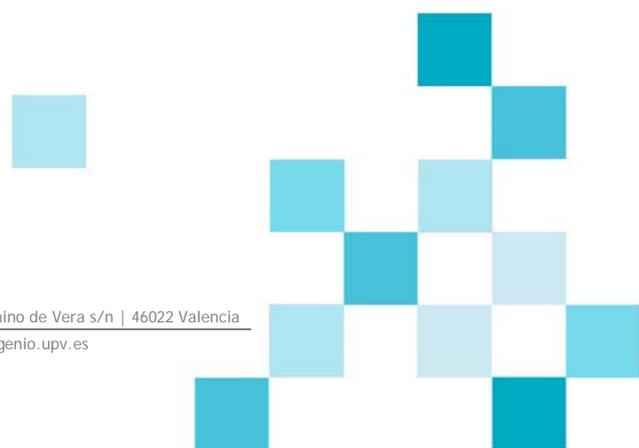




'Shaken, but not stirred': six decades defining social innovation

Mónica Edwards-Schachter, Matthew L. Wallace

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‘Shaken, but not stirred’: six decades defining social innovation

Mónica Edwards-Schachter^{1,a}, *Matthew L. Wallace*^{1,b}

¹ INGENIO, CSIC-UPV (Valencia, Spain)

Abstract: This paper examines the evolution in the conceptualization of Social Innovation (SI) under the assumption of SI as a trans-disciplinary construct which comprises a diversity of discourses from different fields and actors. We performed a comprehensive and systematic literature review along six decades (1950-2014), extracting definitions of SI through a search of 2,339 documents in various languages retrieved from Web of Science, SCOPUS and Google scholar. To guide the inductive analysis of pluri-vocal discourses we assume innovation to be a learning-based process, introducing the notion of social practice linked to its intertwined institutional and socio-cultural dimensions. We applied mixed qualitative methodologies, combining content analysis based on a social constructionist/interpretivist ontology with cognitive mapping techniques. Our findings identify some core and secondary elements underpinning two complementary perspectives (transformative and instrumental) of SI as scientific construct. They also point to a number of promising avenues for research towards the advancement of a socio-technical theory of innovation.

Keywords: social innovation, innovation process, collective learning, social practice, social change, technological innovation

JEL Codes: O35, O17, O30

^a monicaelizabethedwards@gmail.com

^b matt.l.wallace@gmail.com

1 Introduction

We are living under the Social Innovation (SI) imperative (Bates, 2012). As a kind of ‘global discursive obsession’^c SI has become such a ubiquitous term in a variety of policy reports, as well as practice-oriented and academic contributions (Drucker, 1957; Chambon et al., 1982; Mumford, 2002; Mulgan et al., 2007; Howaldt & Schwarz, 2010; Vienna Declaration, 2011; EC, 2013). Omnipresent in political claims on major challenges (Harris & Albury, 2009; Moulaert et al., 2013), SI simultaneously labels the spreading of a diversity of maker movements, social ventures and societal organizational experiments across the world involving actors from government, business and civil society (Fontan et al., 2013; Edwards-Schachter et al., 2012; Hassan, 2013; Battisti, 2014). Despite the pervasive narratives and the extensive literature developed it is not easy to answer the question what SI is. Described as a ‘buzzword’ or ‘quasi-concept’ (Pol & Ville, 2009; Godin, 2012; Jenson & Harrisson, 2013), the term has become ‘overdetermined’ (Laclau & Mouffe, 1985) or, in most cases, its definition is avoided or ignored. The numerous and often contradictory interpretations of SI have ‘caused some scholars to drop it as a scientific concept’ (Moulaert et al., 2013, p.13).

Obstacles are usually justified by a widespread assumption about its origin being rooted in practice instead of scholarship, involving a plethora of activities resulting from improvisation and tacit knowledge acquired through experience (Bouchard, 1999; Caulier-Grice et al., 2012). Dominance of grey and policy-oriented literature is noted as another barrier, being SI a marginalised topic in both economic (Benneworth et al., 2015) and sociological theories of innovation (Howaldt et al., 2015). Moreover, SI is associated with a ‘babelizing’ phenomenon where the meaning of innovation moves between restrictive definitions based on technology to a vast range of ‘adjectives’ identifying other innovation types (Linton, 2009; Edwards-Schachter, *forthcoming*). A discursive fluidity in the meaning of ‘social’ and ‘societal’ is present not only in SI (Mulgan, 2006, 2012; Goldenberg et al, 2009; Nicholls & Murdock, 2012), but also in the notions of inclusive innovation (Cozzens & Sutz, 2012; Foster & Heeks, 2013), grassroots innovations (Gupta et al., 2003; Seyfang & Smith, 2007), frugal innovation (Pralahad, 2005), Base of Pyramid innovations (Pralahad, 2005; 2012); Jugaad innovation (Radjou

^cRoberts, Y. (2008). New ways of doing. Social innovation is a new global obsession. It might be a nebulous idea but it has huge potential. *The Guardian*, 11/08/2008.

et al., 2012), open social innovation (Chalmers, 2012; Chesbrough & Di Minin, 2014) and responsible innovation (Von Schomberg, 2013), among others. The addition of the adjective ‘social’ to innovation brings to the fore the discussion drawing on concepts like ‘social’ learning, ‘social’ capital, ‘social’ ‘sector’ and ‘social’ interactions in knowledge exchange (Kanter, 1999; Nicholls & Murdock, 2012). Debates on such aspects are not only intrinsic to conceptualizing SI but simultaneously face ideological and theoretical questioning about the nature and role of innovation in contemporary society (Jessop et al., 2013; Godin, 2015; Gulbrandsen & Aanstad, 2015).

Why and at what extent is SI ‘new’ and ‘different’? This paper attempts to answer to this ‘desperate quest for a definition’ (Djellal & Gallouj, 2012: p. 121) and the numerous calls for systematic conceptual reviews of SI (Mulgan et al., 2007; Mulgan, 2012; Caulier-Grice et al., 2012). The overall aim of this study is to explore the discursive content of SI, identifying definitions distributed among a diversity of ‘tribes and territories’ (Becher & Trowler, 2001) to answer the following questions:

- How has the conceptualization of SI evolved over the last six decades (1950 to 2014)?
- Is it possible to identify some common ‘core’ meaning/s in the pluri-vocal discourses and definitions of SI constructed by scholars, practitioners and policy-makers?
- Which are the ‘conceptual specificities’ (if any) of the SI concept?

Following the ideas of Keller (2005) and Hjørland (2015) we consider that the conceptualization process of SI is embedded in the interactions by persons and groups in social systems, where terms are essentially arrived at by social disputes and consensus, and the result of a subsequent socialization and ‘institutionalization’ of meanings^d. In this

^dAccording to Keller (2005) this perspective ranges from processes of generating, objectifying and institutionalising knowledge as ‘objective reality’ to the mechanisms of the individual’s more or less creative adoption of knowledge patterns taken from the collective ‘stock of knowledge’. Knowledge refers to everything which is supposed to ‘exist’ (including ideas, theories, everyday assumptions, language, incorporated routines and practices). The ‘social construction of knowledge’ is conceived as an ongoing activity, performance and process and the collective stocks of knowledge appear as institutions (like language itself), theories and other socio-cognitive devices, organisations, archives, texts and all kinds of materialities (e.g. practices, artefacts).

respect we analyze the process of meaning construction by ‘disciplines’ or ‘academic specialties’ connecting ‘discourse communities’, from a complementary view of constructivism and constructionism ontologies[°] (Hjørland, 2002; Talja et al., 2005). Our analysis attempts to examine texts and discourses as explicit mediators in the relationship between the notion of a thing or an ‘entity’ (that is stable, solid, bounded, controllable), and a process (that is unstable, fluid, emergent, elusive) (Thompson, 2011, p. 755). In what follows, Section 2 presents our theoretical framework, summarizing previous reviews on definitions of SI and arguments to investigate SI as a trans-disciplinary concept. Section 3 lays out our methodology. Section 4 presents and discusses the principal findings and, finally, Section 5 concludes and argues for a new self-consistent interpretation of SI that reflects its conceptual roots, its practical uses and its most promising avenues of scholarship.

2 State of knowledge and a new theoretical framework

2.1 Previous reviews

Efforts to characterize SI are reflected in numerous reports (Cloutier, 2003; Nilsson, 2003; Moulaert et al., 2005; Goldenberg et al., 2009; Howaldt & Schwarz, 2010; Caulier-Grice et al., 2012), working papers (Sharra & Nyssens, 2010; Loogma et al., 2013; Rüede & Lurtz, 2013; Juliani, 2014) and academic papers (Pol & Ville, 2009; Edwards-Schachter et al., 2012; Phillips et al., 2015). However, most contributions lack a systematic methodology or contain one which is either not properly explained or presents serious weaknesses (selection bias, inclusion criteria not reported, limitation of sample, etc.) (see Annex A).

