in rural areas.

4. Methods and data

A multiple case study method with cross-case analysis was adopted for the research (Patton, 2015). The case study approach is necessary to understand the context of individual innovations (Bouchard, 2007), and to provide new empirical evidence. This is of relevance to rural studies, where SI has limited conceptual framing and empirical data is needed (Bosworth et al., 2016).

The fieldwork was carried out in two rural areas, located in remote and intermediate regions, with a well-defined geographical reach: Birse parish (north-eastern Scotland, the UK) and Formentera (an island in eastern Spain). In each case, data was gathered about initiatives perceived to be novel by local actors and innovative in their local context, with capacity for improving rural communities' well-being and sustainable development. At the same time, we intentionally selected extreme cases: Birse Community Trust (BCT), an initiative with apparently intense reconfigurations in social relations; and Cooperativa del Camp (CC), an initiative with less intense reconfigurations. It should be noted that while reconfigurations of social relations occur at the initiative-level, the extent to which they are radical or incremental is examined within the local context where SI initiatives emerge.

Data were collected between 2017 and 2018 through primary data in combination with desk research. The main qualitative technique used in data collection was semi-structured interviews with key informants (Longhurst, 2003), which was supplemented with participant observation and documentary analysis relating to the two initiatives. A total of 18 interviews were conducted, 13 in Formentera and five in Birse parish, lasting around 60 min. The difference reflects that the number of organisations and actors involved in CC is higher than in BCT. Purposive sampling identified the main involved actors and interviews continued until a strong appreciation of different views emerged. The interviewees in BCT comprised two practitioners (office manager and ex-advisor), two board members (trustees) and one community member involved in sociocultural activities. In CC we interviewed one politician, three practitioners (agricultural technicians and office manager), six board members, and three community members (users of the Cens de Terres). The interviews sought to understand the local context and its recent history and trajectory, factors triggering SI, community needs and opportunities, actors involved and diffusion process, external support, main skills, attitudes, coordination strategies and structures, conflicts, and main practises. They were all recorded and subsequently transcribed.

The complementary participant observation involved participation in board meetings, agricultural activities, and sociocultural events. This helped to understand the social scenarios in which SI initiatives develop, capturing informal interactions between local actors and culturally-shaped attitudes (DeWalt and De Walt, 2002). A field diary was used to save researchers' own perceptions about the activities at which they were present.

The research was further augmented by secondary data concerning the broader context of the initiatives and the institutional environment, which incorporated a historical perspective of the local area. In CC, social media and a local newspaper (Diario de Ibiza) were key to documenting the initiative. Through the BCT's website² we had access to meeting minutes and newsletters since the beginning of the innovation process, as well as multiple annual strategies, territorial data, and reports illustrating the theoretical and political positioning of the organisation. The rich source of secondary data in BCT allowed us to focus personal interviews on more specific features of the SI process, such as perceptions of key actors and existing conflicts, which explains the lower number of interviews required.

Documentary analysis of secondary data was used in combination with semi-structured interviews and participant observation as a means of triangulation (Denzin, 2012). A qualitative content analysis was conducted in order to derive, firstly, a deductive thematic organisation of data according to our framework based on: context, needs, opportunities, triggers, actors, and reconfiguring of social relations. Secondly, an inductive process was followed to identify the radical/incremental character of the SI initiative, linked to the categories in Table 1 and other emerging topics. The data analysis was carried out using MAXQDA 2018 software. Interview statements are included as means of empirical evidence. The statements in CC have been translated from Catalan to English by the authors.

5. Results

In this section we explore two case studies according to the five categories of our SI framework (see Section 2): context, triggers, community needs and opportunities, actors, and reconfiguration of social relations. In examining the territorial context, we also capture the development trajectory of local communities. The other categories derived from the radical/incremental innovation theory (the skills and knowledge of actors involved, the adoption time of new social configurations, planning and strategies followed by the initiatives, and social risks) are analysed as part of the characteristics of actors and social reconfiguration processes (see Table 2).

5.1. Birse Community Trust (BCT)

5.1.1. Context

Birse parish is located in Aberdeenshire council (Scotland). It has less than 800 inhabitants and six inhabitants per $\rm km^2$. Its closeness to Aberdeen city (44 km) contributed to the transformation of the parish during the 1970s by the arrival of the oil industry, stimulating new settlers and a general improvement in socioeconomic conditions.

