

*Everything and nothing:
A critical review of the "social" in Innovation and
Entrepreneurship studies*

Stefania Sardo*, **Beniamino Callegari**** and **Bisrat A. Misganaw *****

* Karlsruhe Institute of Technology 

** Kristiania University College 

*** NEOMA Business School 

ABSTRACT

Over the past two decades we have witnessed growing academic and policy interest in phenomena such as social innovation and social entrepreneurship. In these instances, the "social" element has often been described as a new or rediscovered category, indicating a normative predisposition to "elevate" existing or emerging innovation and entrepreneurship processes by identifying and promoting socially-acceptable standards of behavior and goal-setting. While previous reviews on social innovation have focused on the historical development of the concept and its role in academic debate, this article critically reviews the place of the "social" in current mainstream Innovation and Entrepreneurship (I&E) studies. The aim is to understand how this literature has been evolving in relation to this element and to what extent this addition has promoted a radical shift in the research direction. Our review, based on selected articles from 16 I&E mainstream journals, advances a novel classification of the dominant approaches to the social dimension in I&E studies, identifying four main categories: disciplinary, integrationist, separationist, and essentialist. What emerges is that most I&E studies ignore, minimize, or compartmentalize the "social", using it to extend existing frameworks rather than to evolve them. Indeed, while the "social" has been offering an avenue for critical views to challenge mainstream discourse, at present it does not seem to significantly affect the latter's evolution.

Keywords: Critical Social Studies; Innovation Studies; Entrepreneurship Studies; Social Innovation; Social Entrepreneurship.

Proposal Submitted 24 January 2022. Article Received 29 April 2022. Reviews Delivered 1 July 2022. Revised 30 September 2022. Accepted 5 October 2022. Available online 16 May 2023.



INTRODUCTION

The term *social innovation* has been utilized by academics for more than two centuries, albeit with an evolving meaning (Gaglio *et al.*, 2019). Although it was originally employed to describe, and often condemn, social change in the direction of socialism, it eventually shed its political connotation, emerging in the last two decades in the academic literature and usually portrayed in a positive light. This resurgence is demonstrated by the growing academic interest in social phenomena such as social innovation and social entrepreneurship, which has led to a plethora of definitions. For example, Mulgan *et al.* (2007, p. 2) describe social innovation as "new ideas that address unmet social needs – and that work", pointing at innovation processes targeted for a "social goal". Social entrepreneurship is at times similarly understood as "the innovative use and combination of resources to pursue opportunities to catalyze social change and/ or address social needs" (Mair & Marti, 2006, p. 37). In this field, scholars have focused on issues such as the conditions for the emergence of social entrepreneurship or the obstacles to obtaining the necessary funding and networking – employing new or existing theoretical lenses to understand these "new" phenomena (Kimmitt & Muñoz, 2018; Lehner & Kansikas, 2012; Zahra *et al.*, 2009).

Public institutions have echoed this interest, devising research and development funding programs to achieve so-called social goals – more recently placed under the banner of Grand Challenges (Kuhlmann & Rip, 2018; Mazzucato, 2018). Examples can be found as early as 2010, when the European Union, emerging from a financial crisis, once again stressed the need to put innovation "at the heart of the Europe 2020 strategy". Here, the "social" element was highlighted as a new – or at least rediscovered – category for innovation and entrepreneurship. In the Innovation Union initiative document, "social innovation" concerns "tapping into the ingenuity of charities, associations and social entrepreneurs to find new ways of meeting social needs which are not adequately met by the market or the public sector (...) to tackle the major societal challenges" (European Commission, 2010, p. 21). One possible explanation for this newfound interest could be the recognition of the widespread negative consequences generated by previous innovations (e.g., Mulgan *et al.*, 2007; Murray *et al.*, 2010) – a veiled condemnation of our past decisions more or less collectively participated in (see for example the disasters caused by oil and gas installations or chemical plants, such as Deepwater Horizon and Bhopal, or by artifacts such as asbestos and plastics), or the realization that the introduction of *mere* technical innovations has, in fact, failed to solve long-standing and wicked problems such as hunger and youth unemployment (Nelson, 2011). Indeed, emphasizing the "social" could be read as an attempt to correct the long-prevailing focus on the technical and economic aspects of these processes (Godin, 2015). Recent

contributions have also revealed that this interest in the social dimension of innovation could be seen as part of a broader, long-term academic and cultural trend of re-inventing innovation to suit or criticize the present ideology (Gaglio *et al.*, 2019; Schubert, 2019).

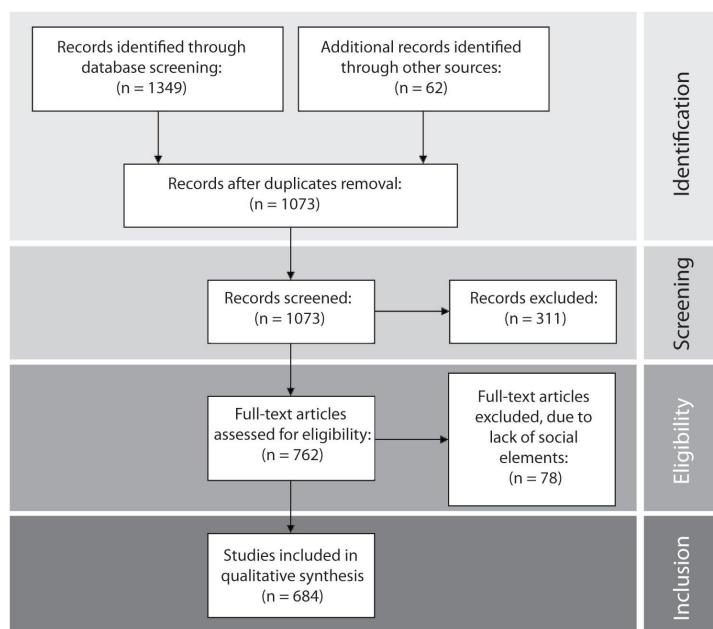
In this article we dig further into the social dimension of "X-innovation" (Gaglio *et al.*, 2019), extending it to the discussion of social entrepreneurship and focusing on how the social dimension is currently conceptualized and appropriated by mainstream innovation and entrepreneurship research. Conceptually, Gaglio *et al.* (2019) identify two characteristics of the "social". On the input side, the "social" could refer to inclusion, a process requiring the participation of the public in deliberations from an early stage. On the output side, the "social" could refer to ethical and environmental considerations, with an expectation that the innovation should be responsible and sustainable. Although this distinction has been useful for conceptualizing the "social" in X-innovations, we would argue that the current understanding and use of the social dimension in the mainstream innovation and entrepreneurship literature is much more diverse. This led us to the following research question: *has the social dimension actually contributed to shape the mainstream discourse on innovation and entrepreneurship towards more critical perspectives or has it, instead, been used to extend or validate existing theories?*

