Cidades
Comunidades e Territórios

39 | 2019
Queering the city

Innovative and transition potential of intentional sustainable communities

Towards an exploratory conceptual model

Carla Nogueira, Hugo Pinto and João Filipe Marques

OpenEdition Journals

Electronic version
URL: http://journals.openedition.org/cidades/1777
ISSN: 2182-3030

Publisher
DINÂMIA'CET-IUL

Electronic reference
Carla Nogueira, Hugo Pinto and João Filipe Marques, « Innovative and transition potential of intentional sustainable communities », *Cidades* [Online], 39 | 2019, Online since 31 December 2019, connection on 10 January 2020. URL : http://journals.openedition.org/cidades/1777

This text was automatically generated on 10 January 2020.

Innovative and transition potential of intentional sustainable communities

Towards an exploratory conceptual model

Carla Nogueira, Hugo Pinto and João Filipe Marques

Carla Nogueira acknowledges the support of FCT (SFRH/BD /117398/2016) for her PhD grant. Hugo Pinto thanks the support of the Portuguese Foundation for Science and Technology (FCT) through the Scientific Employment Support Program (DL57/2016/CP1341/CT0013).

Introduction

1 Society is being confronted with new challenges, resulting in the demand for new ways to solve social, economic and environmental needs. In this context, the dynamics of social innovation as a possible path for the economic and, above all, social reorganisation is beginning to be recognised. New responses cannot be found in traditional structures, associated with economic and technological dimensions without foreseeing the social and environmental elements, and there is now a tendency to analyse the role of micro-level initiatives as sources of innovation (Seyfang and Longhurst, 2016; Haxeltine *et al*., 2018). Initiatives that attempt to develop new models of life, production and consumption have emerged to overcome the social, environmental, economic and political problems of industrialised nations. These initiatives assume different formats, such as the movement of transition cities, living sustainability laboratories, eco-cities and ecovillages, among others.

2 The purpose of this paper is to reflect on the potential of micro, bottom-up initiatives to act as laboratories for social innovation practices. For this purpose, intentional sustainable communities (ISCs) are used as an empirical phenomenon. We explore the articulation of the intentional sustainable communities with transition studies (Geels, 2002; 2005) as a theoretical perspective that enables an understanding of how

innovation generated at the microscale can be transferable to other levels (meso and macro).

3 This article focuses on experiences that are based on community life models whose main objective is the development and dynamism of environmental, social, economic and cultural sustainable practices. These experiences, defined as intentional sustainable communities, gained relevance as ways of rethinking dominant models and practices. The motivation of these communities, in association with certain social contexts, can enhance or limit the creation of innovative dynamics. A close observation of these processes may help understanding how micro-scale community initiatives can generate potentially generalizable sustainability-related innovation.

4 This article is exploratory, based on a systematic literature review, using a content analysis software (*Nvivo*), aiming to understand in more detail the empirical object and verify the literature that intersects the empirical object with that of sustainable transitions (Kemp *et al*., 1998; Loorbach *et al*., 2017; Köhler *et al*., 2019) and social innovation (Franz *et al*., 2012; EC, 2013; Bund *et al*., 2015). The article is motivated by an ongoing research to understand if ISCs produce innovation on the micro-scale, the social needs these innovations are intended to address, and the mechanisms for its transferability. Although some studies discuss these links (e.g. Kunze and Avelino, 2015) this paper will draw a conceptual model that helps to explain the connections between the different literatures and the potential scaling-up process. The article is organised as follows. Firstly, basic theoretical considerations about the interconnection between these communities, social innovation, and transition studies are presented. Secondly, methodological aspects are clarified. Thirdly, the proposal for a conceptual model is explained. The text ends with some conclusions and discussion for future research.

A reflection on communities

Intentional communities

5 The theoretical contributions of the German sociologist Ferdinand Tönnies formulated in 1887 became one of the bases for the understanding and analysis of the concept of community and, mainly, for the analysis of modernity. Tönnies described the community (*gemeinschaft*) as an instinctive and primarily unconscious mode of union, distinguishing it from the other form of social grouping – society (*gesellschaft*) – which is formed by the instrumental, purposive and intentional agency of individuals (Tönnies, 1957). Or, as Emile Durkheim states, a passage from forms of mechanical solidarity to forms of organic solidarity.

6 One of the consequences of modernity was the vanishing of traditional, oppressive, and small-scale communities and the rise of large-scale impersonal societies. Zygmunt Baumann argues that although the community, as a form of social organisation, may contribute to a certain sense of security, it also works as a mechanism limiting individual action and freedom (Baumann, 2001). After discussing the limitations of the community, Baumann concludes that nowadays the community must be reinvented, since communal forms still persist in contemporary societies, but they are substantially different from the communities of pre-modernity. In a context of globalization, characterised by volatile changes and insecurities, the community can gain new shapes and establish itself as a plural format of mutual sharing and well-being.

7 The disappearance of traditional communities has conditioned the fulfilment of the needs of security, collective identity and commitment, which led to the emergence of other types of community – namely, the 'intentional communities' (Bauman, 2001; Delanty, 2010). Postmodernity communities have assumed vague and romanticised outlines (Blackshaw, 2010), in which intentional communities can be understood as frameworks where community structures are developed (Sargisson, 2003), through the interaction of a group that shares something or whose members agree on certain characteristics, behaviour or interests (Stengel, 2005). Contemporary communities are no longer characterised by spontaneous forms of social life, but a microscale type of intentional organisation for the creation of new societal models, functioning as a grouping of related individuals who share not only physical resources but also inherent resources to the social relation they establish, such as knowledge or tradition (Ware, 1986). These perspectives imply a systemic understanding, in which the community represents itself as an organic whole in permanent evolution, where its members are interdependent, and where the importance of the individual role of the parties to the functioning of the system is stressed (Ware, 1986).

8 It is in this context that contemporary intentional communities can be seen as a valuable phenomenon of study as they represent a form of social organisation based on community principles but, at the same time, each intentional community is shaped by the objectives of its particular members. This aims-oriented conception of community implies that it is not possible to define it in abstract, but rather that each community needs to be individually analysed, in the light of its specific dynamics, philosophy, vision, and members.

Intentional communities for sustainability

9 In response to the environmental problems produced by industrial development, the ecological movement emerged in the 1970s. Two decades later, the first 'ecovillages' appeared as forms of voluntary social organisation whose members were committed to live in a more ecological and communitarian way (Mulder *et al*., 2006). The pioneers of this movement experimented new ways of living, from different types of technology, new forms of consumption, production, organisation of the economy, infrastructure planning, to social organisation, and education (Bang, 2005).

10 The first known definition of the concept of ecovillages, and one of the most referenced ones, is Robert and Diane Gilman's in "Ecovillages and Sustainable Communities" (Gilman and Gilman, 1991: 10), a seminal text that was essential to the global ecovillage movement. The authors define them as "a complete settlement of the human scale, in which human activities are integrated into the natural world without causing harm and in a way that supports healthy human development and can be successfully continued in the indefinite future". This definition has been subject of reflection and reconstruction and, since 2012, the official definition of the concept, as provided in the Global Ecovillage Network (GEN) documents, recognises ecovillages as intentional or traditional communities that are consciously designed through participatory, locally owned processes for regeneration of social and natural environments.

11 It is currently considered that an ecovillage should be based on the following foundations: social or community dimension, ecological dimension, cultural or spiritual dimension and the economic dimension, based on the principles of redistribution,

characteristic of the solidarity economy (Joubert and Alfred, 2007; Hall, 2015; Kunze and Avelino, 2015; GEN, 2016). This holistic perspective implies a pragmatic commitment not only in its practices but also in the construction of a common vision (Marckmann *et al*., 2012; Kunze, 2012; Chitewere, 2017).