Birse parish has four main parts: the three scattered rural settlements of Finzean, Birse and Ballogie, and the uninhabited Forest of Birse, which covers over a quarter of the area. Civil parishes in Scotland can be dated from the 19th century but today, they have weak governance competencies. Local councils retain the highest formal capacity of local

² See https://www.birsecommunitytrust.org.uk.

 Table 2

 Radical/incremental SI in the two case studies. Own elaboration.

Radical/ incremental social innovation	Birse Community Trust	Cooperativa del Camp
Community needs (and opportunities)	Poorly-perceived needs: lack of local governance mechanisms; abandonment of the natural heritage Great opportunity: ancient rights	Well-perceived needs: abandonment of the rural character of the area Limited opportunities: synergies agriculture-tourism
Development trajectory/ status quo	Trajectory-creating: new ownership patterns; community ownership/ enterprise	Trajectory-reinforcing: complementarity between tourism development and preservation of the rural character of the territory
Knowledge/skills	New forms of ownership High-skilled local actors	Recovery of agricultural knowledge High capacity of local government
Adoption time	Long: 3 years negotiating with estates	Short: perceived benefits and quick alignment with the project
Strategy/Planning	Structured: well-planned from BCT (initial negotiations, explicit objectives, strategic forestry plans). External role of the Land Reform	Structured: well-planned process from local government and the cooperative
(Social) Risk	High: conflict between community members, and between the community and the estates	Low: none conflicts mentioned

government, while some parishes, such as Birse, still preserve certain community identity. The local context is also defined by: i) a natural heritage of great relevance, notably the ancient rights over the Forest of Birse; ii) a concentrated pattern of landownership, where more than 90% of the land is owned by three estates; and iii) an active local society with three community associations, two community councils and several clubs and other social organisations.

The emergence and development of BCT is also influenced by the national context. A weak local democratic system (Wightman, 2014), and the rise of the *development trust* model in the 1990s are key to understanding the process. In particular, the Land Reform Act (Scottish Government, 2003) has been central in reshaping landownership structures and increasing the role of rural communities in Scotland (Revell and Dinnie, 2018).

5.1.2. Triggers, needs and opportunities

At the end of the 1990s, together with a small group of community members, a key local actor –the innovator– considered that Birse parish needed a new vehicle to improve its autonomy, local governance and satisfaction of local needs. The rediscovery of ancient community rights over the Forest of Birse and the awareness of new types of funding for local communities linked to the development trust model triggered initial actions. By setting up a new community enterprise, they aimed to address poorly perceived needs and opportunities in the local area (e.g., the lack of local governance mechanisms, the lack of recognition of the local natural heritage, the opportunity to enhance the value and use of the ancient rights):

"Finzean, Birse and Ballogie ended up in a very large community council, covering a whole number of other communities stretching off into the distance. That led to, locally, setting up two community associations [...] so that they could collect views to channel them to the remote community council, and channel them to local government, even more remote [...] By the time you get to the mid 1990s, there was a realisation in Finzean Community Association that, as a community, if you were not doing things for yourself, nobody else

was doing them, and that the community needed a new vehicle to be able to do that. The particular issues at hand were the ancient rights over the Forest of Birse, and the watermills in Finzean [...] Birse Community Trust was set up as a vehicle to save those things" (BCT's innovator).

In order to transfer the ancient forest rights to the community, the initial promoters started a negotiation with the two estates owning the land and holding sporting rights. It took three years for the estates to adapt and adopt the idea, reaching an agreement in 1999. Despite the difficulties, the negotiation process (and subsequent actions) was guided by a well-defined strategy designed by the innovator and other promoters, also reflected in some documents on the BCT's website:

"The parish of Birse was given ancient rights over timber in the Forest of Birse. Within the last 30 years, those rights were sort of rediscovered, which prompted a negotiation between the founder of BCT and the landowner of the Forest of Birse. They came to an agreement whereby BCT could revive those rights over the timber, whilst the landowner still retained all of these other rights. So, that ability was a kind of financial basis for starting BCT. We could take timber out of that forest, we could plant trees and get government funding. That enabled us to expand by buying two more forests" (BCT's manager).