To make sense of this complex picture, after reviewing contributions from leading I&E studies journals, we advance a novel classification of mainstream approaches to the "social", illustrating the key features that identify each category through examples drawn from the literature. Having made the case for such a classification, we discuss its merits and consequences for innovation and entrepreneurship studies, and conclude by reflecting on what the classification reveals about the role played by the social dimension in the development of mainstream innovation and entrepreneurship studies. Despite its seemingly critical nature, we find that the social dimension has largely been adapted to mainstream discourse in order to extend and support dominant frameworks. While critical voices do exist, their impact is limited to ensuring the continuation of pluralist discussion, rather than succeeding in prompting a re-thinking of the underlying ideological foundations of the dominant I&E discourse. The article is structured as follows. Section 1 briefly describes the methodology adopted for this literature review. Section 2 introduces the analysis behind the proposed classification and describes a number of examples from the literature for each category. Section 3 illustrates the limitations of the proposed classification by discussing articles whose classification is challenging. The paper ends with concluding remarks.

1. METHODOLOGY

This literature review follows the PRISMA guidelines as described by Moher *et al.* (2009). The PRISMA methodology uses a 27-item checklist to organize references – including title, abstract, methods, results, discussion, and funding categories – and a four-step flow diagram describing the selection process. The first step is to identify all the papers to be analyzed by searching previously defined keywords in pre-selected academic literature databases. The second step is to screen the abstracts of all papers that meet the inclusion criteria. The third step is to analyze the full text of the remaining papers in order to select those eligible. The final step is to apply a coding scheme to identify the elements from each paper to be included in the literature review. Although PRISMA guidelines were initially used in the health sciences, their high generality and usability has enabled their application in many research fields, such as economics (Havránek *et al.*, 2020; Stornelli *et al.*, 2021; Zinyemba *et al.*, 2020). A PRISMA diagram outlines the process (see Figure 1).

Fig. 1: PRISMA guidelines applied to our literature review



Source: elaborated by the authors (Callegari *et al.*, 2022).

Based on these methodological choices, we selected all journals recognized by the ABS50 list as belonging to Innovation and Entrepreneurship Studies and ranked with 4 or 3 stars (see *Table 1*). We then identified an extensive list of keywords covering some crucial aspects of "the social" in innovation and entrepreneurship studies. These were: social value, social theory, social aspect, social dimension, social context, social ontology, social innovation, social entrepreneurship. Applying these criteria, we ensured that no relevant papers were left out on purely nominal grounds and, as an

additional safety mechanism against human error, we used cross-referencing and targeted searches through specific scientific journals' archives, selected on the basis of their thematic relevance, to identify additional records. From these, we analyzed their abstracts and, when the abstract did not provide firm evidence of the article's irrelevance for our aims, we searched the main body of the paper in question for evidence of a relevant discourse. Finally, we proceeded to read and categorize the corpus of articles according to their specific interpretation of the social dimension. To validate our categorization, described in the next section, each of the selected articles were blindly assessed by at least two of the co-authors and then validated. The selected articles are updated to March 2022.

Table 1. Journals analyzed in the literature review

Entrepreneurship & Regional Development	Journal of Small Business Management
Entrepreneurship Theory and Practice	Journal of Technology Transfer
Family Business Review	R&D Management
Entrepreneurship & Regional Development	Journal of Small Business Management
Industry and Innovation	Research Policy
International Journal of Entrepreneurial Behavior and Research	Small Business Economics
International Small Business Journal	Strategic Entrepreneurship Journal
Journal of Business Venturing	Technological Forecasting and Social Change
Journal of Product Innovation Management	Technovation

Source: elaborated by the authors (Callegari *et al.*, 2022).

Although certainly restrictive, the choice of the above-mentioned journals has clear intent, namely, to ascertain the role of the "social" attribute produced by innovation and entrepreneurship literatures. This strand of research not only contributes heavily to the creation of a "mainstream" discourse around innovation, its meanings and functions, but strongly influences national and local policies. Yet, we acknowledge that many critical works will therefore not be included in our review as they have been published elsewhere. However, one question that emerges in this regard – and which will be argued in the concluding section – is how much these critical contributions have been able, over the past two decades, to modify and steer the mainstream discourse and how much they struggle to influence it. Indeed, as expressed by Alvesson and Deetz (2000, p. 8), the objective of critical research is "to identify and challenge assumptions, to recognise the influence of culture, history and social position and to imagine and explore extraordinary alternatives, disrupt routines and established orders" (Curtis, 2007, p. 277). One way to test this critical aim is to use mainstream I&E journals as a source of background information, being aware of the

entry barriers of these journals, which inevitably force researchers to engage with mainstream discourse. A further limitation of our methodological review concerns the search terms, which might exclude those authors who deliberately avoided the use of the prefix "social" while still discussing social innovation/entrepreneurship. However, we assume that critical scholars who have criticized the discourse in mainstream outlets have somehow had to refer to existing research and, thus, have used at least one of the aforementioned keywords.