12 In this article, we suggest the use of the term 'intentional sustainable communities' (ISCs) instead of 'ecovillages'. The *emic* designation 'ecovillage' depends on the group's own perception of its project; it implies that its members designate their community as such (Ergas and Clement, 2016). On the other hand, ISCs generally refer to the same empirical entities as the ecovillages, with the difference that they are not self-designated but identified through a process of criteria verification. In this sense, 'intentional sustainable communities' is a preferable academically constructed concept because it is based on the verification of a set of criteria – instead of a mere designation of the social actors.

13 Through the literature review it is possible to identify the ISC's basic characteristics (Bates, 2003; Andreas and Wagner, 2012; Liftin, 2014; Kunze and Avelino, 2015; Hall, 2015; Ergas and Clement, 2016). They are community models focused on holistic sustainability, created to fill social needs such as identity building and sense of belonging and security; they seek sustainable technological development through the implementation of agricultural techniques, generation and use of energy, reuse of resources and construction (Bates, 2003; Liftin, 2014); they do not have a standard size; they offer on-site employment opportunities to residents and visitors (Hall, 2015); they require a planned architecture and design, usually following permaculture principles (Bates, 2003; Andreas and Wagner, 2012); they minimize the use of vehicles within the territory (Kunze and Avelino, 2015); they have specific social contracts or social management plans; they provide housing for their members, commonly based on fair trade values (Hall, 2015); they constitute places of learning, knowledge generation and sharing, and recognize the importance of local governments for their success (Kunze and Avelino, 2015; Ergas and Clemente, 2016).

14 For Hall (2015), although there is great diversity within the ISC's family, it is possible to identify some common pillars: the community impulse, the citizens' initiative for resistance and action, the sharing of values, research and training. As they assume an experimental character, these communities tend to combine several forms of governance, production, and technology in a creative way. So, according to Joubert and Dregger (2015), it would be simplistic to view them as a movement 'back to the roots' or as a civilizational regression. Factors such as the connection with the natural world, community organisation, cultivation techniques, intergenerational sustainability and a sense of personal integration are reorganised and redefined in these communities, giving rise to practices that seek to combine traditional ways of being and doing with current technology and knowledge.

15 The proliferation of ISCs can be seen as a social movement and analysed from a sociological holistic perspective that combines a macro approach with the structure of the political opportunities (Ergas and Clement, 2016), such as the political climate in which a movement is situated, with a micro-approach to the collective identity construction (Bates, 2003), through the understanding of culture, symbols and collective identity. Liftin (2015) defends that these intentional communities are, in fact, part of a social movement because, on the one hand, they try to change the social order in terms of property and labour relations towards more communitarian and

collaborative ways of life and, on the other hand, they seek to implement environmental practices that minimize the impact of production and consumption.

16 Although ISCs are initiatives at the microscale level, there are signs of increasing recognition at a macro scale, namely in the governance dimension. Currently, there are at least 22 governments interested in including programs to develop ecovillages in their national strategies, through the collaboration in the 'Ecovillage Development Programme'[1], especially in Europe and Africa. This programme catalyses the power of community for the national implementation of the UN Sustainable Development Goals and Paris Climate Agreements (GEN, 2016). This shows the growing importance of these communities as potentially innovative agents, namely, in helping to build responses to existing social challenges.

Transforming the society

Social innovation: A new agenda for new needs

17 Everyday there seems to be a new social challenge to overcome. Individuals continually experience new struggles, new ways of living and facing life and even the society. This situation created an opportunity to learn and think innovative proposals to overcome them (Nogueira *et al*., 2017). In the last decades, the concept of 'social innovation' entered the academic and political discourse. But its fast development as a research field created a multitude of definitions and configurations, leading to a shortage of precision (Van Der Have and Rubalcaba, 2016; Nogueira *et al*., 2017).

18 Following Schumpeter's contribution, the concept of innovation was established taking into account a more economic and organisational character. The example of McFadzean *et al*. (2005) clearly demonstrates this interpretation, where innovation is presented as a process providing added value and a level of originality to the organisation and its suppliers and customers through the development of new procedures, solutions, products and services, as well as new business methods. However, talking about innovation in contemporary contexts is significantly different than in previous decades (Bruland and Mowery, 2005). Innovation is no longer exclusively within the domain of the individual firm. This means that moving forward with a satisfactory definition of 'innovation' is incrementally difficult.

19 Innovation is a contextual process that implies the passage from the conceptualisation of a new idea or solution to its materialisation, in order to generate economic, organisational and social value (Hellström, 2004), being at its base, a social action. In this study, innovation is understood as a multi-level, multi-actor and contextual process. Based on the premise that innovation, as a social process, characterised by the existence of mechanisms of reciprocity between actors and institutions (Freeman, 1988; Lundvall, 1992; Nelson, 1993), the development of innovation practices is, therefore, a process that implies contextual conditions and arises from an interaction between the individual's own ability to innovate (mobilising for this social action) and the structural conditions that may prevent or enhance the emergence of systemic innovative dynamics.

20 Social innovation can and should be defined as a plural concept that benefits from various reflections on what innovation means in different areas. It is consensual that social innovations are novelties that are social in both their ends and means. For a

better comprehension, the concept can be "decomposed". First, there is 'innovation' – this refers to the ability to create and implement new ideas in order to generate value. Then 'social' – this states the kind of value that innovation is expected to provide: a value less concerned with profit and more with issues such as quality of life, solidarity, and well-being. "Social" also refers to the needs of groups, communities or segments of society, which are more vulnerable and less able to be involved or benefit from the value generated by the market economy (Advisers Bureau of European Policy, 2011). Thus, the 'social' dimension of innovation refers to the congregation of intentional collective action that emerges from a given context, with certain actors aiming to develop new effective social practices for solving needs (Franz *et al.*, 2012). These needs can normally divided into: basic needs (access to housing, food, education and health) (Murray *et al.*, 2010); latent needs (needs associated with the skills and aptitudes necessary for integration into society, such as interpersonal relationships, sense of belonging, personal and collective identities and well-being) (EC, 2013; Murray *et al.*, 2010); emerging needs (that emerge in a particular place or context, thus having a territorial and temporal specificity) and strategic needs (those defined by the EU as strategic for the development of member-states, such as demographic trends, environmental development, new community trends, and trends related to poverty, health and well-being) (EC, 2013).

21 Although there are contemporary efforts to outline and clarify its meaning, social innovation is still considered a rather vague concept. Table 1 identifies some of the main definitions.

Table 1. Social innovation definitions

Definition	Source
Social innovation is an improved form of action, a new way of doing things, and therefore, a new social invention.	Taylor (1970)
New ideas that work; innovative activities and services that are motivated by the goal of meeting social needs and that are predominantly developed and diffused through organisations whose primary purposes are social.	Mulgan *et al.* (2007)
A novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the created value accrues primarily to society as a whole rather than private individuals.	Phills Jr. *et al.* (2008)
Social innovation can be a new combination of social practices in certain areas prompted by certain actors intentionally with the goal of better satisfying the needs and problems than is possible on the basis of established practices.	Franz *et al.* (2012)
Social innovations are defined as new solutions (products, services, models, markets, processes, etc.) that simultaneously meet a social need (more effectively than existing solutions) and lead to new or improved capabilities and relationships and better use of assets and resources.	The Young Foundation (2012)

Social innovation can be defined as the development and implementation of new ideas (products, services, and models) to meet social needs and create new social relationships or collaborations. It represents new responses to pressing social demands. It is aimed at improving human well-being. Social innovations are innovations that are social in both their ends and their means.	European Commission (2013)
Social innovations are new social practices created from collective, intentional, and goal-oriented actions aimed at prompting social change through the reconfiguration of how social goals are accomplished.	Cajaiba-Santana (2014)

Own Elaboration.

