



Social Innovations Patents

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ABSTRACT: The core of this paper is focused on establishing a Social Innovation Patent System for the coding, evaluation, certification and scaling-up social innovations. The system is framed under the Open Social Innovation framework. The architecture of this framework is built on three pillars: a) incubation modes, b) social innovation modes, and c) excubation modes. The dynamics of the model consist of three knowledge management processes: a) exploration, b) experimentation, and c) exploitation. The model has five practical implications: a) They promote the efficient allocation of public resources for social innovation, as they circumvent the duplication of social innovations by promoting their dissemination and exploitation; b) They facilitate the codification of innovative social practices and their scaling-up process; c) They raise the visibility and the social and technical appropriation of social innovations; d) They allow for the mapping of social innovations and impact statistics (regional and sectoral), and e) They contribute to shaping social innovation communities through the creation and exploitation of social innovation patents.

Keywords: open social innovation, social innovation patents, incubation-excubation



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Open innovation has been presented as a new paradigm of innovation. It constitutes an alternative to the vertical and internal knowledge and innovation generation model based on R&D (Chesbrough, 2006). Two solid arguments support open innovation as an alternative to the R&D model. The first one is based on the idea that relevant knowledge is distributed within the organizations outside their borders. Thus, these organizations need a collaborative architecture to harness the relationship between internal and external knowledge (Gassmann and Enkel, 2004). The second argument relies on the fact that there are knowledge and technological spillovers that can multiply and turn into innovations during any innovation process. Such spillovers are difficult to capitalize on within the R&D model due to their verticality and lack of porosity. This verticality, which is typical of the

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R&D model generates a protection policy for innovations (Chesbrough, 2006). Hence, patents and licenses are strategically employed to protect intellectual property rights to prevent spillovers and ensure the profitability of the investment (Striukova, 2009). The lack of porosity implies that external knowledge is not integrated and that internal knowledge is not externalized; therefore, constraining the potential for innovation and the development of new business models and markets by restricting the rise of new, creative ideas.

Open innovation is not only a collaborative innovation strategy (internal/external knowledge combination) but also, and fundamentally, a new business model based on a licensing and patenting strategy (Chesbrough and Schwartz, 2007; Chesbrough, 2004; Striukova, 2009). Patenting policies are a novel way of capitalizing on the spillover effect of the technological innovation process and making collaborative partnerships profitable (Chesbrough, 2003a). Thus, open innovation makes strategic use of the intellectual property to guarantee the profitable exploitation of such spillover effect. It is mainly about making innovation profitable (Dahlander and Gann, 2010) by creating new commercialization opportunities for new knowledge (licenses, patents, spin-off and joint ventures).

What are then the lessons that open innovation can provide to social innovation?

To begin with, social innovation can be understood as the generation of products, methods and/or services oriented towards the resolution of social problems (Ishigaki and Sashida, 2013; European Commission, 2013; Mulgan *et al.*, 2001). Social innovations can potentially mitigate the consequences of a social problem (adaptive social innovation) or transform some of the underlying causes of a social problem (transformative social innovation). In either case, social innovations have a participatory and collaborative nature, and therefore, openness to external knowledge is nothing new to social innovation.

Furthermore, finding a solution for a social problem is such a complex task that the level of uncertainty and unpredictability associated with it is extremely high. Thus, to find a chain of micro-social innovations with a limited impact, whose capacity to transform the causes of social problems is extremely restricted is the most common scenario (Castro-Spila and Unceta, 2015). Open innovation can make its best contribution to social innovation in relation to this particular shortcoming.

Indeed, the licensing and patenting strategy employed in the open innovation scheme to capitalize on the collaborative nature and commercial profitability of innovation spillovers can contribute to social innovation.

Social innovations take the form of micro-social innovations (Castro-Spila and Unceta, 2015); that is to say, products, methods and/or services driven by organizations (companies, NGOs, universities, and public administration) that operate at the micro-social level and have a localized impact (limited groups). However, micro-social innovations can condense in niches of social innovation (Witkamp *et al.*, 2011), which can, in the long run, transform the conditions underlying a social problem (transformative social innovation). One of the conditions for clustering (niches) is the expansive transfer of a social solution, in other words, its diffusion and replication until it becomes a standardized solution (Castro Spila *et al.*, 2016). The micro/localized dimension makes social innovation a piece of experiential knowledge (Nonaka *et al.*, 2000) feasible to be codified in a patent and then transferred, with greater speed and efficiency, within a regional environment. Therefore, social innovation patents are the chief device of the open social innovation mechanism and its sustainable impact.