2. THE SOCIAL DIMENSION IN INNOVATION AND ENTREPRENEURSHIP STUDIES

Although there is a consensus that entrepreneurship and innovation studies belong to social sciences, research in these fields is predominantly characterized by an individualistic orientation largely inherited from economics (Goss, 2005; Lundvall, 2013). Over the past two decades, however, work acknowledging the importance of the social dimension is growing in influence in the field (e.g., Anderson, 2015; Shepherd *et al.*, 2020; van der Have & Rubalcaba, 2016). These studies have, for example, contrasted a humanistic conceptualization of entrepreneurship (Kupferberg, 1998) underpinned by a logic of social processes, relations and changes, as opposed to entrepreneurs "investigated as undersocialized economic animals or robots" (Zafirovski, 1999, p. 354), or identified a specifically social type of entrepreneurship as conceptually distinct from other forms (Huybrechts & Nicholls, 2012; Nicholls & Cho, 2006). Yet, there is tremendous variation in the analytical use of the "social", ranging from implicit assumption to explicit conceptualization to defining methodological foundations. This variety is a potential source of critical tension within I&E studies, as the social dimension is commonly associated with contentious implicit or explicit epistemological, methodological, and normative assumptions. This is a consequence of the holistic nature of the social sphere. Human life is, by and large, a social affair. From a fleeting tryst to a global war, most human phenomena are performed in interaction and are, therefore, amenable to social analysis. The complexity associated with such a potentially extensive area of study, however, does not fit the precision requirements of an effective analysis.

A common analytical response has been to narrow the object of study to a more manageable dimension, thus distinguishing between what comprises the theoretical core and what belongs to the contextual phenomenological sphere. This entails an understanding of the "social" as a *residual component*, associated with phenomena lying outside the analytical core. This distinction between core and social periphery can be made across two different lines. The first option is to identify a specific frame of social life – a dimension present in the entirety of the "social", albeit

with varying intensity – and develop a pure analysis of that frame, discarding all other aspects in search of precise and abstract theorizations. We can describe this as the *disciplinary solution*, characterizing for example economics, which focuses on the analysis of *Homo Economicus* and discards, *prima facie*, all other social aspects: the analytical approach in which “the social is often treated solely as a background factor, the *ceteris paribus* of the economists” (Korsgaard & Anderson, 2011, p. 135).

In I&E studies, we can trace this approach back to the early works of Schumpeter (2010). The second option is to specify a set of real phenomena of peculiar interest to be analyzed in their actual complexity. From this type of analysis, domain-specific theories can be developed to explain the most relevant causal mechanisms at play. This can be described as the *phenomenological solution*, applied by I&E studies (among others) to define their analytical perimeter (Brazeal & Herbert, 1999; Malerba & Brusoni, 2007; Urban, 2010). The complex nature of the phenomena under study gives rise to a multitude of both competing and complementary theorizations, each focusing on a specific set of active mechanisms (e.g., novelty generation, entrepreneurial disposition, innovation diffusion) based on different theoretical cores, usually borrowed, although often adapted, from existing social disciplines. The former approach identifies a specific method, based on a corresponding set of assumptions, which can potentially be applied to any aspect of life (Lazear, 2000). The latter approach identifies a set of objects of study, open to any analytical method and any set of assumptions, as long as the resulting study contributes to academic debate.

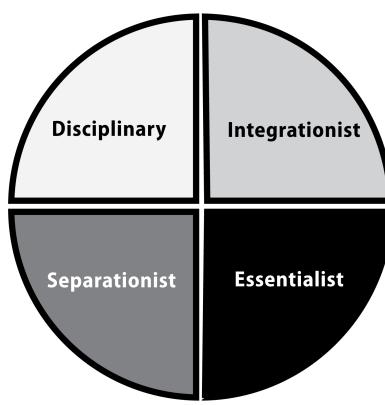
Both options have their limits. The holistic nature of social life resists any attempt to cleave it into neat and distinct slices. While a specific, internally consistent dimension can be identified and described by providing a disciplinary core, its actual reach and relevance for the multitude of real-life phenomena can hardly be determined with any certainty. Likewise, any phenomenon, no matter how narrow, influences and is influenced by a potentially unlimited number of other phenomena, leaving any phenomenologically defined core with unclear boundaries. In general, the complex nature of the social process implies that, however limited the dimension or the original set of phenomena chosen as the object of study, any social science has a potentially unlimited field of expansion. Successful disciplines can extend their analytical frame to include more and more phenomena. The obvious example is the seemingly unstoppable imperialistic trend of economics, which applies economic theory to the analysis of phenomena as diverse as fertility (Becker, 1960), criminal law (Posner, 1985), prostitution (Edlund & Korn, 2002) and torture (Yakovlev, 2011). These expansions can be seen as the gradual colonization of the phenomenological residual by the successful theoretical core. The successful application of the theoretical core to alternative empirical settings is considered a sign of disciplinary vigor. Critical

perspectives within the discipline, however, may point to the phenomenological residual to argue that social aspects currently excluded from the theoretical core mediate key disciplinary mechanisms and, therefore, should be included (Dequech, 2012). Furthermore, application to areas far removed from the traditional focus of the discipline may reveal a number of tensions and limitations plaguing the theoretical core, offering a flank to criticism (Dosi & Roventini, 2016). Within a discipline, then, the "social" can be considered a frontier – a target for ambitious researchers looking for new grounds in which to establish themselves and a refuge for outsiders wanting to challenge the *status quo*.