5.1.3. Actors and reconfiguration of social relations

Social innovation often needs one or more individuals that can bring a unique set of attributes to an initiative. In the case of BCT, we identified a key local innovator who was a specialist in landownership in Scotland and local history, and a supporter of community ownership. After rediscovering the ancient rights, he was able to engage with landowners, bring people with him and drive the initiative during the start-up phases, remaining part of it for almost two decades. Until BCT was set up he did not play any substantial role in the community, whereas during its development he became a leader. Beyond his expertise, the innovator was able to draw upon personal networks with the Scottish government and powerful families to get financial and legal support:

"I would live here for over twenty years before I became involved in helping set BCT up [...] people knew me, I knew them [...] until BCT was being set up, I never played any role in the community [...] I am reasonably antisocial. Anybody here will tell you that, but there were key people in this community, elders of the community in terms of senior members of the tenant farming community and others who always backed BCT and were trustees and everything. But, what I brought to the table was strategic knowledge and focus and both because of the, in a sense, my knowledge of rural development elsewhere, but also because of my knowledge and understanding of the parish" (BCT's innovator).

"He [the innovator] has been an advisor to the Scottish government in the Land Reform. He set the trust up, he is got us to where we are pretty much today [...] he is politically a Scottish nationalist [...] able to engage with landowners [...] He is well connected within the Scottish government, academics ... [...] his research has been taken seriously [...] it goes beyond the political world. We may even be talking about the royal family, because I know he has one connection there, which may have helped, in a big way, financially [...] But he is very single minded and focused, and the trust would not exist without him [...] I think he is a leader (BCT's manager).

These reconfigurations were soon adopted by the rest of the community, who took on an increasing role in local development through BCT. Every person in the electoral register of Birse parish was automatically a member of the BCT. Nearly 50% of the households in the parish have been represented at one Annual General Meeting and during

the initial years more than 10% of the BCT's members attended one. BCT involves community members as part-time employees or volunteers and has organised community ballots before every purchase of forests. Nevertheless, community members are not directly involved on a regular basis. A small number of trustees are responsible for running BCT on the community's behalf. The election of trustees is an open process to the whole community and there is usually no rivalry to access to a position. Despite the good geographic and gender representation, trustees usually include high-skilled people (executives, artists, rangers, scientists, etc.), potentially marginalising some of the traditionally excluded social groups or "rural others", such as youth or ethnic minorities.

In 2018, the BCT's board incorporated new members as part of a regular process of renewal. Some of them are close to oil companies, retaining high human and social capital. During the interviews, some of these new members were very critical with the innovator's role and BCT's past activity. From their view, the innovator was hostile with big landowners because he always wanted to take away their properties. They also questioned why BCT was focused on ownership rather than on meeting people's needs. The conflict was such to the point that the entry of the new team hastened the departure of the innovator. Ultimately, we found ideological disputes between the innovator and some members of the new team, who are close to the estates' families:

"He would always be pushing it to try and get a bit more. He would never compromised. I am much more about compromising [...] Before, he was very confrontational with the communities and would push the boundaries. I am saying that is not my style. I will do it much more engaging with everyone" (BCT's chairman).

"BCT is being moved in an entirely different direction, and one of the distinctions, in terms of perhaps his perspective [member of the new team] and the perspective of me and previous trustees, is that the trust was about community empowerment. I described it as getting a strong democratic infrastructure, and a strong physical infrastructure, because it owns or leases the key places for the identity of the community, the amenity of the community, economic resources [...] He [member of the new team] sees community bodies not in the sense of empowerment but in the sense of amenity organisations" (BCT's innovator).

Despite the new team's narrative, the innovator and community members argue that the relationship between BCT and the estates remained satisfactory to enable cooperation. For example, the ancient rights would have never been vested to BCT without the estates' support. Moreover, some BCT's assets were sold or transferred by Finzean Estate and a member of this family held a position as BCT patron for years. Some interviewees explained that the initiative has shifted the estates' attitude towards the community, something particularly innovative in this area:

"I suppose the agreement with BCT has forced landowners to interface with the community, to listen to their interests, to what they want. They do not always agree, but now we have a really good relationship with them. They listen to us. Things they do not necessarily want to do, we can persuade them to do sometimes, like planting more trees. They do not necessarily like us putting up signs but we say, well, it is just a sign, it is not going to affect you" (BCT trustee).

"When you look at the sort of community landownership and everything in Scotland, all the main examples are all further north and west [...] because of the strength of the estates here, it was a slightly surprising area to have something like BCT' (BCT's innovator).