[°]From the constructionism perspective, as Talja et al. (2005, p. 93) affirm, ‘Language is constitutive for the construction of selves and the formation of meanings’. Regarding the differences between constructivism, collectivism and constructionism, Talja et al. (2005) highlight that ‘Constructionism takes discursive practices as its research object and perceives the production of knowledge in discourses as the primary context for information behaviour and knowledge organisation. Collectivism takes professions and knowledge domains as its research object and sees the information and communication practices and terminologies of professions and domains as the primary context for information behaviour and knowledge organisation. Cognitive constructivism takes individual searchers and their interaction with information retrieval systems as its research object and takes the view that work tasks provide the primary context for information behaviour’ (p. 92). Despite such differences, they consider that ‘Cognitive constructivism, collectivism and constructionism clearly complement each other’ (p. 92).

An exception is the work of Rüede & Lurtz (2013) analyzing 318 documents with a narrative approach, resulting in a set of seven categories based on how different aims and purposes of SI are understood by different actors. In an ambitious project, Godin (2008, 2012, 2015) documents the origins and development of SI over the last two centuries, covering ‘hundreds of titles on innovation’ (2012, p. 7) from England, France and the United States. However, Godin (2008, 2012) covers few references to the ample literature developed in the last decades. Other notable recent works include that of Sharra & Nyssens (2010) in commenting a dozen selected contributions and Phillips et al. (2015) performing a systematic review of 122 papers, both exploring links between SI and social entrepreneurship. Rana et al. (2014) analyze 105 papers restricted to SI in the public sector and not focused on a general definition of SI. A recent contribution of Choi & Majumdar (2015) selects 16 definitions, identifying three uses of the SI concept as social change, intangible innovations and aiming at social value creation.

Furthermore, most analyses are restricted to critically discussing some characteristics of SI and the prevailing confusion it. Cloutier (2003) concludes her review by affirming that ‘SI as an object does not have, in general, distinctive features. It does not take a specific form that would review-identify it immediately’ (p. 41). A policy-driven report by Caulier-Grice et al. (2012) also remarks on this limitation, analyzing a set of contributions from Economics, Sociology and Management fields. They propose five core elements to characterize SIs: novelty, the implementation of practical ideas meeting a social need, their effectiveness regarding existing solutions and their potentiality to enhance society’s capacity to act.

Several authors suggest an analytical approach to group a common set of ‘elements’ or ‘dimensions’ based on what SI is (e.g. a law, organization, value, norm, code, role, etc.), who can ‘do’ it (actors and society sectors), how and where it is ‘done’ and, in particular, why their aims are different from other innovation types (Dedijer, 1984; Cloutier, 2003; Edwards-Schachter et al., 2012; Godin, 2012; Juliani, 2014). Degelsegger & Kesselring (2012, p. 70) consider that SI can be analyzed ‘as an outcome and as a process just like innovation in general’. This is precisely the principal argument that guides our work: the study of SI as *any innovation process*.

2.2 Innovation process approach & learning-based perspective of innovation

Given that knowledge is ‘the outcome of a social process’ (Borrás & Edler, 2015, p. 26), innovation is increasingly understood as a complex socio-cultural process of learning involving a diversity of actors and knowledge sources (Garud et al., 2013). As Landry et al. (2002, p. 683) note, ‘the conception of innovation has evolved rather drastically from the 1950s to date from the idea of innovation as a discrete event resulting from knowledge developed by isolated inventors and isolated researchers to a complex process which success rests upon the interactions and exchanges of knowledge involving a large diversity of actors in situations of interdependence’.^f Our analysis foregrounds such multiplicity of innovation actors, social interactions and interactive learning at the core of innovation processes and the knowledge-based ‘learning economy’ (Lundvall, 1992, 2013). For decades, Lundvall & Johnson (1994) and Edquist (1997) have advocated the ‘interactive learning-based’ idea applied to the concept of innovation system by focusing on the role of knowledge, learning and institutions in innovation processes, arguing for research at the micro-level. In our view, micro-level perspectives can be examined by studying learning embedded in such social interactions and social practices – in *strictu sensu*, social and *cultural* practices (Reckwitz, 2002) – where both tangible and intangible forms of capital are constructed, especially social and human capital. Our argument deepens the concept of innovation process from a learning perspective in the following aspects:

- a) there is an emphasis on ‘social interactions’ as a *social practice* involving perceptions, meanings, bodily competences, ‘materialities’ and ‘acts’ (Wehling, 2006; Reckwitz, 2002; Shove et al., 2012). Ideation and learning as potential sources of all innovation occur in social practices that could not be isolated from purposes, values and power interactions and socio-cultural and institutional contexts. Innovation processes are determined by social action and such action is

^fLundvall (2013, p. 30) affirms that ‘the most important lesson of my research experience is that it is essential to understand innovation as an interactive process’. Landry et al. (2002) foreground the role of social interactions and both tangible and intangible forms of capital, especially social capital to explain innovation processes. According to Coleman [33, p. 16]: social capital is defined by its function not as a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure.

always a purposive and deliberative action. As Hellström (2004, p. 644-45) maintains: ‘Key to the act of innovation has, so far, been to view the actor as involved in various forms of purposive action, in combination with a number of qualifying aspects of how purpose is conceived and executed. As far as the actor is concerned, be it a group or a person, *priesis*—or the practical engagement in activity—may be seen as an imperative for the genesis of innovation’. Interactive learning here not only includes acquisition of knowledge, competences and skills[§] but broadly can be defined as ‘any process that involves a permanent capacity change’ (Illeris 2007, p. 3).

- b) innovation processes involve institutionalization of social practices situating actors’ ability to change rules, relational ties, or distribution of resources (Scott, 2008). Institutions are created through learning processes where ‘learning not only includes behavioural learning (learning-by-doing which evolutionary theories operationalize through search and performance feed-back), but also cognitive learning (which emphasizes action, reflection and sense-making)’ (cited by Geels, 2010, p. 499).
- c) social practices span the different stages of any innovation, from the origins or sources of invention and its development to its diffusion, use and effects or impacts.

As we sketch out in Figure 1, innovation as process is purpose-oriented to certain aims (e.g., more or less profit and non-profit), involves ‘inputs’, ‘resources’ and ‘capabilities’; ‘stakeholders’ (actors and agents); ‘locus’, (process) organization and contextual conditions (social, cultural, institutional).

[§]Learning and process perspective involve what Godin (2008, p. 279) highlights like a ‘comprehensive theory’ of innovation, addressing ‘innovation in ideas, things and behaviors –not only technology’ related to social change.

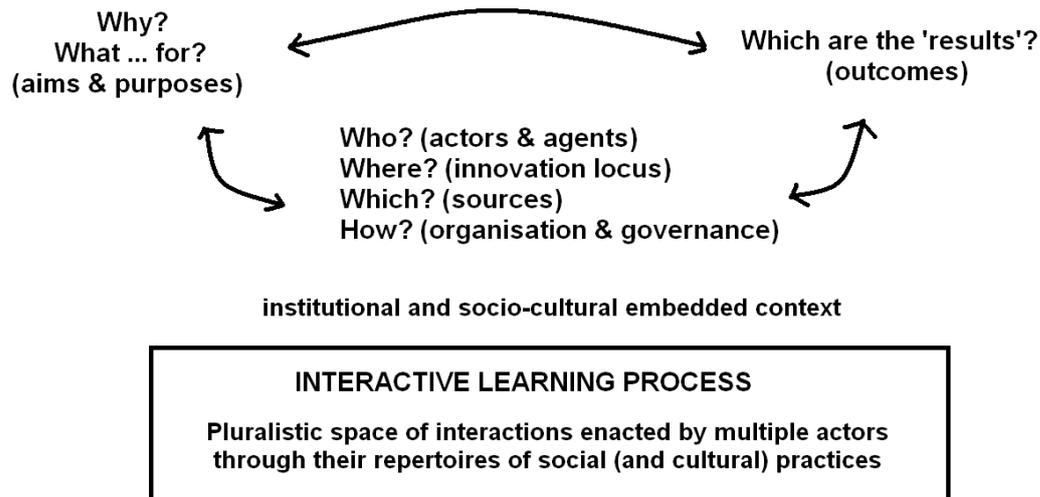


Figure 1. Elements to guide the analysis of SI as innovation process

In our view, the existence of ‘gaps’ to satisfactorily explaining the meaning of SI, which is a common message we found in our literature review, cannot be divorced from the need to broaden current innovation theories at macro level (e.g., society as systems, societal and technological change, spatial models of innovation dynamics, institutional contexts), meso level (networks, intermediaries, social movements organization) and micro level (inventions emerged from creative/transformational and problem-solving processes developed by actors). We use this broad perspective as a heuristic analytical framework in order to overcome the ‘fuzziness’ in the actual ontological foundations and explore constituent elements used by different actors and disciplinary communities.