Similarly, successful phenomenological fields, besides their unlimited methodological potential, are bound to gradually discover that more and more phenomena are intimately connected to their original set, and that their analytical inclusion could lead to higher theoretical validity. Just to cite a few well-known examples, the success of the Triple Helix perspective (Leydesdorff, 2000, Leydesdorff & Meyer, 2006, Etzkowitz & Leydesdorff, 2000) has already spawned a potential expansion to the Quadruple, the Quintuple Helix and beyond (Carayannis *et al.*, 2018ab; Bartoloni *et al.*, 2021). Similarly, the National Innovation System perspective (Lundvall, 2007) has generated a Regional (Cooke *et al.*, 1997; Asheim & Coenen, 2005; Tödtling & Trippl, 2005), Technical (Bergek *et al.*, 2008), and now even Global variant (Lee *et al.*, 2020). The dividing line between phenomenological core and social residual depends on the epistemological assumptions, methodological choices, and theoretical frame adopted by every strand of literature included in the field – if not by every researcher. Inevitably, what the "social" means and the role it plays in regard to the main object of study will be the subject of significant, unsettled debate, but the generally acknowledged pluralist approach inherent in phenomenological fields facilitates the acceptance of differences, even within the definition of the theoretical core.

Understanding the main directions and distinctions within the academic debate, however, becomes a necessity in order to critically analyze its development. In this regard, we found the distinction between disciplinary and phenomenological approaches useful but insufficient as an analytical instrument to understand the evolution of the academic debate. In an attempt to exhaustively classify all the contributions identified by our literature review, we further divided the phenomenological category into three distinct approaches based on how and the extent to which the social dimension has been integrated into the proposed analytical contribution in the context of I&E studies. As a result, we identify four main categories: disciplinary, integrationist, separationist, and essentialist (*Figure 2*).

Fig. 2: Classification of the integration of the social dimension in I&E studies



Source: elaborated by the authors (Sardo *et al.*, 2022).

2.1. The disciplinary approach

The most peripheral approach is the *disciplinary* approach, which focuses on an abstract conceptualization of the main object of study and its primary causal mechanisms, limiting the analysis to a single interpretative frame. This approach is usually associated with its quintessential example, namely economics and, consequently, with those strands of I&E studies that adopt an economic framework of analysis (e.g., Dosi, 1982; Nelson & Winter, 1982; Rosenberg, 1982). Although both innovation and entrepreneurship are implicitly acknowledged as social phenomena, the social dimension is not explicitly conceptualized in order to reduce complexity and generalize analytical results. Consequently, studies in the disciplinary approach integrate social elements in a purely phenomenological sense: existing theories are applied to "social" phenomena without any significant modifications to the theoretical core, in the pursuit of theoretical validation rather than modification or extension.

Pittz *et al.* (2019) provide a straightforward example with a study on how knowledge shared through collaboration can generate co-created value by fostering the development of absorptive capacity in cross-sector partnerships. While the partnerships studied are characterized as "social", described as pursuing social innovation through social entrepreneurship, the social element is used exclusively to identify the field of phenomenological exploration, without the "social" concept entering either the theoretical framework of the article or the propositions that the empirical section of the study endeavors to support. In another example, Brieger and De Clercq (2018), drawing on two theoretical frameworks – the resource-based perspective and Hofstede's cultural value framework – examined how individual-level resources affect the likelihood that entrepreneurs will embrace the goal of social value creation in their startups. They conclude that the relationship depends on the type of resources involved. Human and social capital are both positively associated

with the entrepreneur's propensity to embrace the goal of social value, while financial capital is found to be negatively associated with social goals. The results reinforce the key theoretical axioms of the *resource-based perspective*, while not developing any specific theoretical propositions regarding social value creation or social capital. In a similar vein, Hechavarria and Briege (2020) investigate how cultural contexts influence the likelihood that female entrepreneurs will engage in social entrepreneurship. To examine the relationship, they utilize *practice theory* as background and nine cultural dimensions drawn from the GLOBE study. The findings show that female entrepreneurs are more likely to engage in social entrepreneurship in contexts where there is a high cultural practice of uncertainty avoidance and future orientation. However, human orientation, in-group collectivism, and power distance would have to be low for female entrepreneurs to have a higher likelihood of engaging in social entrepreneurship. Thus, they conclude that female and male entrepreneurs develop different intentions to engage in social entrepreneurship depending on cultural practices, validating the initial theoretical proposition that a society's practiced culture and gender interact to create cultural capacities for social entrepreneurship.

2.2 *The integrationist approach*

The second approach to analyzing the social in I&E studies is the *integrationist* approach, so called because it integrates in fashionably explicit "social" elements within existing theories (previously lacking a social dimension), thus leading to theoretical extension rather than modification. Social conceptualizations are often introduced as contextual, background factors affecting the primary causal mechanisms – such as the composition characteristics of teams, the consequences of economic crisis on innovation processes, the influences of social relations on processes of regional renewal, and so on. A significant heterogeneity exists regarding the factors associated with the social sphere and their relevance for explanatory purposes. This approach is most commonly found in empirical studies, where social aspects can be used to explain a certain phenomenological variance (Landry *et al.*, 2002), or in systemic theoretical work aiming to integrate a variety of related phenomena with the main objects of study (Lundvall, 2007). Yet, it can also be found in analytical efforts aiming to integrate new explanatory factors to clarify contentious areas of current debates (Welter, 2011).

Numerous examples can be found in the literature, such as the concept of *social capital*. Gedajlovic *et al.* (2013) suggest that social capital – the "sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by individuals or social units" (Nahapiet & Ghoshal, 1998, p. 243) – should be integrated into the theoretical core of entrepreneurship.