That being said, social innovations can be considered a public good, and social innovation patents a socio-technical device based on free licenses, which facilitates the social appropriation of products, methods and/or services (social innovations) at a low cost (expansive capability) rather than the private appropriation or protection of specific rights derived from social innovation.

Although social innovation patents are intrinsic to open social innovation, there is no model for the conceptualization of open social innovation. The few references to open social innovation in specialized literature focus on the collaborative nature of social innovation (Changhwan, 2016; Chesbrough and Di Minin, 2014), but they do not delve into the importance of licenses and patents as an essential development policy.

This article presents an exploratory model that links open social innovation to social innovation patents. It contributes to the debate over the relationship between open innovation and social innovation by modifying the architecture and the dynamics of social innovation. Although the architecture of open social innovation is relational (incubation-excubation), its evolution is strongly associated with the capitalization and catalysis policy embodied by social innovation patents.

The article is organized into three sections. In the first section, the open social innovation model is presented. From a knowledge management perspective, open innovation is described around four axes: a) knowledge management, b) strategic governance, c) capitalization mechanism, and d) effective ecosystem. In the second section, open social innovation is defined through two structures: a) modes of incubation and b) modes of excubation. The dynamics of the model comprise four processes: a) exploration, b) experimentation, c) exploitation and d) evaluation. The third section describes the architecture and dynamics of social innovation patents. Its architecture relies on three structures: a) social innovation agencies, b) coding infrastructures, and c) the patenting platform. In the last section, final remarks and lines for future research are drawn.

Framing Open Social Innovation

Social innovation has been defined as the creative application of ideas and knowledge for the generation of products, services and/or methods oriented towards the solution of social problems (European Commission, 2013; Ishigaki and Sashida, 2013; Murray *et al.*, 2010; Unceta *et al.*, 2016).

From the perspective of the Social Innovation Agency (Mulgan, 2006; Castro-Spila *et al.*, 2016), two models are paramount: A) The Community Model, which promotes a perspective based on social innovation communities (Moulaert, 2010, Gibson-Graham and Roelvink, 2010); and B) The Organisational Model, which promotes a perspective based on organizations and their absorptive capacity (Castro-Spila *et al.*, 2016; Jali *et al.* 2016). According to the former, different types of organizations (for-profit and not-for-profit, public sector, universities, technology centers and the like) develop social innovations based on a triple governance model centred on participation (stakeholders and users), collaboration (organizations and institutions), and sustainability (social joint ventures, spin-off and new social innovation prototypes) (Castro-Spila *et al.*, 2016; Innobasque, 2014; Unceta *et al.*, 2016).

In the latter, two models are highlighted: A) The Innovative Cycle Model (Murray *et al.*, 2010), according to which social innovation is developed in successive stages of increasing impact until it produces a systemic change; and B) The Chain of Capacities Model (Castro-Spila *et al.*, 2016; Castro-Spila, 2018), according to which social innovation is a process of exploration,

experimentation, exploitation, evaluation and expansion (E5 model) based on incremental innovations and focused impact.

The concept of open social innovation is still at an early stage of development, making it unripe and unstable. The few publications that address it focus on collaboration and how it is carried out. In particular, joint social ventures and collaborative environment design projects involving the public sector and civil society are presented as examples of open social innovation (Chesbrough and Di Minin, 2014; *et al.*, 2017). However, defining open social innovation by its collaborative nature does not contribute to its conceptual development and advancement, especially when empirical evidence shows that collaboration is not what prevails in the social innovation processes observed at the regional level (Innobasque, 2014; Unceta *et al.*, 2016).