22 Thinking about social innovation means to think about the future, in the sense of perceiving in what ways actions arising at a given moment and context shape the desirable trajectory (McGowan *et al*., 2017). Social innovation can then be understood as the idea that, in the right circumstances, people can create, shape and design the world, and more specifically invent and develop new forms of social organisation (Nicholls *et al*., 2015). Social innovation can be explained as "the development and implementation of new ideas to meet explicit or latent social challenges and needs using shared and co-produced knowledge that are innovative in both their ends and their means. Social innovation can be a product, a technology, an idea, a process, and so on. Social innovation can lead to productivity growth, economic performance and to the affordable access of quality goods and services creating livelihood opportunities for the excluded population, and on a long-term sustainable basis with a significant outreach" (Nogueira *et al*., 2017: 44).

23 Another dimension that can be added to this reflection is the embeddedness of social innovation within society itself (Bund *et al*., 2015). While the provided definitions focus primarily on structure, the embeddedness dimension brings to the discussion the relationship between structure and agency. The interaction between social actors in a given innovation context leads to the establishment of behavioural patterns allowing the creation of shared meanings. The crystallisation and embedding of these behavioural patterns, collectively understood, accepted and adopted, leads to the institutionalisation of routines, change of behaviours that become an integral part of the process, and may eventually become a source of transformative change.

24 In spite of their agency capacity, individuals are always conditioned by structural frameworks that can modify or enhance their performance and their capacity to innovate. Innovation is a social construction process and its analysis must consider this agency-structure dualism; e.g. the actors who carry it out, the context in which it takes place, the historical time that motivates it, and the relationships that result from the articulation of these factors.

Sustainable transitions: A path for innovation scaling-up

25 The term 'transition' is broadly used in many scientific disciplines. It refers to a nonlinear shift from one dynamic equilibrium to another, that is, the process of change from one state to another or from one system state to another via a period of nonlinear disruptive change (Loorbach *et al*., 2017). Such systemic change is the result of interaction of a diversity of factors at different levels and in different domains that

somehow interact and influence each other to produce a qualitative change in the system (Schlaile *et al*., 2017).

26 Environmental problems, such as climate change, biodiversity, and resource depletion, have increased prominence on the political agenda. These problems vary in complexity from the environmental problems of the previous decades, such as water pollution, acid rain, local air pollution and waste problems, assuming a global scale (Schlaile *et al*., 2017). Responses to these new environmental problems will entail more substantive 'transitions' in the coming decades, namely major shifts in energy, transport, and agrifood systems (Schlaile *et al*., 2017). These system changes can be labelled as 'socio-technical' because they not only require new technologies but also modification in markets, user practices, policy and cultural meanings (Geels, 2005). So, the term 'sustainability transitions' is increasingly used to refer to large-scale societal changes, implying radical shifts to different types of socio-technical systems (Khöler *et al*., 2019), considered necessary to solve grand environment societal challenges (Geels, 2002; Avelino and Wittmayer, 2015).

27 The field of sustainability transitions research is a highly multi, inter, and transdisciplinary field in which the core concept of transitions serves as a bridge between different scientific disciplines and grand societal challenges (Loorbach *et al*., 2017). The field is increasingly global and covers a broad range of sectors, domains, and issues, ranging from energy, water, resources, food, and mobility to health care and education, and transitioning regions, cities, and communities toward sustainability (Loorbach *et al*., 2017; Avelino *et al*., 2015). These systemic challenges are interrelated because their causes are emergent and complex, embedded in the social structure, their effects are uncertain, and they are thus extremely difficult to manage (Schlaile *et al*., 2017).

28 One of the central ideas in sustainability transitions research is that disruptive systemic change can be found in the so-called regimes: the dominant order in a societal (sub)system (Geels, 2002; Verbong *et al*., 2008; Loorbach *et al*., 2017). In addition to regimes, there is another fundamental dimension in the analysis of transitions and systems transformation – the niche. Niches are understood as spaces of innovation (Geels, 2005), developed from clusters of innovations, constituted of multiple on-the-ground local projects, linked together by networks and intermediary organisations (Raven, 2012). Niches are conceived as protected spaces where novel sociotechnical configurations are established, often as a direct response to an unsustainable regime, experimented with, and developed, away from the normal selection pressures of the regime (Geels, 2002). Therefore, niches support the dissemination of innovation until they become robust enough to compete with – and influence or displace – the dominant sociotechnical configurations (Geels, 2005; Kemp *et al*., 1998; Raven, 2012).

29 Sociotechnical systems, water, energy, transport, food, are theorized as 'regimes' existing in a state of dynamic equilibrium. They are resilient and therefore display technological lock-in and path-dependence, resulting in limited incremental improvements in sustainability performance (Unruh, 2000; 2002; Geels, 2005). Innovation for radical system-change must, therefore, come from outside the regime. Historical reviews of systemic transitions have identified innovative niches as important sources of innovation (Seyfang *et al*., 2014; Köhler *et al*., 2019). Transitions to sustainability do not come easily. Existing energy, transport, housing, and agrifood systems are deeply embedded in the social structure.

30 The multi-level perspective (MLP) (Geels, 2005; Smith *et al.*, 2005) provides a complex comprehension of change and transitions in the socio-technical systems. The MLP, as one of the dominant approaches in the transitions' literature, suggests that transitions emerge through interacting processes within and between the different levels, the niche, the regime, and the landscape. Niche-innovations may break through more widely if external landscape developments create pressures on the regime that lead to cracks, tensions, and windows of opportunity (Verbong *et al.*, 2008).

31 In this sense, understanding transitions regards considering who are the actors involved as well as the power relations between them (Avelino and Wittmayer, 2015). Transformations towards sustainability involve, for example, changing practices, routines, and habits of both producers and consumers or generating types of innovation beyond the technological aspect (Geels, 2002). Moreover, in order to achieve transformative change, multiple sustainability dimensions, from the economic, institutional, cultural, organisational domains, have to be considered beyond the strict environmental ones (Schlaile *et al.*, 2017).

32 The majority of niche analyses focused on market contexts and business-led technological innovations. However, an increasing body of work is studying 'grassroots innovations'. Grassroots innovations seek to understand and rationalise innovation that arises from the micro-level, in a bottom-up perspective (Seyfang, Longhurst, 2016). Grassroots innovations emerge from a micro-level of action "generating novel bottom-up solutions for sustainable development; solutions that respond to the local situation and the interests and values of the communities involved. In contrast to mainstream business greening, grassroots initiatives operate in civil society arenas and involve committed activists experimenting with social innovations as well as using greener technologies" (Seyfang, Smith, 2007:585).

33 Grassroots innovations tend to appear in response to unsustainable conventional systems, and aim to promote the adoption of alternative and more sustainable forms of production and consumption (Seyfang and Longhurst, 2016). Thus, many intentional sustainable communities can be regarded as niches for the emergence of innovation, mainly social innovation, once they are driven by ideological commitment rather than profit-seeking and they tend to involve communal ownership structures and operate in the social economy (Seyfang and Smith, 2007). These alternative systems of provision are intended to meet social needs in a way that differs significantly from the dominant regime, whilst also facilitating the expression of ecological values and cultural preferences.