Many studies demonstrate the relevance and role of social capital at the individual (Davidsson & Honig, 2003), regional (Kleinhempel *et al.*, 2022) and national (Kwon & Arenius, 2010) levels. Social capital also finds applications in innovation studies as a key resource for overcoming the uncertainty involved in radical innovation and for securing and maintaining control over the resources required for achieving a breakthrough (Baba & Walsh, 2010). At the macro level, social capital has been correlated with innovative performance (Dakhli & De Clercq, 2004), although both the conceptualization and measurement of the construct remain challenging and open to various interpretations (Landry *et al.*, 2002). Scholars within the *Innovation System* approach (e.g., Asheim & Coenen, 2005; Bergek *et al.*, 2008; Lee *et al.*, 2020) have used social capital theory to explain differences between national and regional systems, as these are less reproducible and intangible resources (Lundvall, 2007). They also focus on the extent to which industrial clusters, regions and industries can evolve in terms of "activating" social capital through policy interventions (Cooke *et al.*, 1997). Indeed, firms' innovative activities are shaped by the institutional set-up affecting, for example, the "national education systems, labor markets, financial markets, intellectual property rights, competition in product markets and welfare regimes" (Lundvall, 2007, p. 102). Social capital is, thus, conceptualized as an additional resource explaining performance at various levels of analysis.

In the field of entrepreneurship, social interaction is widely acknowledged as one of the most important factors affecting entrepreneurs' ability to recognize and pursue entrepreneurial opportunities as well as to acquire the resources they need (Davidsson & Honig, 2003). Shepherd *et al.* (2020) suggest that individual characteristics of the entrepreneur mediate the usefulness of social networks for resource acquisition. Social networks are also found to facilitate entrepreneurs' resource acquisition (Lee *et al.*, 2019) and affect firm performance (Hernández-Carrión *et al.*, 2017). In their study, Ibáñez *et al.* (2022) explored the connection between the spur of exogenous events like the Covid-19 pandemic and the emergence of digital social entrepreneurship from multiple-agent collaborations, arguing that digital entrepreneurship, social entrepreneurship, and n-Helix collaborations supported both economic and social needs, integrating the social dimension in both the theoretical structure and their contributions. Authors like Dabbous and Tarhini (2019) look at how social factors influence sustainable consumption and what role trust and intention to engage in sustainable consumption play in this relation. This work does not engage in a theoretical criticism but uses the sharing economy to expand existing conceptual relationships to include a social dimension. Instead, De Silva and Wright (2019) use the term "social" as a broad category that includes a wide variety of entrepreneurial impacts, encompassing technological development, stakeholder outreach, value-creation, and so on. The integration of social concern allows existing entrepreneurial

theories to be expanded to a broader set of phenomenological elements. As a final example, in their empirical study Stirzaker *et al.* (2021) investigate the drivers of social entrepreneurship and explore whether there is evidence of commercial opportunism versus personally informed altruism in social entrepreneurship. Based on their investigation of social entrepreneurs in Scotland, they extend the refined version of *Entrepreneurial Event Theory* (EET) adapted to social entrepreneurship by adding two elements: personally informed mission and ideological preference for the business model of social entrepreneurship. This integration of social conceptualizations and factors in additional fashion to existing theories characterizes the quintessential integrationist approach.

2.3. The separationist approach

The third category is the *separationist* approach, which aims to define and analyze a specifically-social subset of the main phenomena under study and results, for example, in the creation of concepts such as *social innovation* (Avelino *et al.*, 2019; van der Have & Rubalcaba, 2016), *social entrepreneurship* (Hoogendoorn, 2016), and *Responsible Research and Innovation* (Paredes-Frigolett, 2016; Stilgoe *et al.*, 2013; Wiarda *et al.*, 2021) that oppose, rather than integrate, their "non-social" counterparts. Underlying most of this literature is a critique towards the assumption of self-interest, under the guise of either profit- or rent-seeking, and towards the instrumental or complementary use of altruistic, lifestyle, democratic, and inclusive practices in relation to the transactional dimension (De Silva *et al.*, 2021). These concepts are commonly associated with behavior patterns geared toward improving social and/or community welfare, achieving altruistic goals, and/or pursuing non-monetary aims (Gallouj *et al.*, 2018; Verleye *et al.*, 2019).

As an example, the concept of *social innovation* has gradually emerged in recent years (Avelino *et al.*, 2019). Although it is still ambiguous (Linton, 2009; van der Have & Rubalcaba, 2016), scholars have sought to further develop this concept to the status of a middle-range theory (Pel *et al.*, 2020), defining it both as a process of changing social relations and as a qualitative property of ideas, objects, activities, or people. Kohler and Chesbrough (2019) illustrate the use of social innovation as a separate category of innovative practice in their study of how crowdsourcing platforms can practically support these activities. The authors find that crowdsourcing facilitates the bottom-up and decentralized processes that characterize social innovation, supporting the involvement of many actors with different capabilities and interests and the diffusion of novel solutions to social problems. Crupi *et al.* (2022) provide a suitable point of comparison. While distinguishing between social innovation and other types of innovation practices, and between social entrepreneurship and other entrepreneurial activities, the authors investigate how

social innovation and entrepreneurship are effectively carried out by more traditional for-profit organizations. Social bricolage and organizational agility turn out to be effective strategies. The former relies on leveraging resources, both internal and accessible through stakeholders' involvement; the latter, on the other hand, is based on internal innovation and resource fluidity.

Another illustration of studies that can be found within this category is that of *social entrepreneurship*. Established as a subfield since the early 2000s, it has been defined as the "process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs" (Mair & Marti, 2006, p. 37). By addressing social needs and problems, the common mission of social enterprises is the creation of *social value* (Chell, 2007), with a varying degree of ambition towards the creation of *economic value* (Stevens *et al.*, 2015). Some scholars have also recently argued for the need to reconceptualize social enterprises. Bull (2018) examined how social enterprises are conceptualized in the UK and found that current conceptualizations disregard ownership, legal identities, and governance types. Furthermore, the paper urges theoretical frameworks to consider factors such as regional, cultural, as well as political and economic histories in conceptualizing social enterprises, as this will help broaden the scope of conceptualization.