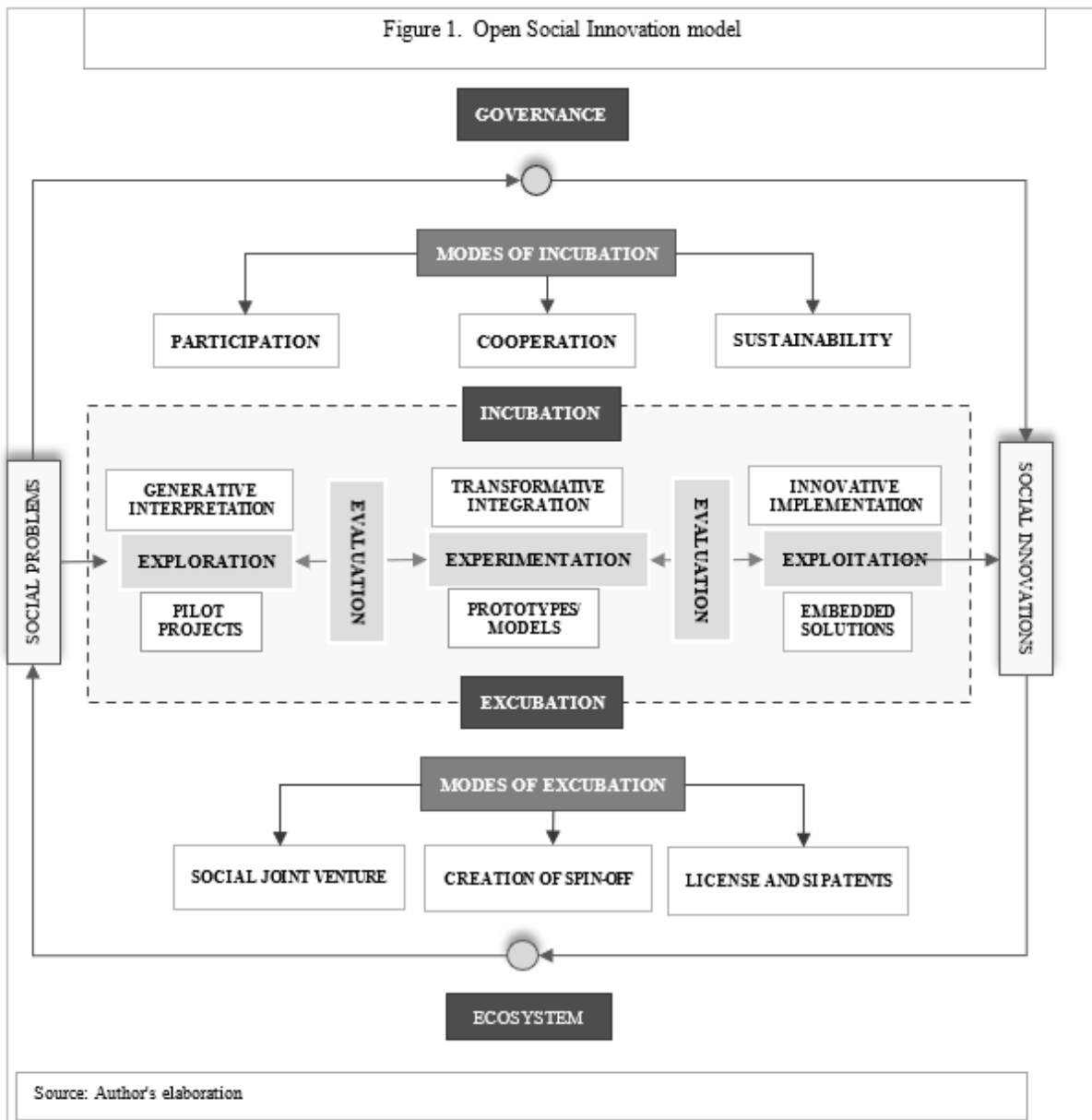
Thus, open social innovation can be defined as the process of incubating external knowledge and excubation of internal knowledge in the pursuit of social innovations. The dynamics of this process rely on a chain of organizational capacities (exploration, experimentation, and exploitation) that yields micro-social innovations.

The open social innovation model can be structured on three key dimensions (figure 1):

Knowledge Management. Open social innovation is a knowledge-management model based on knowledge incubation-excubation dynamics that results in micro-social innovations. This process is structured around three key capacities: exploration, experimentation and exploitation.

Strategic Governance. Open social innovation fosters relationships of participation (civil society), cooperation (organizations and public sector) and sustainability (current and future, positive social impact). It is an incubation process of heterogeneous knowledge.