34 Although this is a debate in the current literature (Seyfang and Longhurts, 2016) – the importance of grassroot and micro-scale innovation – few studies have discussed it in detail, in particular concerning the scaling-up possibilities. The purpose of this study is, through a systematic literature review, to contribute to the conceptual clarification about grassroots innovation dynamics in 'intentional sustainable communities'. A process that begins at the micro-scale, may (or may not) be potentially transferable, but that is highly dependent in systemic and landscape conditions.

Reviewing the innovative and transition potential of ISCs

Methodological considerations

35 The analysis is based on a systematic review of the literature, in order to understand how ISCs have been analysed and how they can be understood as laboratories (niches in the MLP terminology) for grassroots social innovation (Köhler *et al.*, 2019).

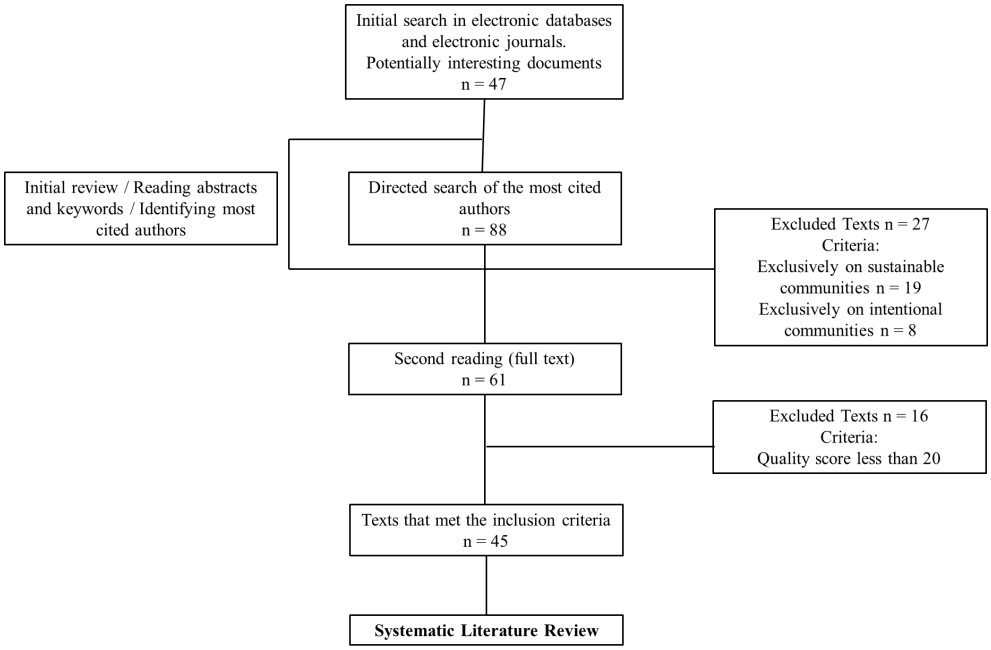
36 Data collection was based on two different objectives. On the one hand, to perceive the empirical object, that is, what are intentional sustainable communities. On the other hand, to understand the relationship of these communities with the dynamics of innovation, namely, social innovation and their potential transferability. In this sense, the question that guided the collection was "what are intentional sustainable communities?". This interrogation was subdivided: "what are the differences between a sustainable community and an ecovillage?"; "are all intentional communities sustainable?"; "are intentional sustainable communities innovative?".

37 Bibliographic items were collected through online database search, namely: Scopus, ScienceDirect, Springer Link, Taylor and Francis Online, Web of Science, ResearchGate, Elsevier, B-on. For the collection, the following keywords were introduced: "Sustainable Communities AND/OR Intentional Communities"; Sustainable Communities AND/OR Ecovillages; "Intentional Communities AND/OR Ecovillages"; "Ecovillages AND Innovation"

38 A first phase resulted in the collection of 47 bibliographic references. Subsequently, the abstracts and keywords of these references were analysed and the information about each of them was summarised taking into account: author, year, type of publication, title, objectives, concepts, type of study, methodology, results, and references. In a second step, a targeted collection method was followed which resulted from the identification of the most cited references in the 47 analysed documents. In this phase, new data gathering was performed but, this time, directed and focused on the specific references. In total, 88 bibliographic references were collected. Finally, since the focus was on intentional sustainable communities, studies focusing exclusively on sustainable communities or intentional communities were excluded, making a total of 61 references.

39 These 61 references were evaluated according to a set of quality criteria: objectives (verify if they were identified, consistent with the sample and analysis and aligned with the research questions); sample (verify if they were identified, dimension, selection procedure and the relevance to the research questions); methods (verify if they were identified, aligned with the objective of the study; potential to explore the sample); analysis (verify if the data reflected the methods, the analysis was supported by literature and answered research questions); and relevance to the research question. According to Tacconelli (2010), the quality criteria is vital for a good selection of the bibliographic items to include in a systematic review. The overall quality score was calculated by assigning a score from 0 to 5, where 0 means "does not meet the criteria" and 5 means "fully satisfies the criteria". Only the references that would guarantee an overall assessment of more than 20 were included. A total of 45 references were analysed. The process of revision is outlined in figure 1.

Figure 1. Diagram of references collection and analysis

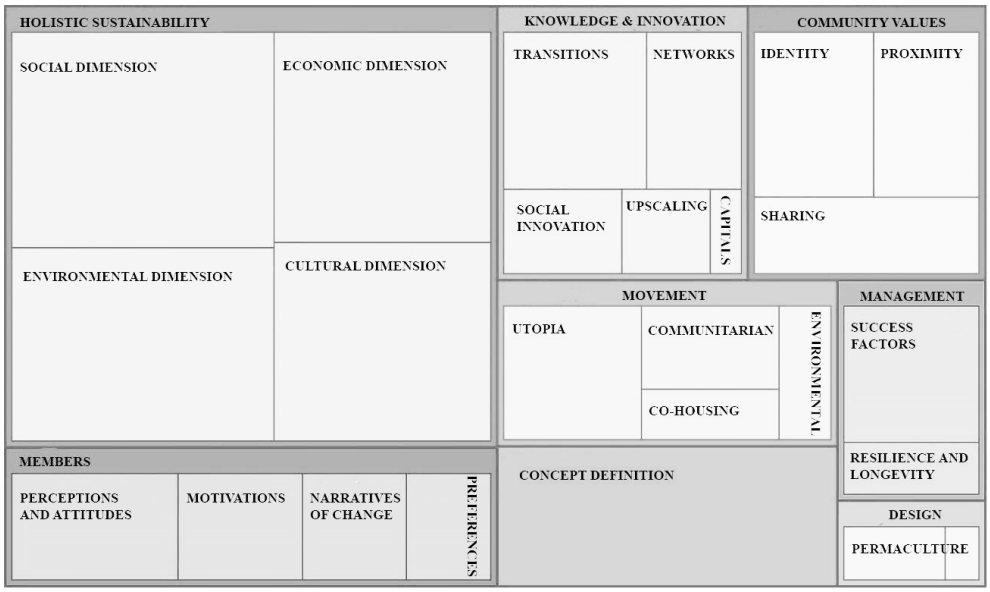


Own Elaboration.

Main focus of the existing literature

40 In order to synthesise the collected information, we proceeded with the identification of categories and the grouping of references in each one of the created categories. This process was carried out using *Nvivo11* software and not only synthesised the information but also identified which categories have been more often represented and approached in the analysed literature. One of the explorations of the analysis was the quantification of the qualitative information. This procedure allowed the verification of the prevalence of a certain idea between the information and the amplitude or relevance of a certain theme (Namey *et al.*, 2008).