Although there is no consensus in the literature on what *social value* is (Stevens *et al.*, 2015), studies in the separationist approach category suggest that the activities constituting social entrepreneurship are uniquely affected by the context in which they operate. For example, entrepreneurs may need to push for changes in local institutional conditions (e.g., policies, rules, practices) if they want their social innovations to succeed, and this should be done together with local communities (Venugopal & Viswanathan, 2019). How entrepreneurs perceive and interpret the social challenge can also define their actions and, in turn, the beneficiaries of their project (Kimmitt & Muñoz, 2018). To mobilize their social capital and gain legitimacy from different stakeholders (Verleye *et al.*, 2019), these entrepreneurs often use a rhetorical strategy, especially against antagonists, i.e., those who do not support the "social change" they intend to achieve (Ruebottom, 2013). However, as noted by Desmarchelier *et al.* (2020), it would be wrong to assume that the social economy – from which social innovation processes emerge – is simply characterized by an entrepreneurial regime à la Schumpeter (i.e., heroic individuals, radical change). On the contrary, it exhibits routinized characteristics, sometimes facilitated by organizations posing as facilitators of social innovation/entrepreneurship and promoting replication and scaling-up. All in all, the "social" is conceptualized as a specific type of entrepreneurial opportunity that entrepreneurs identify and pursue, as well as the type of value they seek to create as part of an entrepreneurial process whose content remains highly context-dependent.

A recent addition to I&E studies comes from science, technology and innovation policy and academic discourses in relation to the concept of *responsibility* (Flink & Kaldewey, 2018; Stilgoe *et al.*, 2013). While this strand of research openly recognizes innovation and entrepreneurship as inherently social processes and, thus, close to our fourth categorization (see below), it also identifies a specific subcategory of research and innovation activities aligned with societal values and expectations, although both are context-based and project-dependent. Responsible Research and Innovation (RRI) scholars study cases and refine practices to either "fix" existing innovation and entrepreneurship processes or design new and better ones according to the principles of inclusivity, reflexivity, anticipation, and transparency (Stilgoe *et al.*, 2013). Although the RRI literature recognizes the relevance of the social dimension to research and innovation activities, it continues to draw a line between socially "responsible" and less desirable practices, identifying important qualitative differences between the two – the key element that identifies the separationist approach.

2.4. The essentialist approach

The fourth category, the *essentialist* approach, argues that the social nature of innovation and entrepreneurship should be integrated into the main concepts and causal mechanisms of the fields. Many essentialist scholars (e.g., social constructivists such as Bijker *et al.*, 1987) implicitly or explicitly argue that mainstream I&E studies have obscured the social nature of the object of study and the relevance of specifically-social mechanisms – such as power and identity – for analysis. This has resulted in a sterile, limited and, even worse, skewed academic debate that ignores or outright conceals key real-world dynamics.

Geels' (2010) review of influential schools of thought in innovation studies highlights the assumptions and analytical consequences of essentialism. Innovations are here seen as socially constructed processes that emerge from the frames of interrelated circumstances. When innovating, entrepreneurs, designers, and engineers combine heterogeneous resources and try to convince others to participate in their projects, even though these actors may have different ideas about what the innovation is and what problems should be solved through it. This contentious process introduces a specifically social source of uncertainty all along the innovation journey, from design to development to adoption and, finally, discontinuation. Carayannis and Forbes (2001), for example, criticize the usual depiction of large systems engineering projects as linear and 'rational' activities external to social processes. This normative definition *de facto* fails to take into account the nature of these projects as "interpretive activiti[es] embedded in on-going social processes", and the struggles that project participants face in withstanding the inherent complexities and

uncertainties they encounter. Another example comes from Soraa *et al.* (2021), who employ *domestication theory* (Lie & Sørensen, 1996) to analyze the social taming of technologies through their use. To comprehend technologies – they argue – we must analyze not only the patterns of social interaction, but also the broader ecosystem in which they are used, including how a technology affects existing connections and transforms human behaviors. In general, what a technology is – i.e., what it becomes in space, time, and through socio-technical interactions – is influenced by the different power wielded by the individuals, organizations and groups involved. In a similar line of thought, transition theorists (Geels, 2010; Geels & Schot, 2007) have combined an understanding of innovation as *socially-constructed* with evolutionary economics and institutional theory to understand the dynamics and governance of system transitions. Transition processes are intrinsically social and uncertain endeavors, and agents are assumed to be imbued with agency while, at the same time, being constrained by a semi-coherent and socially constructed system of rules. Therefore, instead of proposing causal mechanisms as outcomes of their studies, these scholars work with interaction patterns (Geels & Schot, 2007; Markard & Truffer, 2008).

With regards to *entrepreneurship studies*, critical research has highlighted the orientation of mainstream research toward economic approbation as the main focus, and the individual as the analytical starting point (Minniti & Lévesque, 2008), thus suggesting the need to develop a social ontology of entrepreneurship. Although orthodox economic theory postulates that the primary motivation of entrepreneurs is profit, Zafirovski (1999) suggests that entrepreneurship actually has an eminent social character and that entrepreneurial motives are rather culture-specific and constrained by institutional incentives. A key assumption here is that "entrepreneurship, development and related economic activities are primarily complex social processes, and only secondarily physical, technological or psychological" (p. 354). Ignoring these social conditions and processes can only lead to a partial explanation of the phenomenon, and it is necessary to adjust the lens to focus on other mechanisms. In this regard, Tatli *et al.* (2014) argue that Bourdieu's relational perspective could provide both an appropriate set of conceptual lenses and methodological blueprint to support the analysis of entrepreneurship. Their argument is that the relational perspective counters the reductionist tendencies of mainstream social research by offering a deeper and more layered understanding of entrepreneurs and entrepreneurship as essentially social. For their part, Korsgaard and Anderson (2011) extend the argument for the social character of entrepreneurship by arguing that the "social" is not just the context in which the entrepreneurial process takes place or the arena for enabling mechanisms: the outcome of the entrepreneurial process *is* itself social. Therefore, "the examination of entrepreneurial processes should include a focus on the "social"

as an enabler, as context and as outcome" (p. 136). The motives and preferences of entrepreneurs as decision makers should be considered endogenous to the culture, institutions and societal context in which the phenomenon is taking place, rather than an exogenous and homogeneous factor (Zafirovski, 1999).