Impact Chain. Open social innovation requires and promotes impact relationships that entail establishing new alliances (joint social ventures), new organizations (social spin-off), and effective scaling-up strategies for social innovations (social innovation patents).



Modes of Incubation

The mode of incubation is the model through which heterogeneous external knowledge becomes integrated through various modalities of interaction with other agents and with social problems (Figure 1).

Participation, This form of external knowledge integration is enabled through the inclusion of users and stakeholders in the process of social innovation (Chesbrough and Di Minin, 2014; Unceta *et al.*, 2017). The engagement of potential users - the target of the innovation- results in a collaborative adjustment process of the social innovation to the particular social needs, which are structured as social demands.

Cooperation, This form of integrating external knowledge is enabled by deploying cooperation strategies (Chesbrough, 2006, Unceta *et al.*, 2016). Cooperation among diverse agents boosts creativity because of the cognitive distance and the heterogeneous sources of information (von Hippel, 1988). Nevertheless, this same cognitive distance can often be an obstacle to innovation (Boschma, 2005).

Sustainability. This way of integrating external knowledge is related to the conditions of the context in which social innovation is eventually going to be deployed, and it is concerned with the process of exploring acceptable risks and the precautionary anticipation of the potential impact - economic, social and institutional- of such social innovation (Owen *et al.*, 2012; Stilgoe *et al.*, 2013).

Furthermore, the notion of incubation is employed in this article to highlight that a certain time is necessary for external knowledge to be integrated into the organization's internal body of knowledge.

Modes of Excubation

Social Joint Venture. This is a form of externalizing internal knowledge through a partnership between those organizations that do not pursue the maximization of economic benefit but rather the combination of economic, social and environmental factors to mitigate or transform the conditions of a social problem (Dees and Anderson, 2003; Haugh, 2007; Dominic and Eva, 2012). Social joint ventures are built around social innovation, which is the foundation and the basis of its social business model.

Social Start-up. This is a form of externalizing internal knowledge utilizing a start-up/spin-off, thereby giving rise to a new social business model (Katre and Salipante, 2012; Sharir and Lerner, 2006) that bolsters a part, or a set of activities linked to a social innovation which another organization has generated.

Social Innovation Patents. This is a form of externalizing internal knowledge through the patenting of social innovations. Social innovation patents are socio-technical networks (Callon, 1991, 1998) that boost the spreading and circulation of knowledge, the distribution of resources, and numerous instances of assessment. In addition, they promote prestige gain for the parties involved and the

design of social strategies for scaling social innovations (adoption and adaptation) and the incentives for social innovation (public sector).

In this article, the notion of excubation (Castro-Spila, 2018) is used to point out the fact that a certain time is necessary for internal knowledge to be externalized through new organizations (joint social ventures and social start-ups) and into codified knowledge devices (social innovation patents).

Capacities

According to the model of social innovation capacities, at the organisational level (Castro-Spila 2018, Castro-Spila *et al.*, 2016), the open social innovation model is defined by four main processes: a) Exploration (generative interpretation / ideas-projects); b) Experimentation (transformative integration / prototypes and models); c) Exploitation (innovative implementation / innovative solutions), and d) Evaluation (process assessment / impact chain) (Figure 1).

Exploration Capacities are the organizational capacities involved in interpreting social problems and designing social innovation ideas/projects. This process is carried out by integrating users (target), organizations, and developers into interpreting the social problem meant to be solved.

Input (Generative Interpretation): Social problems are complex, multi-causal and systemic; therefore, interpretation is a key first step in addressing them. Faced with such complexity, the process of interpreting social problems consists of formulating a "causal hypothesis," which means speculating on what is the main cause of the social problem, of which it is possible to draw a potential solution (Unceta *et al.*, 2016).

Output (Pilot Projects Generation): Once the causal hypothesis has been stated, it leads to a process of co-creation of social innovation ideas and projects (along with users, organizations, and developers).

Experimentation capacities are the organizational abilities that enable the design of experiments and the testing of social innovation projects. Testing and modelling social innovations is carried out in a participatory manner (along with users, developers, and other organizations).