2.3 SI as a trans-disciplinary construct

In order to apprehend the conceptual complexity of SI it is necessary to ‘capture’ and analyze possible commonalities in multiple discourses where disciplinary and trans-disciplinary approaches coexist (Klein, 2004). Overall, the conceptualization of SI encompasses the process of interpretation, which rather than assuming cognitive consensus seeks to establish the degree to which it in fact exists (Howaldt & Schwartz, 2010; Charmaz, 2014). In this regard, debates and struggles for defining SI as a central object of a ‘new specialty or sub-specialty’ are inseparable from the organizational, cognitive, social and institutional frameworks where cultures of academic tribes and other interest groups live and interact (Chubin, 1976; Becher & Trowler, 2001). In sum, SI as a trans-disciplinary construct advocates the possibility to integrate the inter-play

between multi-disciplinary and inter-disciplinary approaches, resulting in interpretations of meanings about the ‘empirical reality’ of SI phenomena (Strauss & Cordin, 1990; Mulgan, 2012). This perspective also relates to the social construction of scientific communities around social meanings that are created and encapsulated through the ‘woven fabric’ of texts as physical artifacts (Latour, 1987; Keenoy & Oswick, 2000; Keller, 2005; Martin et al., 2012). As Skinner (1988) states, ‘words are markers of the social understanding of the world, and the emergence of new words is a marker of changes in society’.

3 Methods

3.1 Database and compilation process of SI definitions

A comprehensive literature review was used to generate a database of definitions from different types of documents. The search was performed in December 2013 with an update in October 2014, using the key words ‘social innovation’ and other keyword combinations^h. One thousand registers were retrieved from Google Scholar using the software Publish or Perish and compared with the list of academic papers retrieved from Web of Science (N= 634 documents) and SCOPUS (N= 705). We also used the *snowball* technique, which is appropriate when the elements of a population (e.g., policy reports) are difficult to locate or not indexed (Greenhalgh & Peacock, 2005). After a first selection of 2,339 documents, we filtered the information by manually selecting only documents with explicit definitions of SI (the criterion for selection). The final database comprises N= 254 definitions (Table 1), ordered according to date of publication and academic relevance (from highly to minor number of cites), type of document and number of authors.

^hOur first search at WoS included 634 documents using as key terms ‘social innovation’, ‘soci* innovation’ and other terms (‘grassroots innovation’ or ‘Jugaad innovation’ or ‘inclusive innovation’ or ‘social entrepreneurship’ or ‘frugal innovation’ or ‘Base of Pyramid innovation’ or ‘sustainability innovation’). We also used key terms in other languages (French, German, Spanish and Portuguese) and translated the selected documents to English.

Table 1. Sample distribution containing explicit definitions of SI according to the source type

Number of documents	Journal papers			Other documents
	WoK	SCOPUS	Google scholar*	
Total (after filtering)	381	705	1000	
Total documents with definitions of SI	55	14	38	147

* Most of the contributions of WoS and SCOPUS are also present in the Google scholar list

Due to the lack of explicit definitions in the first sparse references to SI (e.g., Ward, 1903; Ogburn, 1922; Weeks, 1932), we decided to limit our sample to definitions published between 1950 and May 2014, leaving us with 251 documents. The number of definitions we found mirrors the well-documented rapid growth of SI literature from 2000 to date (Cajaiba-Santana, 2013). Figure 2 presents the distribution in intervals of 5 years according to the type of document, showing that some academic ‘tribes’ have been interested in SI for decades and predates the “grey literature”.

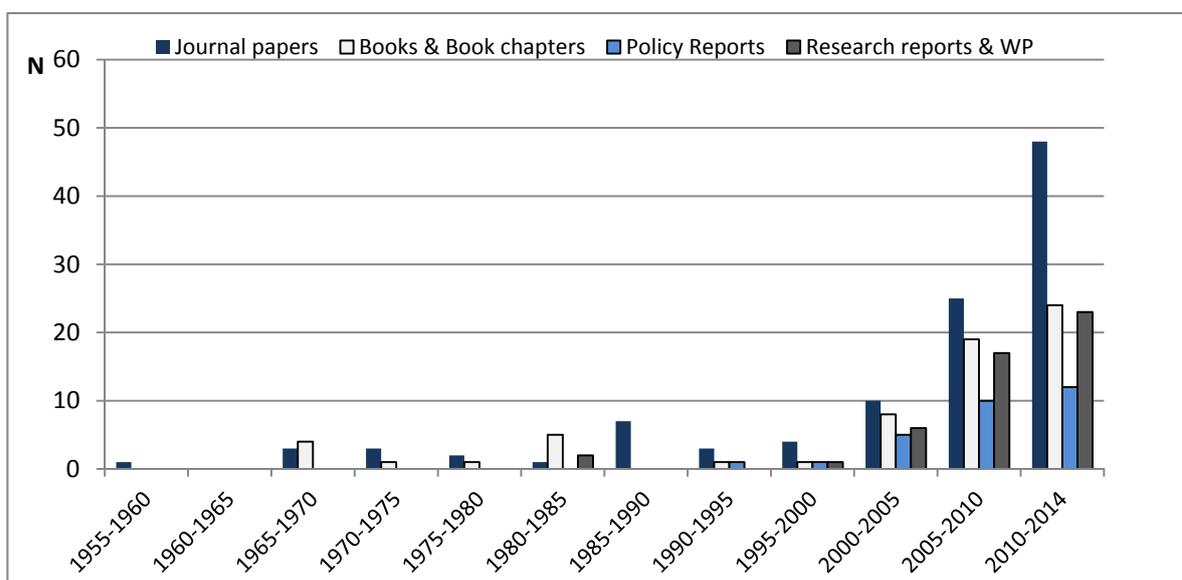


Figure 2. Temporal distribution of definitions (unit of analysis) from 1955 to 2014 (N= 251) according to the type of document analyzed.

3.2 Content analysis strategies and procedures

Content analysis constitutes a systematic, reproducible technique that enables to identify specified characteristics of messages, being a concept socially constructed through continuous processes of differentiating, fixing, naming, labeling, classifying and relating

(Charmaz, 2008, 2014; Segercrantz & Seeck, 2013). In our analysis, we follow mixed qualitative methodologies with an approach oriented towards a constructionist/interpretivist ontology.

a) *First content analysis*: We applied a mapping and clustering algorithm using the VoSViewer software (Van Eck & Waltman, 2010). This program allows us to extract terms rather than words (based on a grammar algorithm applied to English texts) and construct a two-dimensional map based on their co-occurrence, where smaller distances refer to greater number of co-occurrences. This unified co-word mapping and clustering technique has proven to be a robust means to identify different cognitive structures through sets of documents (Leyderdorff & Welbers, 2011). Term co-occurrence comes from linguistics and semantic network analysis and is based on the idea that a term provides clues to specific concepts (Ryan & Bernard, 2003). More specifically, in our case, it is a heuristic which provides some visual clues on the existence of different ‘trends’ and a ‘global content map’ of SI pluri-vocal discourses.

b) *Second content analysis*: Defining ‘words’ as basic semantic units of texts to be classified, we used word frequency counts to identify words of potential interest, using what Glaser & Strauss (1967) called the ‘constant comparison method’ involving analysis for similarities and differences by making systematic comparisons. Data analysis was conducted in iterative process identifying, comparing and contrasting major categories and/or minor categories in order to develop inductive abstract analytical categories through systematic data analysis (Charmaz, 2014)ⁱ The interpretative content analysis allows us to identify some convergent discourses to propose some ‘meta-categories’ in discourses to define SI. Given that a category is ‘a group of words with similar meaning or connotations’ (Weber, 1990, p. 37), we identified and grouped phrases closely together in an open process of continuous readjustment until finalizing the analysis of all texts. Long and complex sentences were broken down into shorter thematic units and compared to establish the classification. Phrases with ambiguity in the meaning were not included and each word/words/phrases were included in only one label/category. For example, we considered under the same label the units ‘social

ⁱWe agree with Glaser & Strauss (1967, p. tecVIII) considering that despite the ‘emphasis is on generating theory rather than verifying it, we take special pains not to divorce those two activities’. In a second part of our study we complement this analysis considering other aspects from a constructionist approach (Charmaz, 2008,2014).

entrepreneurship’ and ‘social entrepreneurs’, while putting ‘entrepreneurship’/‘entrepreneurs’ (without the adjective ‘social’) into another category; we also considered ‘human need’ as synonymous of ‘basic need’, ‘unmet need’ and ‘need of deprived groups’ (see more details in Annex B). Stability and accuracy of the categories were considered comparing two coding processes realized with a difference of three months.

4 Findings: cognitive and pluri-vocal discursive basis of SI

4.1 Semantic global view using VoS software

Figure 3 shows the results of mapping and clustering the terms found in the 251 definitions of SI that were isolated, based on the co-occurrence of terms in the definitions themselves.