A final mention goes to essentialist studies tackling the social dimension in I&E studies as a whole, generally characterized by a critical stand. An example is provided by Fougère and Meriläinen (2021), who criticize the hegemonic depiction of social innovation as inherently "good", arguing that social innovation can have negative consequences, including that of (re)producing inequalities, especially when the aims of such a process are defined by elites and in a top-down manner. Broadly speaking, essentialist contributions emphasize how I&E studies should raise critical questions about power and politics.

3. THE SPACE BETWEEN: REFLECTING ON THE PROPOSED CATEGORIZATION

We believe that the continuum identified by these categories provides a comprehensive description of the role played by the social sphere within innovation and entrepreneurship studies found in mainstream journals. This taxonomy conceals a significant degree of heterogeneity, with each category containing significantly different conceptualizations and theorizations of the social dimension. This diversity cannot be reduced, as it stems from foundational differences within the analytical traditions employed, and it should be understood as an inevitable consequence of the pluralistic nature of phenomenological approaches to the social sciences. Moreover, these categories should not be intended as clear-cut, but as having porous boundaries: several authors, schools of thought and single contributions straddle them. For the sake of completeness, we review here some interesting contributions that may fall in-between categories.

Integrationist-essentialist. The papers by Fu *et al.* (2022), Ford *et al.* (2017), and Yan and Sorenson (2006) can be categorized as integrationist in terms of their contribution, although somewhat rooted in essentialist theoretical perspectives. The first article describes how the Chinese government has imported, adopted, and contextualized Western makers' discourse. The Chinese approach to the makers' culture is enforced by the government in a top-down fashion, diminishing its innovation potential and reducing the makers' culture to a mere empty buzzword, with the sole goal of pursuing the government's economic development agenda. While clearly considering policies as socially constructed and innovation/entrepreneurship as social processes, the study applies existing frameworks and methodologies to a "new" empirical case, leading to the integration of a new social process within

established theories, rather than challenging their core. The second article advocates for the use of the Energy Cultures framework to enlarge the Multi-Level Perspective of socio-technical transitions. By emphasizing the social embeddedness of behavioral changes Ford *et al.* (2017) argue that one needs to understand how these changes are affected by demand and lifestyle considerations in order to conduct a proper analysis of change in energy systems. Thus, it is by taking into account the energy culture surrounding adopters and innovators, that we can better understand the interrelations between the different analytical levels of regime, landscape and niche, and provide a more comprehensive view of change. Again, while coming from an essentialist perspective, the authors focus primarily on a specific empirical case and their theoretical advancement is incremental compared to the academic core. In the third article, Yan and Sorenson (2006) address one of the major problems of family firms: succession. To this end, they discuss the effect that Confucianism ideology may have on succession in Chinese family businesses. Confucianism defines what relationships in the family should look like, emphasizing the importance of loyalty, harmony, trust, and sympathy. The article may appear at first glance essentialist in that it argues that business relationships are significantly affected by social values and, thus, implicitly embedding entrepreneurial behavior into the social dimension. However, the study ultimately applies the Confucian framework to the empirical context without drawing any theoretical contribution, rather using the context of family firms succession decision-making to validate the Confucian framework. These cases reveal an important limitation of our proposed classification, namely, that in order to achieve a degree of consistency, one must take into account the specific analytical contribution rather than the general implications of the study as a whole.

Disciplinary-integrationist. Neumeyer *et al.* (2019) extend the entrepreneurial ecosystem theory by studying how entrepreneurial ecosystems differ with respect to venture types, finding differences with respect to connectivity, density and strength of the social networks associated with sustainable and conventional entrepreneurs respectively. While the main conceptual distinction operated by the authors is between sustainable and conventional business models, with social conceptualizations not being invoked at the outset, a "social" dimension is introduced later – along with "technological" and "organizational" – to form a comprehensive categorization of sustainable business models. Therefore, although the social element is in an auxiliary position, it is nevertheless integrated into the theoretical framework of the contribution, rather than playing a purely empirical role. Consequently, the article can be considered integrationist, rather than disciplinary.

Separationist-essentialist. Acs *et al.*'s (2013) contribution to the debate challenges, but ultimately confirms, the validity of the taxonomy we propose. Initially, the authors identify and contrast social and economic values, thus apparently joining

the separationist side of the debate. However, their primary argument is that such separation lacks clarity, since in most cases the generation of economic value implies, irrespective of entrepreneurial intentions, the concomitant creation of social value. Against this distinction they support instead the Baumolian classification of productive, unproductive and destructive entrepreneurship. Ultimately, their argument is essentialist: economic value is inherently social. Excluding unproductive and destructive forms of entrepreneurship, all successful entrepreneurs are social entrepreneurs, no matter their intent, which – although subjectively relevant – is objectively uninfluential.