Input (Transformative Integration): The experimentation process is conducted utilizing the implementation of agile innovation models (Pirola-Merlo, 2010). It entails recursive testing of the

pilot project and the involvement of the target population and stakeholders. In this process, the solution generated during the exploration stage is tested to obtain information about what works and what does not and establish the chain of impacts (anticipation of possible negative impacts - responsibility).

Output (Social Innovation Modelling): Thanks to recursive testing, an integrative model of social innovation is obtained. Small-scale impacts are already observable at this stage.

Exploitation capacities are the organizational abilities to embed the integrated social innovation models into products, methods or services driven by the organization itself or by new organizational structures (joint social ventures, social start-ups). At this stage, the social-innovation-patenting process can be expedited to promote the expansion of social innovation.

Input (Innovative implementation): The development of social innovation products, methods, or services embedded in new business models or new organizations. At this stage, local-scale impacts are observable.

Output (Embedded Solutions): Social innovation products, methods, or services developed by the organization, new organizations, partnerships and/or social innovation patents.

Evaluation Capacities are the organizational capacities that enable the interpretation of results at each stage of the process of social innovation generation. Evaluation is a double-loop mechanism (Argyris, 1976) in which the learning process that takes place at the stages of exploration, experimentation and exploitation of social innovations revolves around the incubation-excubation dynamics.

Altogether, the proposed model of open social innovation implies that organizations incubate social innovations according to a specific combination of degrees of participation (users and target population), degrees of collaboration (organization), and degrees of responsibility (precautionary anticipation of the economic, social, and institutional impacts). On the other hand, social innovations are excubated by embedding the resulting products, methods or services into partnerships or new businesses and/or by the boost that stems from patenting social innovations.

Framing Social Innovation Patents

Technological and social patents

Economically and legally speaking, a patent is a legal device that protects inventions and innovations from being commercialized during a limited period. From this point of view, patents can be understood as a privileged strategy of investment, production and commercialization for inventions and innovations.

Patents have also been conceptualized as a method of transfer of innovations according to the conditions of the appropriateness of enterprises, which depend on their internal patterns of knowledge and the technological trajectory of the business sector (Cohen *et al.*, 2000). Along these lines, patents can be considered an economic and technological indicator to estimate trends and evaluate the efficiency and impact of the development of the R&D (Cohen *et al.*, 2002; Hottenrott *et al.*, 2016; Griliches, 1990; Narin *et al.*, 1987). In summary, patents are devices of coded knowledge backed by a legal party (Burk, 2008) to guarantee future profits derived from the past investment.

Social innovation patents have not yet been developed as such, so no literature addresses it. Even so, some basic differences between social innovation and technological patents can be drawn.

Private / Public.

Technological patents are a means for the private protection of the costs derived from the process of invention/innovation. They are devices of legal protection that generate private encouragement to avoid illegal imitation by competitors, cover the costs of R&D and obtain a future benefit.

On the other hand, social innovation patents are devices for the public dissemination of collective invention/innovation processes. They are public encouragements for the promotion of the best social solutions tested in different contexts. Social patents are incentives for acquiring future social benefits and improving public resources allocation efficiency, which promotes the adoption/adaptation of social innovations.

Closed / Open

Technological innovation patents are set up during a specific time in close spaces based on industrial secrecy to obtain a competitive advantage. When an organization carries out processes of innovation-oriented towards this patent strategy (organizational spillover effect), it results in an organizational learning effect that improves the organization's internal competencies.

Social innovation patents are configured within open-collaboration-based work environments to obtain a collective advantage to solve a social problem. These conditions foster social learning, which enhances the collective competencies needed to solve problems (social spillover effect).

Private appropriation / Social appropriation

Technological patents are configured as a legal instrument that enables the private appropriation of an invention or innovation for a specific cost during a specific amount of time. This private appropriation results in the restricted diffusion of the innovation, thus increasing the organization's competitiveness, which holds the right to exploit the technological patent.

Whereas social innovation patents foster social appropriation. They are legal instruments (free licenses) based on the acknowledgement of the legal and social authority of the patent. This form of social appropriation promotes the visibility and expanded diffusion of the innovation by improving the conditions of collective appropriation of a social solution embedded into a patent.