Figure 2. Nodes compared by number of coded references



Own Elaboration using *Nvivo11*.

41 Figure 2 shows an exploratory analysis with the aggregation of the information/ number of encodings for each category (nodes), taking into account the analysed scientific production. This figure is a direct output from *Nvivo* software where the size of the squares is directly proportional to the percentage of encoded text in each of the nodes created for analysis. This allowed to understand that the most referenced category in the literature about ISCs has been the study of sustainability, from a holistic perspective, while the dimensions that are more often approached are the social and the environmental. Members' perceptions, motivations, narratives of change and preferences are a relevant dimension in the study of ISCs, as well as, inevitably, the definition of the concept. Management and design studies are the least discussed in the analysed references. The dimension related to knowledge and innovation has generated some studies. However, it should be mentioned that although there are references that reflect on this type of communities as transition catalysts, primary studies are still rare and incipient. This evidences the need for greater attention in this dimension.

42 One limitation of this approach is that it does not provide much information about the in-depth content in each dimension. To bridge this gap, a content analysis was conducted using *Nvivo* exclusively on the dimension that relates ISCs with knowledge and innovation. Thus, a content analysis of the 45 texts that met the inclusion criteria for systematic review was performed. In this phase the goal was to build an integrated framework of the links between ISCs, social innovation, and sustainability transitions. The results are presented in the next section.

A tentative framework for innovative and transition potential of ISCs

43 This section reflects the literature that crosses ISCs with sustainable transitions and social innovation. It is distinguished from the literature review presented at the beginning by its purpose to guide, support and build the theoretical support that channels the construction of the tentative model. Although in an exploratory way, it is

our intention that this framework should provide clues on dimensions of analysis and hypotheses for future research.

44 The logic of continuous change is associated with a need for transition. The times of crisis turn out to be fertile periods of innovation and emergence of creative solutions to minimise the consequences of the crisis. Several recent references have debated on ISCs precisely as agents of change and transition (Adalilar *et al.*, 2015; Ergas and Clement, 2016; Avelino *et al.*, 2015; Kunze and Avelino, 2015; Hall, 2015).

45 According to Kunze (2012) structural change of paradigms occurs in three different stages: the first stage involves all actions that delay the collapse process, occurs in public and political resistance to the destruction of support systems, through NGOs, local initiatives, demonstrations or civil disobedience, and public campaigns. The second phase of change takes place overlapping with the first and involves the analysis and understanding of the structural causes of the ongoing crisis and the creation of alternative standards. It is the search for alternative structures that transform society. Finally, the third stage represents a fundamental change in values and worldviews, through the adoption of new perspectives on reality, consolidating approaches that comprise the perceptions of agents as catalysts of structural change.

46 Intentional sustainable communities present evidence of transformation in these three phases: some of their members are usually part of a protest movement against the hegemonic system or environmental destruction (Avelino and Kunze, 2009; Marckmann *et al.*, 2012); with the materialization of their existence, they are part of the second stage of model construction and, therefore, they create experimental laboratories for the test of sustainable solutions (Adalilar *et al.*, 2015); and these experimental lifestyles make them an integral part of change in values and in consciousness (Kunze and Avelino, 2015).

47 The experimental form used by this type of community in the development of ecologically and socially sustainable living conditions can provide answers about the relationship between sustainability, lifestyle and structures of social organisation (Kunze, 2012). Moreover, the ISC empirical phenomenon allows for the exploration of a number of issues that are particularly relevant to the analysis of transformative change and transition: radical change beyond functional or sociotechnical innovation; multifunctional interaction – how different types of innovation interact in a local context; the social dimension of community building; the dynamics of self-governing citizen initiatives as opposed to centralized governance and the role of transnational networks in sustainability transitions (Avelino and Kunze, 2009; Kunze and Avelino, 2015; Chitewere, 2017).

48 Sustainability transitions have been used as a connected domain where ISCs are inserted. Our approach adapts some of the features of the MLP to understand the processes of systemic interaction comprising the three levels of analysis: context, regimes, and niches (Verbong *et al.*, 2008). This explains how a micro-level practice is transferable to the macro-level, that is, part of the micro-level behaviours to infer wider social processes and changes (macro-level).

49 One way to add explanatory value to MLP is through its articulation with social mechanisms (Pinto 2018a; Pinto 2018b). This articulation elucidates the contextual effect between the micro, meso and macro levels identified in MLP. The use of social mechanisms (Hedström and Ylikoski, 2010) in conjunction with MLP has been reflected

in innovation studies (Pinto, 2018a; Pinto, 2018b) as an explanatory vector of contextual processes and in reflection on MLP itself as a capable element to bridge analytical approaches (Papachristos, 2018). In order to understand this contextual effect, the ISCs are understood as carrying different patterns (situational mechanisms) that influence the way decisions are made (mechanisms of action formation) and consequently systemic change (transformational mechanisms).

50 Literature has been scarce in exploring the potential of ISCs, as potential micro actors, for sustainable transitions. In this domain the studies of Kunze and Avelino (2015), Kunze (2012), and Haxeltine *et al*., (2018) represent an effort to advance with potential exploratory hypotheses for the analysis of this articulation. The ISCs practices help raise questions that can serve as a basis for analysing their potential for transition, in particular: how can we characterize this movement in terms of transition, that is, in which transitions are involved; which is the dynamic interaction between niche, regime, and context?; how, and to what extent, can these practices be scalable to transform the regime and context?; and how innovations in ISCs escape niche stasis?

51 Intentional sustainable communities present bottom-up planning methods. This factor differs from a dominant top-down approach in contemporary society. Other factors that characterise them in terms of transition are, on the one hand, the creation of small-scale and self-sustaining economies that replace the corporate economy, and on the other hand, the self-government of citizens that replaces centralised governance. In addition, socially fragmented and individualised ways of life are replaced by a communitarian way of living and working.

52 In general, intentional sustainable communities envisage a global transition from large, fragmented and centralised social systems to smaller, integrated and self-governing systems. In this sense, it is possible to consider ISCs as niches within the existing models of planning, governance, and economy (Kunze and Avelino, 2015; Kunze, 2012; Haxeltine *et al*., 2018).

53 In addition to the formation and experimentation of local niches, ISCs may form transnational networks such as GEN, establishing a connexion between both the global movement and local initiatives. According to Kunze and Avelino (2015), they can be characterised as a transnational niche network that aims to connect several niches in different countries and to trigger a shift from large-scale, fragmented and centralised social systems to smaller social systems, integrated and self-governing. In this sense, ISCs exert an innovative power, insofar as they create new technological and natural resources and employ transformative power since they create new structures and institutions at the local and transnational level.

54 Finally, it is important to understand how this movement can transform regimes, that is, how micro-level community initiatives can generate potentially generalizable sustainability innovations. This implies, of course, mechanisms of generation and diffusion of knowledge between the macro and micro-scales, in both directions.