BCT has reconfigured the coordination between local actors –also with the estates–, and between local actors and national public bodies. Three new governance mechanisms (groups that meet regularly) were

created on issues such as forestry and deer management, local assets management, and local initiatives in general. Indeed, BCT and its subsidiary commercial firm (BTCo) are themselves new forms of socioeconomic coordination in the parish. At the national level, two forests were managed in partnership with Forestry Commission Scotland from 2000 until their purchase within the Land Reform framework (Forestry Commission Scotland, 2004). The BCT has also been successful in getting funding from many national public and private bodies.

Through the aforementioned governance mechanisms, BCT codesigned strategies for managing the community and the organisation itself, introduced external knowledge, and disseminated this knowledge to other local organisations. It has also been able to meet people's demands, such as accessible paths in the forests and saving abandoned buildings. BCT has promoted people's reconnection to the natural environment and the parish identity – it is the only body that operates at the parish level. Community ownership in particular appears to be the main approach to fostering local development and a more balanced distribution of landownership:

"The natural heritage is a big thing for me. The area would not look the same or feel the same without the work we've done. I am talking about the Forest of Birse and our commercial forests [...] Our historic buildings would have fallen into the river by now without us [...] they are culturally and historically significant to the area. That is the last working water-powered sawmill of its kind in Scotland, probably in the UK" (BCT trustee).

"The feedback that BCT got when people were signing up was great, you're there doing it, and we don't have to worry, it happens. That is part of the capacity that the community gained through having BCT [...] it had sorted out the rights over the Forest of Birse, it was taken over the mills and restoring them. The church came up for sale in Birse, so everybody, having seen what BCT could do, said save the church! Because BCT had demonstrated capacity [...]" (BCT's innovator).

5.2. Cooperativa del Camp (CC)

5.2.1. Context

Formentera is the second smallest (80 km²) of the Balearic Islands (Spain). Together with Ibiza, it represents a well-defined integrated territory (Illes Pitiüses) and forms a single LEADER area, where Ibiza retains centrality in basic services such as transport or health. The environment of Formentera is of great ecological interest and its land-scape is the basis of its international recognition as tourism hub (Pons and Rullan, 2014). Formentera's tourism development during the second half of the 20th century was followed by the abandonment of agriculture and rapid urbanisation. While tourism activities have considerably increased income and employment, the rural landscape of livestock, cultivated fields, dry stone walls and traditional rural roads have lost significance. In 2019, almost 50% of the inhabitants were employed in the hotel industry, whereas only 1,2% in agriculture (IBESTAT, 2020). Despite this fact, the island's rural character is widely recognised by its population.

The context of CC is also defined by a singular institutional environment. In 2007, Formentera removed municipal administrations, having the *Consell Insular de Formentera* as the only administrative structure. The *Consell Insular* (island council) is a government structure at the island level, between municipalities and regional government (Balearic Islands). It covers six main settlements ranging from 400 to 2000 inhabitants, with a total population of 12,000 inhabitants and 100 inhabitants per $\rm km^2$. Around 60% of the population lives in houses scattered around the island. The island council retains a large portfolio

³ See http://www.leadereivissaiformentera.com/web/asociacion/quiene s-somos/.

of legal powers and a considerable budget (2500 ϵ /inhabitant in 2020). It is perceived to be close to citizens and a leading actor within the community.

5.2.2. Triggers, needs and opportunities

The evidence suggests two main triggers in CC. The assets (two buildings) of two historic agriculture cooperatives, which had been inactive over 30 years, were about to be lost due to a regional law on cooperatives which would see the assets return to a regional federation of cooperatives. Some community members, linked to a farmer's association, initiated actions to prevent the community from losing such emblematic organisations. The emergence of a new local party in 2007 and its participation with government duties since 2011 also accelerated this process:

"There was a risk of losing some properties, commercial offices [...] The *Consell* started moving [...] we looked for former cooperative members, contacted those still alive and the descendants of those dead. We gathered these people and arranged initial meetings to recover the old cooperatives and create a new one [...] Avoiding the loss of properties was key" (Board member).