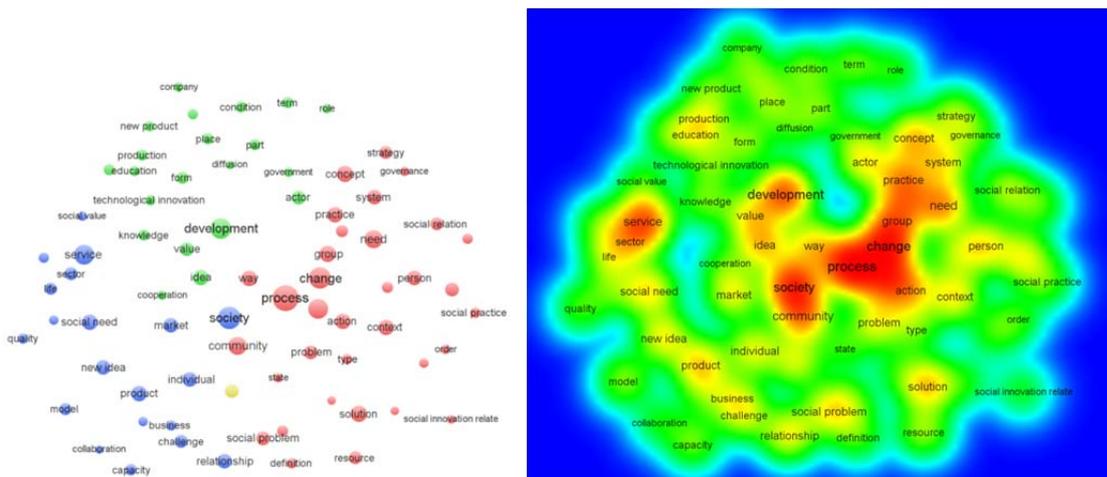


Figure 3. Mapping co-occurrence of main terms found in definitions of SI (N=251). Left: cluster distribution; Right: density map

The most commonly-occurring term, ‘social innovation’, is removed, and a minimal threshold of 10 for the occurrence of terms is applied (for clarity), which yields the maps shown in Figure 3. We can view this map as a set of clusters derived from a measure of similarity also based on the distance (Fig. 3, left), or simply as a density of terms which occur. The bulk of definitions are focused on the central notions of social processes and social change (centrality of ‘society’, ‘process’, ‘change’), being ‘Development’ and ‘Service sector’ two strong associated components of the ‘content discourse’ revealed

across six decades. The clusters, which should not be viewed as ‘rigid’, suggest three main areas, tightly related to:

- Red cluster (right-hand side) : highlights ‘process’, ‘people’, ‘change’, ‘community’, ‘action’, ‘problem’, ‘need’, ‘social practice’, ‘context’ and ‘social relation’. This cluster focused on process, change and social practices that underpin SI.
- Blue cluster (bottom left): shows links between ‘society’, ‘market’, ‘social need’, ‘new idea’, ‘product’, ‘business’, ‘challenge’. ‘Social need’ tightly links with ‘service’, ‘sector’ and ‘quality’ and ‘life’. This is about bringing new innovation to market in order to address a social need, linking with both ‘market’ and ‘society’.
- Green cluster (top left) highlights the centrality of ‘development’ together with ‘value’ and ‘knowledge’; also ‘technological innovation’, ‘new product’, ‘actor’, and ‘government’. These terms seem to be closely linked to ‘classical notions’ stressing development and technological innovation.

These figures provide an overview of the global discourse and confirm the existence of different perspectives and academic ‘tribes’. Despite the existence of budding clusters the map shows an overall ‘non-specificity’ of terms associated with the discourse surrounding SI definitions, indicating that more in-depth analysis is required to fully tease apart the ontological bases and cognitive boundaries of SI.

4.2 Evolution in the discursive content defining SI

Table 2 summarizes the principal categories emerged containing common terms/phrases and their frequency distribution and time intervals considered. Most of text grouped in the different ‘meta-labels’ indicate a gradual trend towards a ‘stabilization’ (general acceptance) in the use of core terms contained in the definitions of SI¹. The three intervals were chosen for convenience but results not differ significantly when we look at decades, for instance.

¹Godin (2008, p. 6) explains the notion of ‘relative stabilization’ as result to the genesis, transformation and power struggles in the ‘formalization’ of concepts. He performed a genealogical study on the innovation concept based on a Foucaultian methodology starting with the exploration of words (or terms) related bias until to obtain such ‘relative stabilization’.

Table 2. Summary of principal categories containing common terms/phrases and their frequency distribution (N=251 definitions). Intervals considered: 1955-1974, 1975-1994 and 1995-2014. Note: the 'X' in the right-hand column indicates the presence of given term or phrase in each of the three periods analyzed.

Coded categories	1955-1974	1975-1994	1995-2014	
	N=12	N=24	N=215	
frequency (%)				
A. Aims/ends and generation of values in SI processes				
A1 'oriented to social values'	2 (16.7)	6 (25.0)	47 (21.9)	X
A2 'improvement of economic growth'	1 (8.3)	0	11 (5.1)	-
A3 'improvement of well-being & quality of life'/'oriented to restorative justice'/'social inclusion'	2 (16.7)	6 (25.0)	41 (19.1)	X
A4 'addressed to unmet social needs'/'complex social problems'				
A5 'related to CSR/CSI'	5 (41.7)	6 (25.0)	91 (42.3)	X
	0	0	7 (3.3)	-
B. The 'outputs/outcomes' of SI processes				
B1: 'social invention'/'new law, norm and/or rule'	10 (83.3)	10 (39.1)	44 (20.5)	X
B2: 'new combination or configuration of social practices'	5 (41.7)	7 (30.4)	83 (38.6)	X
B3: 'new or improved products'	1 (8.3)	4 (16.7)	54 (25.1)	X
B4 'new organization method'	5 (41.7)	5 (20.8)	39 (18.1)	X
B5: 'new services'	1 (8.3)	4 (16.7)	50 (23.3)	X
B6: (innovation in) 'marketing'	1 (8.3)	1 (4.2)	3 (1.4)	X
B7: 'new technology/ICT development'	3 (25.0)	1 (4.2)	7 (3.3)	X
B8: 'social technology'	2 (16.7)	1 (4.2)	1 (0.5)	-
C. The organization of SI processes: Sources, actors, agents and interrelationships				
C1 'process'	1 (8.3)	6 (25.0)	82 (38.1)	X
C2 'learning dynamics'(process) & 'collective creativity'	3 (25.0)	6 (25.0)	73 (34.0)	X
C3 'creating new skills and capabilities'	0	3 (12.5)	6 (2.8)	-
C4 'design & design thinking'	1 (8.3)	1 (4.2)	8 (3.7)	X
C5 'social and grass-root movements'	1 (8.3)	3 (12.5)	65 (30.2)	X
C6 'user participation/co-creation'	1 (8.3)	2 (8.3)	11 (5.1)	X
C7 'resources and costs'	0	0	7 (3.3)	-
C8 'social entrepreneurship and social economy'	1 (8.3)	2 (8.3)	29 (13.5)	X
C9 'entrepreneurship'				

C10 'community participation'/'philanthropy and voluntary organizations'/'civil society/third sector/NGO'	0	1 (4.2)	7 (3.3)	-
C11 'cross-sector between government, business and civil society'	1 (8.3)	3 (12.5)	81 (37.7)	X
C12 'change in territorial development models'	1 (8.3)	3 (12.5)	42 (19.5)	X
	2 (16.7)	2 (8.3)	48 (22.3)	X
D. Institutions and power in SI processes				
D1 'institutional change'	1 (8.3)	4 (16.7)	32 (14.9)	X
D2 'cultural change'	0	1 (4.2)	15 (7.0)	-
D3 '(formation of) 'social capital'	0	0	8 (3.7)	-
D4 'innovative governance with civil involvement'/'collective agency'	4 (33.3)	5 (20.8)	42 (19.5)	X
D5 'empowerment'	1 (8.3)	2 (8.3)	10 (4.7)	X
E. SI processes in evolving complex macro-systems				
E1 'nation states' powerlessness'	1 (8.3)	1 (4.2)	7 (3.3)	X
E2 (social) 'market failures'	0	4 (16.7)	59 (27.4)	-
E3 (oriented to) 'sustainability'/'change in patterns of production and consumerism'	0	4 (16.7)	42 (19.5)	-
E4 'socio-technical change'	0	3 (12.5)	26 (12.1)	-
E5 'social change'	6 (50.0)	4 (16.7)	69 (32.1)	X
E6 'radical innovation'/(SI as radical change'	1 (8.3)	0	4 (1.9)	-
E7 'reorganization of work'	1 (8.3)	2 (8.3)	15 (7.0)	X

A few salient trends immediately apparent in the three periods analyzed are 'change in social practices/new combination or configuration of social practices' (B2), the orientation to the satisfaction of 'human needs/basic needs/unmet needs/needs of deprived groups' and 'complex social problems' (A4) and the production of 'social change'/'change in social systems/transformation of the organization of social systems' social change'. Other increasing popular terms address to the orientation to 'social values' (A1, 16.7%, 25.0% and 21.9%) that can be reinforced if we consider other labels like A5 ('oriented to restorative justice & social inclusion') and A3 ('improvement of well-being and quality of life'). C10 ('community participation'/'philanthropy and voluntary organizations'/'civil society/third sector/NGO') and C11 ('cross-sector between government, business and civil society') exhibit a similar rising trend, while D4

(‘innovative governance with civil involvement’/‘collective agency’) experiment a slight decrease.