Patens as an Indicator of Technological Innovation / Social Innovation

In general, patents are assessed according to their originality and innovativeness. This is why public bodies and private businesses use the patent system to indicate technological development and competitiveness.

In the same way, social innovation patents can be used as indicators of the capacity of social impact that an organization has. Thus, social innovation patents can greatly assist the allocation of public resources to foster multiple social innovations and open paths to social inclusion.

Open Social Innovation Patents: Architecture

The open social innovation patent system is based on three structures: a) social innovation agencies, b) codification infrastructures, and c) patenting platforms (Figure 2).

Agencies of social innovation. The core of social innovation lies in three types of agents:

Organizations. This category includes businesses, universities, social and civic organizations, and technological centres that boost social innovation due to processes of temporary clustering (transitorily-stabilized connections).

Developers. These include informal practising groups and innovative communities that design and drive social innovations thanks to networking processes in which the users are included (loosely attached connections).

Institutions. Different public bodies and agencies drive social innovations through processing encouragement and new normative frames (connections that generate innovative contexts).

Infrastructures of codification. Social innovations can be coded into two different types of structures:

Organizations. Organizations incubate social problems (integrating different perspectives), generate and test innovative solutions, and excubate social innovations according to different strategies (open social innovation). Thus, organizations are a confidential source in the production of patents.

Social Innovation Patents Labs. Not all organizations and developers have the absorptive capacity and the resources necessary to codify a social innovation and code it into a patent. SIP-Labs are infrastructures of social innovation codification that support organizations and developers throughout applying for patents of social innovation before the Patent Evaluation System.

The Patenting Platform: The digital platform consists of several connected online platforms:

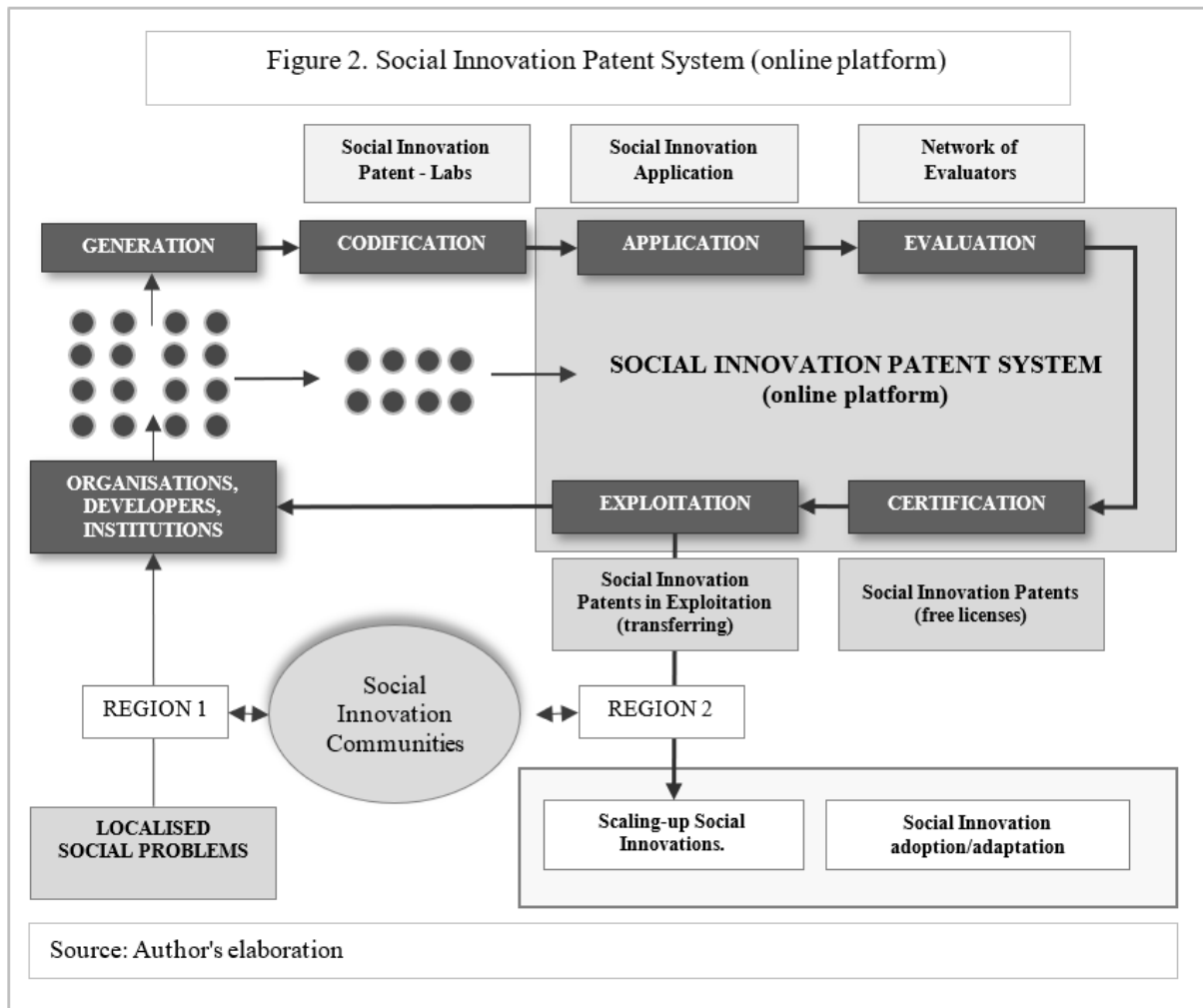
Patent Request System. An online application form specifies the characteristics and type of social innovation according to four key dimensions: participation, cooperation, responsibility and sustainability of the social innovation.