By merging the old cooperatives and creating a new one, the actors involved aimed at revitalising local agriculture. The farmer's association was interested in providing inputs for livestock (fodder) at lower prices than those coming from Ibiza and the peninsula. The *Consell* saw the initiative as a strategy to provide local products and rural landscape –not only beaches– to the tourism sector:

"We live quite well because we earn a lot of money in summer [...] but we need to value our traditional environment. If you go to the beach and you see a nice rural landscape ... I think that's good for everyone. Those who live here have concerns about how rural Formentera lost everything due to tourism and other business activities. We do not reject tourism at all! [...] We can produce high-quality products to be offered in the tourism sector. We want to join both activities" (Politician from Formentera local council).

5.2.3. Actors and reconfiguration of social relations

Formentera's local government is run by a relatively new left-green and nationalist local political party, *Gent per Formentera* [People for Formentera], whose electoral programme claims for a reconfiguring of attitudes, i.e., the agricultural, rural and cultural recovery of Formentera:

"The primary sector makes us better as a community. While Formentera is nowadays very popular, in the past we were an extremely poor island [...] local people knew how to make a boat, a house, cultivate, manage a forest or the slaughter of cattle [...] we want to recover and diffuse this know-how to young people because tourism tends to standardise territories" (Politician from Formentera local council).

The local government was central in designing and planning the initiative, providing economic resources, and convincing actors with different profiles to run the cooperative. However, this well-structured process would not have been possible without the engagement of a few members of the farmers' association, who embraced such change in attitudes and introduced complementary skills:

"It was a school teacher, J.V., member of the farmers' association, who made a great effort for reactivating the cooperative [...] We think agriculture should be reactivated. It is something really important for the island [...] I don't know about agriculture, but I do about bureaucracy. Assisted by the Agriculture Office and J.V., two people and I managed the reactivation process [...] The *Consell* transferred us the warehouse" (Board member).

The board members involve a wide range of professional profiles, although with little expertise in agriculture. This lack of knowledge about agriculture (partly due to the abandonment of this activity in recent decades) was compensated for by hiring technical staff from outside the territory.

We found the greatest innovative potential in *Cens de Terres*. It is a novel coordination mechanism, conceived by the local government, by which civil society in general can transfer their land to the cooperative to be cultivated free of charge for periods of three, five or ten years. In doing so, they become cooperative members. They are mainly old people with strong sense of place and interested in avoiding the abandonment of arable land:

"I am really interested in everything implying taking care of our land [...] This was my parents' land. I do not want to sell it to anyone. I would be very grateful if the cooperative cultivates it because my children will not do it" (Cooperative member).

"I do not have enough time to work my land [...] that is why I transferred my plot to the cooperative, to see it alive and nice. In some way, this is the island's garden [...] I have been subjected to pressure from people who wanted to buy my land, but real estate is not the idea of investment I have" (Cooperative member).

Involving the local society in *Cens de Terres* was relatively easy. The island's small size and the closeness of the local government to residents—and between residents—facilitated face-to-face communication. Likewise, many interviewees underlined the role played by the cooperative in engaging with small landowners since it was perceived as a neutral body, rooted in the community. In 2019, more than 100 people had transferred their land to the cooperative (250 ha).

This initiative comprises an interesting reconfiguration of governance arrangements. CC represents the recovery of a traditional coordination structure in the area. It holds the largest arable land surface in Formentera, becoming a central agent in agricultural and rural development, and intermediary between entrepreneurs: "The cooperative is the core. It creates synergies between existing and potential agriculture initiatives" (Cooperative's manager). Furthermore, the initiative illustrates a novel public-cooperative coalition for rural development. The local government relies on a cooperative (private agent) to promote agriculture, local products and rural landscape, finance its activity by arranging the *Cens de terres*' agreement annually (100.000 \in approx.), and meets with board members regularly to exchange information and align the cooperative activities with other local initiatives (e.g., a new irrigation system and training):

"This is something innovative. In order to achieve this degree of collaboration we had to change statutes, we had to say we were a non-lucrative cooperative [...] Actually, collaboration is very high. They [local government] are working on recovering structure and investing. We are contributing to improve the island's appearance" (Board member).

Additionally, *Cens de Terres* expands the public-cooperative coalition to the wider civil society, so that i) landowners (civil society) save costs and are discouraged to abandon their land; ii) the cooperative cultivates different crops to meet primary sector's demands; and iii) the local government implements its policy aimed at promoting new inputs to the tourism sector (e.g., rural landscape and local products).

6. Discussion

Comparing the two case studies in Scotland and Spain provides new insights on the meaning and the contribution of the radical/incremental lens to SI theory in rural areas (Table 2). This approach helps us to differentiate the degree to which reconfigurations in social relations compare to previous configurations in distinctive rural communities.