As we commented before, we excluded the contributions of Ward (1903), Ogburn (1922) and Weeks (1932) who define social invention but not mention the term SI. However, these seminal works comprise a common set of words, like ‘new ways, techniques, procedures, laws’ [...] ‘involves people’ (Weeks, 1932, p. 367-9) and ‘collective action’ (Ward, 1903, p. 571), expressions that re-emerge later in SI definitions^k. Conger (1974, p. 7) defines social invention as ‘a new law, organization or procedure that changes the ways in which people relate to themselves or to each other, either individually or collectively’. Laschewski (2011, p. 7) affirms that ‘social innovation means that a social invention is applied and institutionalised in practice’. Moulaert et al. (2013) explain the earlier use of social invention by Max Weber referring more to structural transformations of society and its social relations as part of ‘the ‘proto-disciplinary age’ of SI.

‘Social inventions’ (B1) appear in 10 of the 12 definitions we found in the first interval (83.3%), but decline in the second interval (39.1%) and the last interval (20.5%). The decrease in the use of the term ‘social invention’ contrasts with a slight increase in references to ‘new or improved products’ (B3, 8.3%, 16.7% and 25.1%) and ‘new services’ (B5, 8.3%, 16.7% and 23.3%). This can be interpreted as a shift and/or reformulation of SI as traditional innovation, in the context of the restructuring of the welfare state and the ‘marketization’ orientation of the public services sector (Pierre, 1995) and nonprofit sector (Eikenberry & Kluver, 2004) and, perhaps even the ‘commodification of all social relations’ as the ultimate form of capitalism (Moulaert, 2009, p. 11).

Another distinctive aspect is the rising trend in recognizing SI under the label of ‘process’ (C1, 8.3%, 25.0% and 38.1%) associated to ‘collective learning’/‘learning dynamics & creativity’ (C2, 25.0%, 25.0% and 34.0%). Regarding the suggested relationship in the green cluster (Fig. 3) between SI and technology, our content analysis across six decades clearly put in evidence fuzzy borders between them. One example is

^kFor Ogburn (1922) social invention consists in making adjustments as will induce men to act in the manner most advantageous to society. ...The social invention suggested is social appropriation of knowledge or education for all, as the combination or modification of previously existing and known and/or intangible cultural elements to create a new element.

the use of the expression ‘social technologies’¹ as synonymous of SI, intrinsically related to social development problems (Conger, 1974; Mesthene, 1969), especially in the context of developing countries (Dagnino & Gómes, 2000). Definitions also contain a variety of roles of ‘technology’ as partner or complement, subaltern, substitute, driver or opponent; sometimes mixing in descriptions involving technological developments oriented to social ends or to products and services ‘ICT-enabled’ or ‘ICT-supported’. For Gershuny (1983), SI induces technological innovation. Chambon et al. (1982) and Zapf (1989) consider that are two different and independent types. According to Hämäläinen & Heiskala (2007) SI comprises change in regulative, normative and cultural innovations and differs from techno-economic innovations, while Harrisson et al. (2009, p. 9) maintain that ‘technological and social innovations in organizations are the two faces of the same coin’.

4.2.1 First period (1955-74)

Despite the fact that the number of definitions found in the two first periods are barely enough to capture a set of isolated interpretations of the meaning, they are useful to illustrate some ideas present in the academic discourse during those decades. Thus, the work of Garvey & Griffith (1966), in the field of social psychology/behavioural sciences, identifies SI with the adoption and dissemination of (innovative) psychosocial interventions –named in several papers as Experimental Social Innovations- involving change in social practices of both people and the academic psychologist community^m. These changes attempted to promote the provision of social and public services with particular attention to groups with marginal social identityⁿ.

¹ The term ‘social technology’ was first used at the University of Chicago by Albion Woodbury Small and Charles Richmond Henderson around the end of the 19th century. In 1901 Henderson published ‘The Scope of Social Technology’ describing it as ‘a system of conscious and purposeful organization of persons in which every actual, natural social organization finds its true place, and all factors in harmony cooperate to realize an increasing aggregate and better proportions of the “health, wealth, beauty, knowledge, sociability, and rightness” desires.’ Also see Bennett, W. L., & Segerberg, A. (2011). Digital media and the personalization of collective action: Social technology and the organization of protests against the global economic crisis. *Information, Communication & Society*, 14(6), 770-799.

^mSee for example Seidman, E. (2003). Fairweather and ESID: contemporary impact and a legacy for the 21st century. *Am J Community Psychol* 32(34), 371-375. We identified but could not access presumed similar contributions in Germany, like Eysenck, H. J. (1973). *Die Experimentiergesellschaft: soziale Innovationen durch angewandte Psychologie*. Rowohlt.

ⁿIn Canada the journal *Nouvelles Pratiques Sociales* (NPS), created in 1988 in the field of sociology, covers themes of work in the social and health fields and the impact of social policies in the practical arena.

Central to definitions we found in this first period are the generation of ‘social inventions’ (B1, 83.3%), ‘social change’ (E5, 50%), ‘change in social practices’ (B29, ‘unmet social needs’ (A4) and ‘new organization methods’ (B4) mentioned by Drucker (1957); Fairweather (1967, 1972), Coleman (1970) and Holt (1971). ‘Learning dynamics’ (C2) are present in the broad conception of ‘creation’ and collective creation (Gabor, 1970).

Definitions of Fairweather (1967) and Taylor (1970), also from the behavioral sciences field, emphasize the meaning of SI as the emergence of ‘new ways of doing things’ to ‘dealing with poverty’ (Taylor, 1970, p. 70) and develop ‘alternative solutions to social problems’. During this interval narratives are strongly associated with experimentation in social policies (Fairweather & Tornatzky, 1977; Lapierre, 1977) and the search of managerial efficiency in organizations (Drucker, 1957).

4.2.2 Second period (1975-1994)

This interval shows a major use of terms naming ‘improvement of well-being and quality of life’, ‘restorative justice’ and ‘social cohesion’ (A3), ‘nation states’ powerlessness’ (E1) and references to ‘sustainability’ and ‘change in patterns of production and consumerism’ (E3). We also found explicit references to ‘generation of new skills and capabilities’ (C3) and ‘formation of social capital’ (D3). While the term ‘social economy’ emerged in the 1840s, comprising the economic activities developed by co-operatives, mutual, voluntary associations and foundations (Bouchard, 2000), explicit definitions of SI linked with this topic in this period are scarce.

‘Key’ terms in this period coincide with previous one, presumably accompanying the growing impact of the globalization and attention paid to environmental concerns (the first Earth Summit and establishment of the Agenda21 was in 1992). They are: ‘social inventions’ (B1, 39.1%), ‘change in social practices’ (B2, 30.4%) followed with the same percentage (25.0%) by ‘orientation to social values’ (A1) and ‘addressed to social needs’ (A4), ‘improvement of well-being & quality of life’/‘oriented to restorative justice & social inclusion’ (A3) and the consideration of SI as ‘process’ (C1) involving ‘creativity and learning dynamics’ (C2). At the ends of 1980s research paid more attention to SI and human development from the spatial and territorial dimensions explicitly focusing on change in the industrial organization, re-organization of work and production models and participatory governance related to processes of socioeconomic polarization and social

exclusion (Chambon et al., 1982; Held & King, 1984; Swyngedouw, 1987). This perspective was deepened in most highly cited academic contributions in following years (e.g., Moulaert & Nussbaumer, 2004; Gerometta et al., 2005; Novy & Leubolt, 2005; Moulaert et al., 2005, 2013).

4.2.3 Third period: 1995-2014

Despite the explosion of SI literature in this last period, Table 2 shows the continuity in defining SI ‘addressing to unmet social needs/complex problems’ (A4, 42.3%) producing ‘change in social practices’ (B2, 38.6%), with a slight rebound in the term ‘social change’ (E5, 32.1%) and the perspective of spatial/territorial/urban development (C12, 21.9%) with respect to previous intervals. Similar to the consideration of IS as a ‘process’ (C1, 38.1%) associated with ‘creativity and collective learning’ (C2, 34.0%) with ‘community participation’/‘philanthropy and voluntary organizations’/‘civil society/third sector/NGO’ (C10, 37.7%), that can be combined with the label referred to the ‘hybridization of public, private and civil sectors’ (C11, 19.5%). Debates on values (related to A1 and A3 categories) are also present in a significant number of definitions, mentioning ‘solidarity’, ‘social cohesion’, ‘social inclusion’ and also to ‘quality of life’, ‘environmental quality’ and ‘efficiency’, in particular in the provision of public services. Harrison et al. (2009, p. 11) maintain that ‘social values constitute the very driving force for social innovations’.

This last period highlights the ‘rediscovery’ of SI through a proliferation of new words and explanations attributable to the intensifying of the planetary crisis along socio-economic, socio-ecological and socio-political dimensions (Dobrescu, 2009; Harrisson et al., 2009; Caulier-Grice et al., 2010; Bouchard, 2012; Faaij et al., 2013). SI moved to the forefront of policy discourse (in particular around 2000 onwards) not only as a ‘new’ approach ‘to solving the crisis of the welfare state’ (Moulaert et al., 2013, p. 17) but as the principal instrument to cope with complex global issues under the new label of ‘grand challenges’ (EC, 2010; OECD, 2011; Nicholls & Murdock^o, 2012). In words of Dobrescu (2009, p. 6), ‘the crisis has reinforced the meaning of innovation as social innovation’

^o Nicholls & Murdock (2012, p. 25) maintain that ‘Social innovation offers potential solutions to climate change, the crisis of the welfare state, health pandemics and failures, social dislocation and inequality, and educational failure. The need to address –if not solve- these ‘wicked’ problems presents us with global challenges that will become increasingly evident in all our everyday lives’.

and ‘seeks to set framework conditions for development and to create new paths for growth’.