Patent Evaluation System. A network of evaluators (researchers from different fields, practitioners, policymakers, developers, users and stakeholders) who either certify or reject a patent application according to the criteria established in the evaluation forms provided on the platform.

Patent Certification System. The allocation of a free license to exploit a social innovation patent (similar to those used by Creative Commons). The license is granted according to different types of social innovation patents.

Patent Exploitation System. The possibility of downloading the patent license and using/adopting it as long as the original source is acknowledged to create a chain of knowledge categorized by types of patents and social innovations (scaling).

Monitoring system. A system of statistical exploitation of the requested patents, previously agreed upon, enables social innovation monitoring at a regional and global level.



Open Social Innovation Patents: Dynamics

The dynamics of the open patent system are built based on a double loop of coding and recoding of innovative social practices through open innovation.

Coding. The creation of social innovation patents is a process of codification of knowledge. Codification entails the creation of a "codebook" (a system of rules and messages) (Cowan *et al.*, 2000) that allows for the integration, combination and expansion of implicit and explicit knowledge (Nonaka, 1994), structured through socially innovative practice. Thus, a patent is a book of codes that reconstruct "integrated knowledge practices" to be used at different times and in different places. Patents are devices that stabilize social knowledge by modelling the processes that shape a social innovation (concepts, practices, sequences of application and modes of evaluation). In the open patent system proposed, SIP-labs are privileged patenting infrastructures that promote the codification and dissemination of social innovations.

Recoding. Social innovation patents understood as a codebook are elaborated in a specific social context. However, SIPs make sense only if they can be decoded and applied –replicated– to different contexts (time/space). In this way, SIPs allow other agents to reinterpret the original code (previously coded) and re-write it to fit its social context (recoded by transformative users). This process (coding and recoding) gives rise to a social innovation community whose dynamics consist in obtaining a patent (original patent), which emerges from a particular production context. However, it is subject to re-codification within the context of the application (derived patent). According to this dynamic, SIPs are an "open source" book that is cumulative and constantly evolving, creating families of social innovation patents (depending on the number of times an original patent has been recorded). In a radical sense, the codebook "is" the community itself that recursively codes and re-codes social innovations through patenting processes. In the open patent system, social innovation communities are the transfer infrastructures that promote the re-codification and diffusion of social innovations among different regions.

Discussion: Theoretical and practical implications

Theoretical Implications

This article contributes to the conceptualization of open social innovation. The few academic papers that explore this concept consider open social innovation within its collaborative dimension and thus describe good practices for establishing alliances and joint social ventures as examples of open social innovation (Chesbrough and Di Minin, 2014, Yun *et al.*, 2017). However, the emphasis on the participatory and collaborative nature of social innovation is a redundancy

that does not contribute to the evolution of the concept of open social innovation. It only exemplifies its collaborative nature.