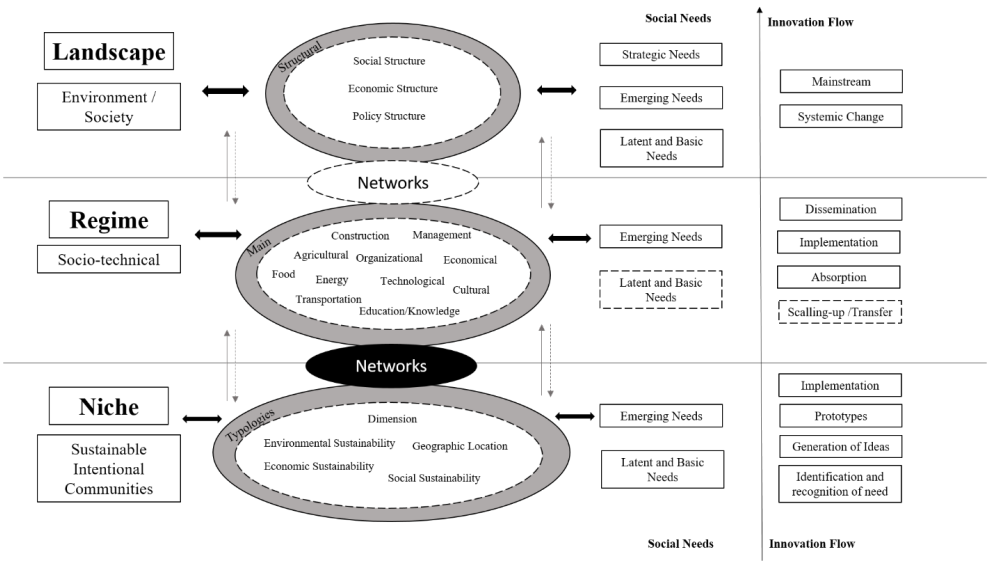
55 One of the points that need to be addressed is the increased demand for sustainable livelihoods, such as responses to ecological crises, resource depletion, financial crisis, population ageing in developed countries, cultural tensions, subsequent security problems in large cities and so on. The question, however, is to what extent the ecovillage movement is able to stimulate and further facilitate this demand. In fact,

many of these communities already receive more applications than the available places they have (Kunze, 2012), which underlines the importance of their scalability.

56 ISC practices are, in fact, scalable in different forms, such as co-habitation projects and transition cities (Kunze and Avelino, 2015). These are examples of regime absorption of the concept of ISC. This absorption contributes to the erosion and to the substitution of the existing regime in the socio-technical transitions in domains as energy, tourism, and housing (Avelino and Whitmaier, 2016).

57 In this sense, our tentative framework intending to articulate ISCs, social innovation, and sustainability transitions assumes the existence of three distinct but interconnected levels of action development (Verbong *et al.*, 2008) - particularly innovative action - that are inspired by MLP. A micro-level, ISCs, which function as niches i.e. as privileged places for the development of innovation practices to respond to basic, latent or specific social needs of the territory and the community. In these niches the innovative action may flow from the identification of the need, the development of prototypes and subsequent implementation. Subsequently, in order for this innovative action to move to a scaling-up phase, ISCs must have knowledge dissemination mechanisms that enable their transference, such as the existence of networks. If innovation practices can scale and spread across existing networks, they can introduce change into a set of regimes (identified in the model) destabilising them. However, innovation produced on the micro-scale (niche) may have its regime destabilization capacity enhanced if there is pressure in both directions, not only from the niche to the regime but from the exogenous context (landscape) to the regime (Khöler *et al.*, 2019). The sustainability transitions analysis unit has been located mainly at the meso-level (Geels, 2004). Khöler *et al.* (2019) state that the focus of the research on sustainability transitions therefore differs from debates at the macro-level or the micro-level. Given the growing importance of micro-scale innovations, it is important to realise their scalability and then to verify their synergies with the major social challenges and their potential dissemination and regime destabilization. Figure 3 presents the main features of this tentative framework.

Figure 3. Tentative framework



OWN ELABORATION.

58 The model aims to account for the articulation between the micro-level and the macro-level, through both a micro and a meso-level analysis (networks), in order to overcome this limitation. This is a conceptual model that is meant to be tested in the field. In order to understand these interactions, it will be relevant to analyse three dimensions in the future research:

59 (1) The type of community: although there are definitions of ICS commonly referenced in the literature, it is systematically stated that moving forward with a concrete definition is a complex and almost impossible exercise. According to Ergas and Clement (2016), this is because these communities have different meanings in different contexts, for different people. To address this limitation and ambiguity, the first dimension seeks to understand what kinds of intentional sustainable communities actually exist in Europe. This characterisation will be made using the following variables: community size, geographic space (rural/urban) where they develop their activities and level of integration of environmental, economic and social sustainability practices.

60 (2) The development of innovation practices: it is important to understand if these communities develop activities that can be considered social innovation. Social innovation represents the development of new or improved products, services, processes that seek to meet social needs. The development of social innovation practices is understood through a cycle with different stages ranging from the development of the idea to the capacity to introduce systemic change (Mulgan, 2012). In this sense, it is important to understand what stage the innovative practices developed by the ICSs can achieve. This cycle of innovation relates to the potential of transition. This means that the more transferable and scalable the practices are, the more potential there is to introduce transformation into regimes. These regime changes may serve as opportunities to destabilize the context and subsequently facilitate the introduction of transformative change.

61 (3) The existence of networks: for this transfer and scalability to take place, there must be mechanisms of knowledge dissemination. These mechanisms imply the connection of the actors at different stages and levels of action. To that end, the existence of networks between ISCs and other actors (other communities, local development agencies, governance bodies, among others) is essential. In the case of the ongoing research that inspired this paper, the objective is to map the links that ICSs establish in order to perceive if the knowledge generated within the communities has scalability and transferability potential and to analyse in what way, with which partners and connections, this transfer is carried out.

62 In sum, the present tentative model operates in a systemic and interrelated way, comprising three levels of action development. This theoretical-empirical scheme seeks to demonstrate how innovation generated by different types of ICSs respond to social needs; if the communities are sufficiently connected for the transfer and scalability of their knowledge and innovative practices; at what stage of the innovation process are they located, and to the potential to introduce transformative change.

Conclusion

63 The main objectives of this article were to debate if ISCs can function as laboratories for the emergence of social innovation practices; and to what extent these practices and

the knowledge associated with them are transferable and can bring insights about change in regimes. It is a question of realising the extent to which these communities can contribute, as active agents, to the development, implementation, and dissemination of practices that lead to more sustainable social, economic and environmental models.

64 In order to achieve these objectives, the article provided a systematic literature review in three interrelated topics – ICSs, social innovation and sustainability transitions – to draw a tentative framework adapting elements from the MLP. This approach clarifies how a practice developed at the micro-level is transferable to the macro-level, that is, it analyses transfer processes that allow a transition of practices and/or behaviours from the niche to the landscape.

65 In the specific case of this article, the ISCs are analysed as niches in the sense of perceiving the multifunctional interaction with the other levels of development of the action. The practices of ISCs can be analysed according to the existing sociotechnical regime and context. Thus, distinct levels influence the action. All levels are related in a bidirectional influence. These features are influenced by the top of the structure, more precisely, by the networks of elements and generated expectations, in order to introduce continuous change in the environment. In fact, they have a role to play in the transition to sustainability, but these initiatives cannot be expected to induce transformative change on their own. To achieve sustained and wider influence they need support both at the project and niche level and in the wider regulatory and socio-political context.

66 The reflections presented here are inspired by emerging approaches that seek to analyse the phenomenon of ISCs in the light of their potential as laboratories for the emergence of innovative practices and their possible capacities for the introduction of change in the sociotechnical regimes and, later, for their transition. However, as already mentioned, these studies are still in an incipient condition.

67 One of the main difficulties felt in the development of the empirical study is the scarce literature that has been produced. The scarce scientific production is felt both in terms of its extension around ICSs in general, and in its articulation with the theoretical frameworks of innovation studies and sustainable transitions, in particular.