But the notion of sustainability linked to SI is by no means new, dating back to the Club of Rome report *Limits to Growth* (Meadows et al., 1972), which likewise explicitly names SI in parallel to technical change, to changes in political processes, structures and social practices oriented around sustainable development. Our findings show that definitions in this last period contain more explicit references to sustainability, in a similar measure to ‘grand-challenges’ and explanations on ‘social change’ and ‘socio-technical change’, particularly in policy reports (OECD, 2001; 2011; Manzini & Jégou, 2003; EC, 2010; Bates, 2012; Osberg & Schmidpeter, 2013). References to ‘complex and intractable problems’ (E2) are found to increase slightly in this last period (27.6%), linked to terms like ‘collective learning’ and ‘social learning’ as central elements to the process dimension in various SI definitions (Crozier & Friedberg, 1993; Mumford, 2002; Hochgerner, 2009).

Terms like ‘institutions’, ‘institutional change’, ‘legitimization’ (of social practices), ‘resistance’, ‘resilience’, ‘co-creation’ and ‘empowerment’ related to ‘cross-sector partnerships’, ‘grass-roots’ and ‘community-driven’ participation are present in definitions from systemic approaches and macro perspectives on the role of SI in human development and social and technological change (Moulaert et al., 2005; Hämäläinen & Heiskala, 2007; Moore & Westley, 2011; Cajaiba-Santana, 2013; Haxeltine et al., 2013). Mumford (2002, p. 256) highlights that ‘around the year 2000 the discourse show that SI was transforming in a kind of federating concept to label ‘practices’ of charities, social enterprises, CSR initiatives, etc.’ Research paying attention to ‘new modes of social organization by the grass-roots movements’ (Moulaert, 2000, p. 79) is experimenting a shift attempting to explain the growing heterogeneity of ‘cross-partnerships’, e.g. in the case of innovation hubs, collaborative co-working spaces and living labs (Edwards-Schachter et al. 2012; Bates, 2012). Old labels re-emerge in these new innovation spaces with more ample re-interpretations. Thus, the narratives of Weeks (1932, p. 367) about social inventions referred to ‘introducing refinements of design’ are present in recent definitions including ‘design’ and ‘design thinking’ linked with sustainability and SI (Morelli, 2007; Manzini, 2012) and discussion regarding ‘collective creation’ (Crozier & Friedberg, 1993), ‘co-creation’ and ‘collective process of learning’ (Cloutier, 2003; Gerber, 2006). In addition, perspectives referring to collective creativity, work

organization and mass coordination, as found in the work of Drucker (1957; 1987) are developed in the definition of Mumford (2002), one of the most cited contemporary authors.

The attention paid at the end of 1980s to territorial and spatial perspectives crystallized in several highly cited papers, research and policy reports (Moulaert 2000, Regalia, 2006; MacCallum et al., 2009; Moulaert & Mehmood, 2010). In words of Van Dyck & Van Van den Broeck (2013, p. 131) ‘social innovation, as a way to foster social cohesion, is an inherently territorialized process’ involving ‘the transformation of spatial relations’ (p. 133). In this respect, the proposals of new models of territorial development (Moulaert et al., 2005; 2007) involving new forms of governance, community participation and collective agency (Swngedouw, 1987; Moulaert et al., 2013) are particularly relevant over the last decade.

The term ‘Corporate social responsibility (CSR)’ (A6) comes out in definitions of SI in this last decade. CSR was first introduced by Rosabeth Moss Kanter (1999), who argued that companies should develop solutions that create new markets while also addressing social concerns. However, she does not mention SI explicitly; it is referred to in later definitions of Ellis (2010) and Saul (2011), who proposed ‘to transform’ CSR into Corporate Social Innovation (CSI), linking with ‘the new economics of social change’, where corporations take advantage in new markets ‘developing “social” products and services’ and, ‘at the same time they create social value’ (Saul, 2011, p. 4). In fact, this earliest reference to Kanter (1999) identifying the social sector as a rich source of business innovation and the impulse experimented in the 1960s (Mulgan, 2006) is central to recent arguments involving SI and social entrepreneurship by authors like Leadbeater (1997; 2007), Moulaert & Ailenei (2005) and Dees & Anderson (2006). Moulaert & Ailenei (2005, p. 2037) highlights the role of SI in the social economy, referring to ‘the (re)introduction of social justice into production and allocation systems’. Bouchard (2012, p. 48) maintains that SI constitutes ‘creative solutions to social problems’, CSR being one approach related to the ‘emergence of a variety of market and non-market-based entrepreneurial ventures that aim at solving social problems’. However, social entrepreneurship and social economy seem to be a partial view more than an appropriate basis to understand what SI is as innovation process (Hoogendoorn et al., 2010).

Highly cited authors, like Gerometta et al. (2005) and Moulaert et al. (2005) define SI in terms of the improvement of the socio-political capability of citizens and their access to

resources (empowerment dimension). Latest definitions take up SI in terms of ‘legitimation’ and ‘institutionalization’ of social practices (e.g., Loogma et al., 2012; Cajaiba-Santana, 2013; Reinstaller, 2013), whereas less frequent terms concern to financial resources, costs (e.g., transaction costs) and the protection/property rights of SIs.

5 Conclusion, limitation of the study and discussion

Using a procedure derived from a learning-based innovation process, this paper contributes to the conceptualization of SI by exploring the pluri-vocal discourses constructed in definitions across sixty years. Broadly, our study reveals that SI is a complex process that is bringing to the fore new insights and questioning elements intrinsic to any innovation process (Fig. 1) and the ‘babelization’ of innovation. Given that our sample aims to be representative of the discourses across several decades, two limitations in our study have been the impossibility to access to documents and, the existence of literature covering the conceptual content of SI without using the term itself. Notwithstanding, our analysis is wide enough to capture and reveal some continuity and (in other cases) re-emergence of core terms defining SI in the ‘woven fabric’ of texts. Regarding our first research question on the overall evolution of the concept, our results suggest an evolution in the proto-stage of the field towards the consolidation of SI as scientific construct (Moulaert et al., 2013), confirming the existence of academic contributions in the 1950s and earlier, in line with Godin (2012, 2015). Figure 3 shows the centrality of ‘social change’ and suggests the existence of two sectoral ‘branches’ or close sub-fields: SI in the public sector, related to public services provision, and SI related to human development.

In terms of the second question of core meanings of SI, we identified some distinctive elements (as the more ‘established’ terms) in the pluri-vocal discourses that enables us to affirm that: SI is seen as consisting in changes in social practices (B2) by means of a collective learning process (C1/C2) driven by multiple actors from civil society as well as public and private sectors (C10/C11), oriented towards answering social demands and complex social problems (A4) and the generation of social values (A1/A3). Such a change in social practices is seen as a potential source of socio-technological change (E3/E4/E5) promising to solve the grand challenges we are facing in our planet.

The ‘societal demand’ and the need to promote widespread social, cultural and technological change in the face of current unsustainability constitutes a ‘new rationale for policy intervention’ to achieve the desired sustainable development. The division between profit and non-profit orientations in social economy is increasingly less clear (Caulier-Grice et al., 2012) and the role of the third sector is moving towards hybrid forms of private, public and civil society interactions, i.e., multiple potential innovation actors from a ‘society as a whole’ (Hubert, 2010, p. 25). Collective learning process at the basis of SI encompasses the emergence of new organizations and institutions and processes of legitimatization and institutionalization of social practices. Here the notion of ‘collective agency’ involving civil society actors and social movements acquires additional relevance that can potentially stimulate a major shift in institutional forms of governance and can transform power relations; this is what Moulaert et al. (2013, p. 6) describe as ‘the (re)making of social space’.

One crucial aspect for identifying the specificity of SI (our third research question) means bringing into focus the practical application of collective creativity to develop new or improved products, services and models, methods, etc., in *any* sector (Murray et al., 2010)^P. This aspect makes SI ‘fuzzy’ regarding the use of the term ‘social’, as well as other adjectives like ‘technological’, ‘organizational’, ‘eco’, ‘green’, ‘grass-root’, among others. In our opinion, this is the basic problem of defining what innovation in general means and how it can be understood from different dimensions, whether technological, social, cultural, etc. There is no argument supporting the fact that collective creation and social practices constitute and are exclusive of SIs. Numerous case studies find examples of changes in social practices that have been institutionalized as ‘pure social inventions’, e.g., women’s suffrage (Conger, 1974). Nevertheless, the development of products aimed at both profit and non-profit purposes, with or in absence of technology, are embedded in social practices and also can be driven and/or complemented by *change* in social practices (e.g., the case of micro-credits that have been successful in some places and not in others). Outcomes of innovation process can be ‘pure’ SI through institutionalized forms of change in social practices and the diffusion of social inventions or also technological and cultural innovations and be more or less ‘immaterial’ and/or ‘tangible’.