Considering this conceptual deficit, this article proposes a new definition of open social innovation. Hence, open social innovation can be defined as a collaborative and inclusive innovation strategy that enables the development of a new impact model based on a dynamic architecture of *incubation-excubation* of different *social innovations*. The social innovation patents enable the catalysis of micro-social innovations resulting from the spillover effect produced by solving a localized social problem.

This definition has a wide variety of implications. First, it highlights the collaborative and participatory nature of social innovation as an impact strategy rather than a premise of social innovation. Second, the impact is understood as a process of catalysis of micro-social innovations. The coverage and speed of recursive replication of a social solution are tested until it becomes standardized (the mechanisms agreed upon to solve a social problem). Third, the definition emphasizes that social innovation is an incubation-excubation process and its "temporal" dimension (duration of incubation and excubation).

Moreover, it suggests that due to the complexity intrinsic to localized social problems (geographically, institutionally and socioeconomically speaking), it is not possible to reach systemic social solutions but rather micro-social innovations, that is, knowledge spillovers from the ongoing process of searching and testing solutions for social problems. Moreover, lastly, the "micro" dimension of social innovations (constrained target population, specific methods and localized impacts) is a condition of possibility for the patenting of social innovations. Social movements and large-scale social transformations cannot be excubated nor patented.

Practical implications

Open social innovation is intrinsically linked to the creation of a social innovation patent system. Given that other modes of excubation are more widely known (social spin-off and joint social ventures), it is in the interest of this paper to highlight the role of social innovation patents.

Codification of social practices: Patents enable the codification of innovative social practices. Codification is a process of (transitory) standardization of a social innovation that explains the know-how of a tested social solution. It is a process of accumulation of experiential knowledge that

allows for the recursive (different moments) and collective (different agents) capitalization of knowledge.

Social appropriation system: Social innovation patents promote the social diffusion and appropriation of social innovations by providing structured, open and accessible information for the technical understanding, public diffusion and social communication of social innovation.

Evaluation system: Social innovation patents require a social innovation evaluation system designed according to three parameters: multi-criteria evaluation (inclusion, cooperation, sustainability and responsibility), multi-agent evaluation (users, developers, experts and academics) and multi-impact evaluation (cooperation degrees, degrees of social inclusion, degrees of responsibility, and degrees of sustainability).

Scaling-up strategy: Social innovation patents facilitate the scaling (adopt and adapt) of social innovations that have already been implemented and tested in other regional contexts. Improvement of the replication capacity (scaling) promotes overall resource efficiency by avoiding the reinvention of *social* innovations that have already been tested in other contexts.

Resource allocation system: Social innovation patents allow regional agents to make their impact capacity visible. Thus, the more social innovation patents regional agents possess, the greater their displayed impact capacity. The visibility of organizational impact capacity promotes the efficient allocation of public resources (public sector and social philanthropy) to social innovation, reducing the risk of financing low-impact-capacity organizations.

Monitoring system: Social innovation patents are mechanisms that offer structured and comparable information on the different impacts of social innovations, which eases the task of obtaining statistics on social innovation.

Future Research

For the time being, social innovation is an unstable concept that needs further development and empirical validation. Four lines of future research can be drawn:

Development of the conceptual architecture: Along this line, progress is being made regarding better modelling the relationship between modes of incubation and modes of excubation of social innovations. Based on empirical research (from incubation to excubation of social

innovations), the aim is to model new social business models into social innovations (social spin-offs, joint social ventures and social innovation patents). This line provides a new system of indicators of social innovation based on open social innovation.

Development of the operational architecture: Along this line, advancement has been made over the operative development of the open platform of social innovation. This development is focused on the processes of application, evaluation and exploitation of social innovation patents.

Development of the legal architecture: Social innovation patents (free licenses) are a potential source of conflict. This line of research seeks to establish a positive connection between heterogeneous legal frameworks to avoid legal conflict in the development of social innovation patents. To do so, a manifesto for a new legal framework is endorsed, which promotes social innovation patents.

Development of the architecture of policies: Open social innovation is a policy architecture itself. Along this line, a framework for governance is outlined to connect open innovation's organizational policies with those of the public sector (financial incentives and legal frameworks) to ensure the efficient allocation of public and social philanthropy resources to open social innovation.

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