68 The presented theoretical-empirical framework takes a step forward in establishing links between the different analysed conceptual frameworks and serves as a basis for future work exploring these connections. However, this is only a tentative model with limitations. First, it remains a theoretical proposal that lacks confrontation with the real world and needs to be empirically tested in the field. Second, this model only grants understanding and testing of these links through an integrated analysis of different levels (empirical) and different theoretical frameworks (social innovation and sustainability transitions to address major social challenges). It cannot help to verify the impact or actual occurrence of transition or transformative change since they are long-term processes that may take decades to unfold. In order to confirm its transition potential, it will be necessary to deconstruct an often-romanticised view of intentional sustainable communities. The existing methodological gap must be filled – the majority of performed studies are qualitative – seeking a more extensive and measurable approach to the phenomenon and, to validate the existence of conditions for ISCs to succeed in deploying social innovation and generating transformative change.

BIBLIOGRAPHY

Adalilar, S. N., Alkibay, S., Eser, Z. (2015) "Ecovillages as a Destination and a Study of Consumer Approaches to Ecovillages", *Procedia Economics and Finance*, 23 (October 2014), 539–546.

Advisers Bureau of European Policy (2011) *Empowering people, driving change Social Innovation in the European Union. European Commission*, Luxembourg: Publications Office of the European Union.

Andreas, M., Wagner, F. (2012) *Realizing Utopia: Ecovillage Endeavors and Academic* Approaches, Nova Iorque: RCC Perspectives.

Avelino, F., Wittmayer, J. (2015) "Shifting Power Relations in Sustainable Transition: A Multi-Actor Perspective", *Journal of Environmental Policy and Planning* 8(5), 628-649, available at http://dx.doi.org/10.1080/1523908X.2015.1112259.

Avelino, F., Kunze, I. (2009) "Exploring the Transition Potential of the Ecovillage Movement" in *European Conference on Sustainability Transitions: Dynamics & Governance of Transitions to Sustainability*, Amsterdam.

Avelino, F., Wittmayer, J., Dumitru, A., Longhurst, N., Hielscher, S., Weaver, P., Haxeltine, A. (2015) "Transitions towards New Economies? A Transformative Social Innovation Perspective", *TRANSIT working paper series*.

Bang, J. M. (2005) *Ecovillages: a practical guide to sustainable communities*, New Society.

Bates, A. (2003) "Ecovillage Roots (and Branches) When, where, and how we re-invented this ancient village concept", *Communities* (117), available at https://www.scribd.com/document/35048590/Ecovillage-Roots-and-Branches.

Bauman, Z. (2001) *Community – Seeking Safety in an Insecure World*, Oxford: Polity Press.

Blackshaw, T. (2010) *Key concepts in community studies*, London: SAGE Publications Ltd.

Bruland, K., Mowery, D. C. (2005) "Innovation through Time", in J. Fagerberg, D.C. Mowery, R. Nelson (eds.), *The Oxford Handbook of Innovation*, Oxford, Oxford University Press, 349-379.

Bund, E., Hoelscher, M., Mildenberger, G. (2015) "A methodological framework for measuring social innovation", *Historical Social Research*, 40(3), 48-78.

Cajaiba-Santana, G. (2014) "Social innovation: Moving the field forward. A conceptual framework", *Technological Forecasting & Social Change*, 82, 42-51.

Camisón-Zornoza, C., Lapiedra-Alcami, R., Segarra-Ciprés, M., Baronat-Navarro, M. (2004) "A meta-analysis of innovation and organizational size", *Organization Studies*, 25 (3), 331-361.

Chitewere, T. (2017) *Sustainable communities and green lifestyles: consumption and environmentalism*, Routledge.

Delanty G. (2010) *Community*, 2nd edition, Oxon: Routledge.

Ergas, C., Clement, M. T. (2016) "Ecovillages, Restitution, and the Political-Economic Opportunity Structure: An Urban Case Study in Mitigating the Metabolic Rift", *Critical Sociology*. 42(7-8), 1195-1211.

European Commission. (2013) *Guide to Social Innovation*, Brussels: European Commission.

Franz, H.W, Hochgerner, J, Howaldt, J. (2012) *Challenge social innovation: Potentials for business, social entrepreneurship, welfare and civil society*, Dordrecht: Springer.

Freeman, C., (1988) *The Economics of Industrial Innovation*, London: Pinter.

Geels, F. (2005) 'Processes and Patterns in Transitions and System Innovations: Refining the Co-evolutionary Multi-level Perspective', *Technological Forecasting and Social Change*, 72 (6): 681-96.

Geels, F. W. (2002) "Technology Transitions as Evolutionary Reconfiguration Processes: A Multi-level Perspective and a Case Study", *Research Policy* 28 (5): 469–488.

Gilman, R., Gilman, D. (1991) *Ecovillages and Sustainable Communities: A Report for Gaia Trust*, Gaia Trust.

Hall, R. (2015) "The ecovillage experience as an evidence base for national wellbeing strategies", *Intellectual Economics*, 9(1), 30-42.

Haxeltine, A., Avelino, F., Wiitmayer, J., Kunze, I., Longhurst, N., Dumitru, A., O'Riordan, T. (2018) "Conceptualising the Role of Social Innovation in Sustainability Transformations", in J. Backhaus, G. Audley, S. Lorek, E. Vadovics, J. Wittmayer, *Social Innovation and Sustainable Consumption - Research and Action for Societal Transformation*, chapter 2, Routledge.

Hedström, P., Ylikoski, P. (2010) "Causal Mechanisms in the Social Sciences", *Annual Review of Sociology*, 36, 49-67.

Hellström, T. (2004) "Innovation as social action", *Organization* 11(5), 631-649.

Hong, S., Vicdan, H. (2016) "Re-imagining the utopian: Transformation of a sustainable lifestyle in ecovillages", *Journal of Business Research*, 69(1), 120-136.

Joubert, A. K., Alfred, R. (2007) *Beyond you and Me, Inspirations and Wisdom for Building Community*, Hampshire: Permanent Publications.

Joubert, K., Dregger, L. (2015) *Ecovillage - 1001 Ways to Heal the Planet*, Triarchy Press Ltd.

Kemp, R., Schot, J., Hoogma, R. (1998) "Regime Shifts to Sustainability through Processes of Niche Formation: The Approach of Strategic Niche Management", *Technology Analysis and Strategic Management*, 10 (2): 175-98.

Kirby, A. (2003) "Redefining social and environmental relations at the ecovillage at Ithaca: A case study", *Journal of Environmental Psychology*, 23, 323-332.

Köhler, J., Geels, F. W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A., Alkemade, F., Avelino, F., Bergek, A., Boons, F., Fünfschilling, L., Hess, D., Holtz, G., Hyysalo, S., Jenkins, K., Kivimaa, P., Martiskainen, M., McMeekin, A., Mühlemeier, M. S., Nykvist, B., Pel, B., Raven, R., Rohracher, H., Sandén, B., Schot, J., Sovacool, B., Turnheim, B., Welch, D., Wells, P. (2019) "An agenda for sustainability transitions research: State of the art and future directions", *Environmental Innovation and Societal Transitions*, 31, 1-32.

Kunze, I. (2012) "Social Innovations for Communal and Ecological Living: Lessons from Sustainability Research and Observations in Intentional Communities", *Communal Societies*, 32(1).

Kunze, I., Avelino, F. (2015) *Transformative Social Innovation Narrative of the Ecovillage of Schloss Tempelhof* (TH). TRANSIT: EU SSH.2013.3.2-1 Grant agreement no: 613169.

Litfin, K. (2014) *Ecovillages: lessons for sustainable community*, Cambridge: Polity Press.

Loorbach, D., Frantzeskaki, N., Avelino, F. (2017) "Sustainability Transitions Research: Transforming Science and Practice for Societal Change", *Annual Review of Environment and Resource*, 42:4, 1-428.