6.1. The role of attitudes

SI intensity is related to actors' attitudes towards the existing needs and opportunities in a community. Radical SIs can be associated with needs that are poorly perceived by the population and –as BCT reveals—with great opportunities for transformation usually associated with ambitious attitudes and aspirations. This complements previous studies examining rural SIs driven by urgent needs (Górriz-Misfud et al., 2019; Cattivelli and Rusciano, 2020), which can also lead to radical reconfigurations (Yasmi et al., 2013; Herraiz et al., 2019). As shown in CC, incremental SIs can be linked to well-perceived needs and opportunities that are complementary to existing processes, often representing less urgent demands.

In this regard, rural communities may show different preconditions, and the actors involved may embrace different aspirations and attitudes in relation to similar needs and opportunities. For instance, a more sustainable and multifunctional forestry model in Birse parish could have been implemented through incremental reconfigurations –e.g., the governance arrangement between BCT and the Forestry Commission over two forests (Forestry Commission Scotland, 2004)—. However, there was no driving force to instigate incremental SI processes and it took an innovating actor with the ability to rally the community around the particular issue of landownership to drive change. The innovator had the personal conviction to change his community activism and to convince others about the wider opportunities that this novel vision of community ownership offered. Thus, the type of actors involved and their values and motivations that determine how they conceive and respond to opportunities are all key factors in radical/incremental SIs.

6.2. Three diverging development trajectories in social innovation

The most obvious element for distinguishing radical/incremental SIs is the extent to which the new social reconfigurations challenge the status quo of a local community. Rather than companies challenging economic power within market equilibria, SIs create new interactions between different social groups and institutions, with the potential to disrupt dominant power relations by offering alternative visions and development trajectories for the territory. In this sense, incremental SIs represent trajectory-reinforcing processes that build on existing activities and structures to deliver more effective development models within the status quo. The example of CC illustrates how reconfigured social relations were able to adapt the current tourism-based economy towards a more sustainable and endogenous one. The government's local leadership remains undiminished, the existing rural values amongst the population -complementary to the current tourism model- have been enhanced, and previous agricultural coordination structures have been adapted through the new cooperative. Accordingly, neither power relations, key institutions nor the development trajectory are challenged by the initiative, but reinforced.

Conversely, radical SIs reflect *trajectory-creating* processes that enable rural communities to seize major opportunities that open new development trajectories and institutions, and change power relations. In doing so, they challenge the status quo. This is clearly the case of BCT, where new leadership and the new attitudes disseminated through the local community (e.g., the notion of community ownership) have contributed to reshaping landownership structures. However, SIs driven by major external threats, e.g., a global pandemic (Cattivelli and Rusciano, 2020) or industrial projects with negative environmental effects (Yasmi et al., 2013; Herraiz et al., 2019), respond to exogenous factors that "break" the development trajectory and, in some cases, force social reconfigurations that challenge the status quo. We term this as *trajectory-disrupting* processes.

6.3. Radical social innovation and conflict

Generally, radical innovations are regarded as risky, require long

adoption and adaptation periods, and can bring about conflicts (Colombo et al., 2017; Polman et al., 2017; Castro-Arce and Vanclay, 2020), which is confirmed by our study. Reaching an agreement between BCT promoters and the estates took a long time, while CC was non-confrontational an easily adopted. Nonetheless, two points need to be made in this respect. Firstly, trajectory-disrupting processes, driven by urgent threats, may keep adoption periods shorter since the time to reconfigure social relations is vital to respond to the urgent need (Herraiz et al., 2019). At the same time, urgent shocks can avoid conflicts between actors, at least initially, and encourage a prevailing interest in solutions (Górriz-Misfud et al., 2019; Herraiz et al., 2019). This leads us to the second point: conflicts do not necessarily emerge at the beginning of SI processes, but depend on the temporal context and the specific nature of the actors involved at that time. In BCT, despite the initial reluctance of the estates, a co commitment was reached and the process developed successfully for years. However, the entry of new actors with a different attitude led to new conflicts over some of the early, fundamental premises of the initiative.