^PThe Open Book of social innovation (2010, p. 4) defines ‘social innovations as new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society’s capacity to act’.

Concerning this our findings show the co-existence of two complementary ‘shaken, but not stirred’ perspectives on SI: a *transformative* view (academic view) with focus on social practices and social and/or technological change at long time (Fairweather, 1972; Gillwald, 2000; Heiskala, 2007; Nicholls & Murdock, 2012; Cajaiba-Santana, 2013; Moulaert et al., 2013), and an *instrumental* or *practical* (even normative perspective, emerged from practitioner and policy contributions), where SI is a blurred label of social practices that accompanies solutions to problem-solving through the development of ‘new or improved products’, ‘new services’ ‘new organization method’ and/or mixed ‘pure’ social inventions, such as a ‘law, norm, rule’ or also institutional and political innovations.

In a further paper, we will complement this study mapping the SI research field and comparing in detail these approaches, with special attention to sectoral perspectives.

In our view, to understand the specificity of SI in term of repertoires of social practices we need to investigate how learning occurs ‘from the beginning’, involving both the generation and implementation of ideas that underpin further invention and nourish agency. How do social groups as learning actors construct innovation ‘communities of practice’ and innovation networks? How do such innovation communities and innovation networks interact and enable ‘scalability’ and construct innovation systems? Which type of knowledge sources are involved in the construction of different learning trajectories?

Other aspects contained in the definition of SI leave several questions unanswered. Why do we assume that ‘social ends’ means ‘good’? Values imply sometimes a ‘creative destruction’ with desirable or un-desirable effects, emergence, replacement and even destruction of values. Some hidden innovation involve controversial values, contesting to what is ‘socially desirable’ in an extensive and normative sense’ (Howaldt & Schwartz, 2010, p.26). For example, pornography industry generates significant revenues in the knowledge economy being a stigmatized sector and invisible in academic literature, despite the emergence of social movements and regulations and change in social practices in some countries (Voss, 2015). Examples like Wikipedia and innovation in gastronomy and cultural movements suggest the existence of change in social practices driven by collective creativity more related to transform some aspect of the social realm rather than a problem-solving orientation. Could this constitute an avenue to differentiate wider innovation types, e.g. technological and cultural from SIs?

Other crucial question relates to the formal and informal dimension of SIs, i.e. how multiple social actors -as *change-makers*- construct collective agency and produce formal and informal institutions overcoming the institutional diversity that characterise the different sectors (business vs. non-profit vs. Public)? In this respect it is interesting to note that the different repertoires of social practices developed/constructed by multiple actors from academy, industry, society, government, etc., are not independent of the creative transformation of different types of knowledge (Edwards-Schachter & Tams, 2013).

Most discussion today on how catalyze collective creativity and SI to cope with grand challenges and go ‘from vision to action’ has been present for decades, such as in the book *Social Innovation for Development* (Held & King, 1984). Given that SI – as a change in social practices – is at the centre of the persistent paradoxes between sustainable aspirations, production and consumption models and of discourses on economic development, efficiency and competitiveness, it is crucial to study SI from the perspective of the governance of change in innovation systems (Borrás & Edler, 2015). In terms of policy implications to determine outcomes and impacts of SI, the ‘learning’ component and the contribution of SI to the institutionalization of social practices are particularly relevant, considering that innovation indicators are hard institutions that underpin legitimacy and social order.

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Annexes

Annex A. Contributions containing state-of-the-art and literature reviews with the purpose of providing a definition of SI

Author & Document type	Methodology & sample	Principal conclusion regarding SI definition	Disciplines/ knowledge field
Cloutier, J. (2003) Research report	Not reported Critical analysis of 28 authors' references, being the first Taylor (1970) and Gabor (1970)	'SI as an object does not have, in general, distinctive features. It does not take a specific form that would identify it immediately' (p. 41). 'SI can be procedural and concern to practices, processes and services. SI can be organizational and refer to the social organization of activities (work reorganization, new roles, changing the roles of organizations and institutions). On the institutional, SI refers mainly to legislation, policies, standards and rules. SI can be tangible (technology, product) or a social invention'	References from Sociology, Sociology of work, Development studies
Nilsson (2003) Report (prepared for McGill-DuPont Social Innovation Think Tank, created in 2002 in Canada)	Not reported The paper summarizes 47 papers extracted from ProquestABI and JSTOR Period: 1992 to 1998	SI is 'a significant, creative, and sustainable shift in the way that a given society dealt with a profound and previously intractable problem such as poverty, disease, violence, or environmental deterioration' (p. 3)	Complex Adaptive Systems, Institutional Theory, Social Movements, Organization Theory, Development, Social Entrepreneurship, Innovation Social capital
Moulaert et al. (2005) Research report (European Project, SINGOCOM)	Not reported	SI is both and normative and analytical concept and comprises three dimensions: satisfaction of human needs not currently satisfied, either because not yet or because no considered by the market or the state (content/product dimension); changes in social relations , especially with regard to participatory governance (process dimension) and increase in the socio-political capability and access to resources ¹	Management science and business administration Social economy, Urban studies, Creativity
Goldenberg et al. (2009) Policy report for the Social Sciences and Humanities Research Council (SSHRC), Canadian Policy Research Networks ¹ (CPRN)	Combination of library and Internet searches for Canadian sources Period: 2004 to 2009 10 interviews with key social innovation leaders	SI addresses the social challenges the world faces through innovative means. These challenges can be as large-scale as fighting global climate change and reducing poverty or as small-scale as creating a community garden. SI is a worldwide phenomenon fuelled by globalization and the rise of the knowledge-based economy, itself fuelled by scientific and technological innovation ... to answer to 'increased global awareness of complex and often intractable social problems, ranging from environmental issues to growing levels of poverty around the world and increasing socio-economic disparities within and between countries'	References to social entrepreneurship, social economy, CSR (Corporate Social responsibility), public and services sector , NGOs and volunteering sector
Pol & Ville (2009) Academic paper	Not reported Sample: analysis of 5 definitions	Four conceptions: 1) as Institutional Change, 2) SI and Social Purposes, 3) SI and the 'Public Good', 4) answer to needs not taking on by the market. They propose a fifth conception of SI oriented to improvement of quality of life	Some references of Economics and Sociology

<p>Howaldt & Schwarz¹ (2010) Report (prepared for International Monitoring (IMO) research)</p>	<p>Not reported The study provides an overview of concepts, research fields and some international trends on SI</p>	<p>'SI is 'an intended change in social practices that in some way or another contribute to overcoming concrete social problems and/or to satisfying the needs of specific societal actors' (p. 31). SIs are distinct from technological innovations, their purposes and objectives differ, but outcomes may overlap (e.g. improving economic performance). The innovation of social interaction, forms of transportation and behavioral patterns as the true subject matter, purpose and 'decisive/competitive' factor demarcates social innovation from technical innovation' (p. 24)</p>	<p>Sociology, Economics (Schumpeter theories) Socio-ecological approaches Management Theories and approaches of innovation studies, like open innovation, services innovation</p>
<p>Sharra & Nyssens (2010) Working paper</p>	<p>Not reported</p>	<p>Two dimensions, analyzed throughout definitions provided by previous literature: SI as out-come and SI as a process-based</p>	<p>Social entrepreneurship Development studies</p>
<p>Loogma et al. (2013) Working Paper</p>	<p>An interpretative review of selected literature. Specific information they search and the methodology applied are not explained</p>	<p>Three approaches to SI: The institutionalization of social need approach: SI is a particular type of innovation that produce change in the social practice and social relations (social change). The co-development approach: SI is considered as complementary, accompanying or collateral process, induced by technological-economic, business and organizational innovations or being 'enabler' of these innovations. The systemic change approach: SI is related to the multi-level transformation of society as a macro-system</p>	<p>Sociology, Economics theories Organizational and Management theories</p>
<p>Edwards-Schachter et al. (2012) Academic Paper</p>	<p>Content analysis of 76 definitions from 109 selected documents from various databases</p>	<p>The paper summarizes some distinctive characteristics taking into account: Aims , purposes/Objectives, drivers , sources (Context (Agents & Sectors), process characteristics, empowerment and capacity building, governance, results/outcomes</p>	<p>Sociology, Economics, Social entrepreneurship, Management, Creativity, Political sciences, Territorial and urban development, Human Development</p>
<p>Rüede & Lurtz (2013) Working paper</p>	<p>Systematic conceptual literature review and narrative approach Sample: 318 documents Sources: EBSCO, Library of Congress, British Library, German National Library, grey literature</p>	<p>The paper explains seven categories according to different understandings on the aims/purposes of SI: 1.To do something good in/for society, 2.To change social practices and/or structure, 3.To contribute to urban and community development, 4.To reorganize work processes, 5.To imbue technological innovations with cultural meaning and relevance, 6.To make changes in the area of social work and, 7.To innovate by means of digital connectivity</p>	
<p>Choi & Majumdar (2015) Book Chapter</p>	<p>Not reported neither mentioned</p>	<p>Explores different streams of literature and comment 16 definitions The paper identifies three major uses of the SI concept: as social change, as intangible innovations and aiming at social value creation. This third use is discussed from the perspective of social entrepreneurship</p>	<p>Sociology, Creativity Entrepreneurship, Economics Community psychology, Territorial development and practice-led perspectives</p>