Lundvall, B. A. (1992) *National Systems of Innovation, Towards a Theory of Innovation and Interactive Learning*, London: Pinter Publishers.

Marckmann, B., Gram-Hanssen, K., Christensen, T. H. (2012) "Sustainable living and co-housing: Evidence from a case study of eco-villages", *Built Environment*, 38(3), 413-429.

McFadzean, E, O'Loughlin, A, Shaw, E. (2005) "Corporate entrepreneurship and innovation part 1: The missing link", *European Journal of Innovation Management*, 8(3), 350-372.

Mulder, K., Costanza, R., Erickson, J. (2006) "The contribution of built, human, social and natural capital to quality of life in intentional and unintentional communities", *Ecological Economics*, 59(1), 13-23.

Mulgan, G., Tucker, S., Ali, R., Sanders, B. (2007) *Social Innovation - What it is, why it matters and how it can be accelerated*, Skoll Centre for Social Entrepreneurship - Young Foundation, 1-52, available at http://eureka.sbs.ox.ac.uk/id/eprint/761.

Murray, R., Caulier-Grice, J., Mulgan, G. (2010) "Introduction", in R. Murray, J. Caulier-Grice, G. Mulgan, *The Open Book of Social Innovation*, NESTA - The Young Foundation, 1-224.

Namey, E., Guest, G., Thairu, L., Johnson, L. (2008) "Data reduction techniques for large qualitative data sets", in G. Guest, K. M. MacQueen (eds.), *Handbook for team-based qualitative research*. Lanham: AltaMira Press, 137-162.

Nelson, R.R. (1993) *National Innovation Systems: A Comparative Study*, Oxford, Oxford University Press.

Nicholls, A., Simon, J., Madeleine, G. (2015) "Introduction: Dimensions of social innovation", in A. Nicholls, J. Simon, M. Gabriel, C. Whelan (eds.), *New frontiers in social innovation research*, New York: Palgrave Macmillan, 1-28.

Nogueira, C., Pinto, H., Sampaio, F. (2017) "Social Innovation and Smart Specialisation: Opportunities for Atlantic Regions", *European Public & Social Innovation Review*, vol. 2 (2).

Papachristos, G. (2018) "A mechanism-based transition research methodology: Bridging analytical approaches", *Futures*, 98, 57-71.

Phills Jr., J. A., Deiglmeier, K., Miller, D. T. (2008) "Rediscovering Social Innovation", *Stanford Social Innovation Review*, 34-43.

Pinto, H. (2018a) "Resiliência da Inovação – Um Contributo para a Compreensão Multinível das Dinâmicas de Inovação", in M. M. Serrano, P. Neto (org.) *Inovação, Emprego e Políticas Públicas*, Sílabo : Lisboa, 77-96.

Pinto, H. (2018b) "Innovation Dynamics and Resilience : A Crucial Agenda for the Future of Regional Studies and Policy", *RSA Regions e-Zine*, 2, available at https://doi.org/10.1080/13673882.2018.00001012.

Raven, R. (2012) "Analysing Emerging Sustainable Energy Niches in Europe: A Strategic Niche Management Perspective", in G. Verbong, D. Loorbach (eds.) *Governing the Energy Transition: Reality, Illusion or Necessity?* Abingdon: Routledge, 125-151.

Sargisson, L. (2003) "Surviving Conflict: New Zealand's Intentional Communities", *New Zealand Sociology*, 18(2), 225-251.

Schlaile, M.P., Urmetzer, S., Blok, V., Andersen, A.D., Timmermans, J., Mueller, M., Fagerberg, J., Pyka, A. (2017) "Innovation Systems for Transformations towards Sustainability? Taking the Normative Dimension Seriously", *Sustainability* 9, 2253, available at https://doi.org/10.3390/su9122253.

SCIE (2010) *SCIE Systematic Research Reviews: Guidelines*, Second Edition, London: Social Care Institute for Excellence.

Seyfang, G., Longhurst, N. (2016) "What influences the diffusion of grassroots innovations for sustainability? Investigating community currency niches", *Technology Analysis and Strategic Management*, 28:1, 1-23.

Seyfang, G., Smith, A. (2007) "Grassroots Innovations for Sustainable Development: Towards a New Research and Policy Agenda", *Environmental Politics* 16 (4): 584-603.

Smith, A., Stirling, A. and Berkhout, F. (2005) 'The Governance of Sustainable Socio-technical Transitions', *Research Policy*, 34 (10): 1491-510.

Steinmo, S. (2008) "Historical institutionalism", in D. Della Porta, M. Keating (eds.), *Approaches and methodologies in the social sciences: A pluralist perspective*, Cambridge: Cambridge University Press.

Stengel M. (2005) "Was ist Gemeinschaft? – Definitionssuche und Überblick", in M. Stengel (ed.), *Eurotopia 2005 – Gemeinschaften und Ökodörfer in Europa*, Poppau: Einfach Gut Leben e.V., 10-15.

Sunstein, C. (2006) *Infotopia*, Oxford: Oxford University Press.

Taylor, J. B. (1970) "Introducing Social Innovation", *The Journal of Applied Behavioral Science*, 6 (6), 69-77.

The Young Foundation (2012) *Social Innovation Overview – Part I: Defining social.*

Tönnies, F. (1957) *Community and society*, New York: Harper & Row.

Unruh, G.C. (2000) "Understanding carbon lock-in", *Energy Policy* 28, 817-830.

Unruh, G.C. (2002) "Escaping carbon lock-in", *Energy Policy* 30, 317-325.

Van Der Have, R. P., Rubalcaba, L. (2016) "Social innovation research: An emerging area of innovation studies?", *Research Policy*, 45, 1923-1935.

Verbong, G., Geels, F.W., Raven, R. (2008) "Multi-niche analysis of dynamics and policies in Dutch renewable energy innovation journeys (1970-2006): hype-cycles closed networks and technology-focused learning", *Technology Analysis & Strategic Management* 20(5), 555-573.

Ware, C. (1986) *Estudo da Comunidade*, Buenos Aires, Humánitas.

Westley, F., McGowan, K., Tjörnbo, O. (eds.), *The evolution of social innovation*, Edward Elgar, 1-17.

NOTES

1. More information about the Ecovillage Development Programme is available at https://ecovillage.org/our-work/ecovillage-development/.

ABSTRACTS

The number of ecovillages – intentional sustainable communities – is showing signs of growth all over the world. These self-organized groups can be seen as agents of change that may contribute to the transition to a more sustainable environmental, social, economic and political paradigm.

This article seeks to reflect on the 'transitional potential' of intentional sustainable communities as mechanisms that foster the development of social innovation practices. It is an exploratory study that debates the articulation between an empirical phenomenon, the existence of this type of communities, and a theoretical perspective, the study of transitions. This study is based on a systematic literature review to identify relevant analytical dimensions and suggests a conceptual model that provides comprehension of the phenomenon of intentional sustainable communities as a mechanism for social innovation and transformative change.

INDEX

Palavras-chave: Ecovillages, intentional sustainable communities, transition studies, social innovation

AUTHORS

CARLA NOGUEIRA

CinTurs – Research Centre for Tourism, Sustainability and Well-Being, University of Algarve, Portugal, carlafsvnogueira [at] gmail.com

HUGO PINTO

CES – Centre for Social Studies, University of Coimbra, Portugal, hpinto@ces.uc.pt

JOÃO FILIPE MARQUES

CinTurs – Research Centre for Tourism, Sustainability and Well-Being, University of Algarve, Portugal, jfmarq [at] ualg.pt