6.4. Skills, knowledge and the reconfiguring of social relations

The role of knowledge and skills in identifying radical/incremental SI is not entirely clear. In BCT, the transformation of ownership structures and the creation of a community enterprise would have been impossible without the existence of local actors with high expertise in the field and strong networks outside the area. However, the importance of skills should not only be understood in relation to the activities developed by SI initiatives, but also to the process of social reconfiguration (Richter, 2019; Castro-Arce and Vanclay, 2020). For example, conflict management skills would be useful in resolving the situation in BCT. Rural communities comprise different social groups with different value sets, for which radical SIs can be challenging. Therefore, social innovators need to recognise conflicts and provide effective mechanisms committed to creating internal ties between social groups (bridging social capital). In CC, drawing upon the cooperative as a politically-neutral organisation to encourage people to participate in the Cens de terres was a shrewd move by the local government.

6.5. Can radical/incremental social innovations be planned?

We firmly believe that radical/incremental SIs can form major components of well-defined strategies and development plans within the public and community sectors. In contrast to business innovations, our results illustrate that neither form of SI is completely spontaneous or stochastic, but they can follow planned and structured processes. Nevertheless, it is in the incremental processes where local public actors enjoy greater leadership and planning capacity (Reinstaller, 2013; Jungsberg et al., 2020; Georgios and Nikolaos, 2021), while civil society organisations find more room for action in radical SIs (Moulaert et al., 2010). This suggests that planners and public policy makers may need greater courage to plan space in their strategies to allow radical SIs to emerge, and examples like BCT demonstrate the potential. By creating new legal frameworks that have an impact on structural issues such landownership, public actors can legitimise local creative action, thus indirectly contributing to the emergence and development of radical SI. This supports other studies that point to the need for innovation in governance arenas at national levels to foster local SI initiatives (Georgios and Nikolaos, 2020). This can also help to overcome the struggle local governments typically have when promoting SI on their own (Martens et al., 2020).

6.6. Social innovation: a fluid process

The fact that SIs admit a certain degree of planning and strategy does not mean that they do not evolve and transform over time. As some authors pointed out (Neumeier, 2012; Reinstaller, 2013; Sarkki et al.,

2021), SIs are evolutionary processes in which networks, attitudes and governance mechanisms are continuously being reconfigured. For example, in BCT we observed that radical processes can evolve in or lead to incremental processes owing to leadership changes. Some members of the new team do not fully agree with the notion of community ownership and propose to adopt a less challenging attitude towards estates. Moreover, while it is true to say that BCT is radical, there are some elements that, when examined separately, do not constitute immediate challenges for the status quo, e.g., the reinforcement of the values linked to local identity and the natural environment. This leads us to recognise that the radical/incremental character of SIs is not strictly binary. Additionally, while this may validate that some transformative outcomes develop in the long term as a result of accumulative incremental processes (Kluvankova et al., 2021), an explicit attitude to achieve thorough transformations seems to be necessary -which most likely entails some kind of radical reconfiguration.

7. Conclusions

Social innovation (SI) broadens contemporary rural development paradigms, characterising the dynamics of change in networks, attitudes, and governance arrangements as innovation (Neumeier, 2012; Secco et al., 2017), rather than only a means for introducing innovations into local communities (Naldi et al., 2015). This study is a first attempt to advance SI conceptualisation in rural areas through radical/incremental innovation theory.

Contemporary thinking about rural development should recognise radical and incremental SIs as processes of transformation in rural societies that can lead to sustainable development and social change. However, they imply social reconfigurations of different intensity that respond to the different attitudes and aspirations of the actors involved. Through an empirical analysis of two cases studies in rural areas of Spain and Scotland, we obtained new insights about the meaning and operationalisation of radical and incremental SI in rural areas.

Our research is relevant for public actors, as they can play a role in both radical and incremental SIs. In particular, public actors should identify the different aspirations of local actors and set the stage for the activation of the local society. In doing so, it is important to design conflict management mechanisms (particularly in radical processes) and promote new skills amongst social innovators. This study also opens up new research avenues. We encourage future projects to test the radical/incremental lens across a range of alternative case studies to capture a greater diversity of rural needs and contexts, to further explore the role of knowledge and skills, and to link the latter to different levels of development and territorial capital endowment in rural areas.

Credit roles

Néstor Vercher: Conceptualisation, Methodology, Formal analysis, Investigation, Writing – original draft. Gary Bosworth: Conceptualisation, Writing – review & editing. Javier Esparcia: Conceptualisation, Writing – review & editing.

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Declaration of competing interest

None.

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