<p>Phillips et al. (2015) Academic Paper</p>	<p>Systematic review, search in Scopus (from 1984 to 2012) Sample of 122 articles</p>	<p>The paper identifies distinctive aspects on the role of the social entrepreneur, the formation and development of cross-sectoral partnerships, the role of institutions. It suggests that social enterprises and social entrepreneurs exists within a social innovation system ('a community of practitioners and institutions jointly addressing social issues, helping to shape society and innovation')</p>	<p>Entrepreneurship, Management Innovation & Technology Management , Economics Third sector Research, Business ethics, Small Business Research Policy Studies, Health, Family Business, Knowledge management Operations management , Sociology, Interdisciplinary</p>
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Annex B. Analytical guide obtained by inductive heuristic applied to content analysis

A. The innovation aims/ends perspective	
Category description (obtained from the texts)	
<p>A1: ‘oriented to social values’/‘generation of social values’/‘transformation of social values’ /‘humanitarian values’/‘public good’/‘harmonize with the social good’/‘dignity and worth’/‘solidarity’</p> <p>A2: ‘contribution to economic growth’/‘economic development’/‘improvement of economic performance’</p> <p>A3: ‘enhanced quality of life’/‘improving well-being’/‘improving living conditions of people’/‘raising overall welfare levels’/‘justice/social justice/right to human dignity/restorative justice/public good and equity/social inclusion/cultural inclusiveness/social cohesion/integration of vulnerable people/social inclusion’</p> <p>A4 (A4.1 ‘social needs’/‘answer to human needs’/‘satisfaction of basic needs’/‘unmet needs’/‘needs of deprived groups’/‘satisfaction of alienated human needs’/) and A4.2 (societal problem’/‘social problems’/‘major problems’/‘intractable problems’/‘pressing challenges’/‘problems that threaten the human species’/‘complex social problems’/‘major economic and social challenges’/‘complex social and ecological challenges’</p> <p>A5: ‘Corporate Social Responsibility/Corporate Social Innovation’</p>	<p>A1 ‘oriented to social values’</p> <p>A2 ‘improvement of economic growth’</p> <p>A3 ‘improvement of well-being & QL’/‘oriented to restorative justice & social inclusion’</p> <p>A4 ‘addressed to unmet social needs’/</p> <p>A5 ‘related to CSR/CSI’</p>
B. Innovation ‘outputs/outcomes’	
<p>B1: ‘Social invention’/ law’/‘regulation’/‘new rules’/‘social arrangement’/‘to devise measures (like legislation)’/‘new ways of doing things’ /‘new techniques’/‘new concepts’/‘new initiative’</p> <p>B2: ‘change in social practices’/‘change beliefs and habits’/‘change basic routines’/‘change in consumer behaviour’/‘change in lifestyles’/‘change in social relations’/‘superseding older practices’/‘change the role of social actors’/‘new combination and/or new configuration of social practices’</p> <p>B3: ‘new products’/‘products’/‘new or improved products’/‘equipments’</p> <p>B4: ‘new methods’/‘new models’/‘new organization procedure’/‘procedures’/‘new program’</p> <p>B5: ‘new services’/‘public services’</p> <p>B6: ‘marketing’/‘change in marketing practices’</p> <p>B7: ‘new technology’/‘new technologies’/‘ICT’/‘new software’</p> <p>B8 : ‘social technology’</p>	<p>B1: ‘social invention’/‘new law, norm and/or rule’</p> <p>B2: ‘new combination or configuration of social practices’</p> <p>B3: ‘new or improved products’</p> <p>B4 ‘new organization method’</p> <p>B5: ‘new services’</p> <p>B6: (innovation in) ‘marketing’</p> <p>B7: ‘new technology/ICT development’</p> <p>B8: ‘social technology’</p>
C. Innovation process (dynamics, sources, actors and interrelationships)	
<p>C1: (social innovation is a) ‘process’/‘social process’</p> <p>C2: ‘education’ (process)/‘collective learning’/‘socio-spaces of learning’/‘social learning’/‘social appropriation of knowledge’/‘learning dynamics’/‘creativity’/‘new ideas’/‘production of new ideas’/‘collective creativity’/‘creative strategies’/‘social creativity’/‘search of alternative solutions’/‘problem-solving’/‘all methodical creation’/‘social experimentation coming with new ideas’</p> <p>C3. ‘skills development’/‘creating new capabilities’</p>	<p>C1 ‘process’</p> <p>C2 ‘learning dynamics’(process) & ‘creativity’</p> <p>C3 ‘creating new skills and capabilities’</p> <p>C4 ‘design & design thinking’</p>

<p>C4: 'design'/'introducing refinements of design'/'design thinking'</p> <p>C5: 'social movements'/'social groups'/'grass-root movements'/'articulation of collective projects'/'cooperativism'</p> <p>C6: 'user participation'/'co-creation'/'inclusion of people in innovation process'/'user acceptance'/'citizens as co-creators'/'co-production'/'close distance between providers and users'</p> <p>C7: 'resources'/'lower costs'/'social investment found'/'crowdsourcing'</p> <p>C8 : 'social entrepreneurship'/'social entrepreneurs'/'social inventor'/'social economy'/'informal economy'</p> <p>C9 : 'entrepreneurs'/'entrepreneurship'</p> <p>C10 'community'/communities'/'philanthropy'/'charities'/'voluntary organizations'/'civil society'/'third sector'/'NGO'</p> <p>C11: 'cross-sector partnerships'/'public-private organizations'/'market, academia and state'/'cooperation between multiple actors'/'hybrid space between government, business, charities and non-profit organizations'/'resulting from the formation of multidisciplinary teams and cooperation between different actors'</p> <p>C12: 'change in development models'/'local development'/'regional development'/'territorial development'/'development at local level'/'rural development'/'urban development'/'cities'/'cities and urban neighbourhoods'</p>	<p>C5 'social and grass-root movements'</p> <p>C6 'user participation/co-creation'</p> <p>C7 'resources and costs'</p> <p>C8 'social entrepreneurship and social economy'</p> <p>C9 'entrepreneurship'</p> <p>C10 'community participation'/'philanthropy and voluntary organizations'/'civil society/third sector/NGO'</p> <p>C11 'cross-sector between government, business and civil society'</p> <p>C12 'change in territorial development models'</p>
<p>D. Institutional and power perspective</p>	
<p>D1: 'institutional change'/'institutional innovation'</p> <p>D2: 'cultural change'/'modification of previously existing and known and/or intangible cultural elements to create a new element'/'propose new cultural orientations'/'cultural emancipation'</p> <p>D3: 'social capital'/'social innovation capital'</p> <p>D4: 'socially innovative governance'/'improvement of governance'/'innovation governance'/'public participation'/'mechanism for reclaiming democratic social life'/'socio-political action'/'civil participation'/'democratization and civic involvement'/'enhance collective action'/'collective agency'/'society capacity to act'/'intelligent collective action'</p> <p>D5: 'empowerment'/'social and political empowerment'/'empowerment dynamics'/'social and political empowerment'/'create new capacities for action'/'empowerment of the citizens'</p>	<p>D1 'institutional change'</p> <p>D2 'cultural change'</p> <p>D3 '(formation of) 'social capital'</p> <p>D4 'innovative governance with civil involvement'/'collective agency'</p> <p>D5 'empowerment'</p>
<p>E. The complex macro-system change/societal grand challenges perspective</p>	
<p>E1: 'nation states' powerlessness'/'strategy against poverty'/'social policy'/'(addressed to) 'welfare/welfare state'/'to reconfigure the welfare diamond'</p> <p>E2: 'create new market'/'social market'/'cover market failures'/'social demand'</p> <p>E3: 'sustainability'/'sustainable development'/'contributor to overall social and ecological resilience'/'change in the industrial patterns of production'/'change in patterns of goods and services structure'/'more sustainable production methods'</p> <p>E4 : 'socio-technical change'/'large-scale change'</p>	<p>E1 'nation states' powerlessness'</p> <p>E2 (social) 'market failures'</p> <p>E3 (oriented to) 'sustainability'/'change in patterns of production and consumerism'</p> <p>E4 'socio-technical change'</p>

<p>E5: 'social reform/change in social systems/ transforming the organization of social systems/social change/change in the social order/social transformation/social experimentation/transformation of society</p> <p>E6: (SI as radical change/disruptive) 'radical change in the social structure'/'a disruption of social order'/'radical change'</p> <p>E7: 'employment'/'change in working conditions'/'reorganization of work'/'new forms of work organization'/'efficiency of work organization'</p>	<p>E5 'social change'</p> <p>E6 'radical innovation'/(SI as radical change'</p> <p>E7 'reorganization of work'</p>
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