CONCLUSION

The proposed classification begets the following evaluation of how the social dimension is being currently integrated within I&E studies. The disciplinary approach illustrates how the social dimension can be harmlessly integrated within existing dominant frameworks, in a process parallel to those at work within the economic discipline at large. The integrationist approach, while equally harmless to the continuation of mainstream discourse, at least offers an avenue through which social phenomena and mechanisms can receive some analytical attention. The separationist approach, while subject to a tendency towards the creation of separate analytical sub-categories, distinguishes itself for its capability to conjugate critical frames within mostly mainstream theorizing. In this regard, it may be considered the most promising approach in terms of cross-paradigm communication. Finally, the essentialist approach utilizes the social domain to promote more thorough and extensive critical theories against mainstream narratives, whose weaknesses are exposed. On one hand, papers belonging to this approach are more likely to provide original contributions to the analysis of the social dimension within I&E studies while, on the other, the main goal of prompting change within mainstream discourse does not seem to be met, as we have not found evidence of scholars from other approaches engaging with critical discourse. This classification highlights how, while social innovation as other forms of X-innovation (Gaglio *et al.*, 2019) can be used in opposition to mainstream innovation discourse, it can also be deployed to extend and support dominant ideological frameworks.

Nevertheless, while it is true that social innovation has become a “quasi-concept (...) benefitting from the legitimizing aura of the scientific method” (European Commission 2013), it is also true that this theoretical and policy trend that emphasizes the social aspects of entrepreneurship and innovation has *de facto* enforced a

conceptual separation between innovation and entrepreneurship processes with social purposes and those driven primarily by economic profit.

From the above discussion, the following conclusions can be drawn regarding the role of the social dimension within the context of I&E studies. First, I&E studies, as phenomenological fields rather than disciplines, are necessarily characterized by plurality of analytical interpretations of the social dimension. This diversity should not be considered a sign of immaturity of these fields, or a preliminary, exploratory phase to be reconciled through further analytical development. Rather, it is a permanent feature. If anything, the success of these fields will lead to an empirical and theoretical expansion of the phenomena analyzed, resulting in even more diversity in the near future. Secondly, understanding the epistemological roots of these varieties of views, found in the conflict between the social sphere's complexity and the requirements of scientific analysis, allows for a reconciliation of these differences: not in a single perspective but, rather, within a pluralist field capable of admitting and fostering constructive interaction between different camps, in contrast to the rigidities and conflicts characterizing disciplinary approaches. In this sense, we would argue that this can happen only if the field itself recognizes its intrinsic plurality, i.e., if it is reflexive of itself. Thirdly, essentialist conceptualizations of the "social" (our fourth category) serve a systemic critical function of checking the growth of transactional and individualist assumptions nested in mainstream approaches of I&E studies, and providing spaces for critical, alternative analytical perspectives to grow. Unfortunately, there is a dearth of critical inquiry in mainstream I&E journals, which seems to support the hypothesis that critical perspectives are not succeeding in affecting mainstream discourse.

On the other hand, the lack of a clearly defined and generally accepted theoretical core and a clear demarcation between the object of study and social dimension in I&E studies is bound to remain a potential source of academic debate and division. Once the issue is framed as a necessary consequence of the phenomenological nature of these fields, the heterogeneity of positions with respect to the analytical role played by social elements can receive pluralist interpretation as an evolving richness, rather than early confusion. Recognition, however, does not imply consensus. A more substantial integration of the social dimension involves a critical tension that cannot be reconciled with a linear development of the fields along existing lines. The "social" provides an entry point for critical perspectives within the mainstream development of I&E studies. But, so far, their role has been limited to providing a much-needed counterpoint to the analytical simplifications adopted by mainstream analysis. The social dimension has not provided an avenue to reclaim mainstream I&E discourse from a critical perspective, although it has provided a space for cross-paradigm communication. It has also illustrated how the dominant discourse

is able to embrace concepts and mechanisms once characterizing more critical perspectives, effectively disarming them in the process. The expansion of social discourse within I&E studies, therefore, does not seem to prelude the abandonment of dominant theoretical frameworks. More likely, the "social" will remain an arena of continuous advancement and incessant challenge, where explicit and implicit advocates and opponents of the current capital system meet, responding to apologies with criticism, and vice versa.

REFERENCES

Acs, Z. J., Boardman, M. C., & McNeely, C. L. (2013). The social value of productive entrepreneurship. *Small Business Economics*, 40(3), 785-796.

Alvesson, M., & Deetz, S. (2000). *Doing Critical Management Research*. Sage Publications, London

Anderson, A. R. (2015). The economic reification of entrepreneurship: re-engaging with the social. In A. Fayolle, & P. Riot (Eds.), *Rethinking entrepreneurship: debating research orientations* (p. 44-56). Abingdon: Routledge.

Abingdon: Routledge. Asheim, B. T., & Coenen, L. (2005). Knowledge bases and regional innovation systems: Comparing Nordic clusters. *Research Policy*, 34(8), 1173-1190.

Avelino, F., Wittmayer, J. M., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., Kemp, R., Jørgensen, M. S., Bauler, T., Ruijsink, S., & O'Riordan, T. (2019). Transformative social innovation and (dis)empowerment. *Technological Forecasting and Social Change*, 145, 195-206.

Baba, Y., & Walsh, J. P. (2010). Embeddedness, social epistemology and breakthrough innovation: The case of the development of statins. *Research Policy*, 39(4), 511-522.

Bartoloni, S., Calò, E., Marinelli, L., Pascucci, F., Dezi, L., Carayannis, E., Revel, G. M., & Gregori, G. L. (2021). Towards designing society 5.0 solutions: The new Quintuple Helix-Design Thinking approach to technology. *Technovation*, 102413. <https://doi.org/10.1016/j.technovation.2021.102413>

Becker, G. S. (1960). An economic analysis of fertility. In G. S. Becker (Ed.), *Demographic and economic change in developed countries* (p. 209-240). Princeton, NJ: Princeton University Press.

Bergek, A., Jacobsson, S., Carlsson, B., Lindmark, S., & Rickne, A. (2008). Analyzing the functional dynamics of technological innovation systems: A scheme of analysis. *Research Policy*, 37(3), 407-429.

Bijker, W. E., Hughes, T. S., & Pinch, T. J. (Eds.) (1987). *The social construction of technological systems: new directions in the sociology and history of technology*. Cambridge, MA: MIT Press.

Brazeal, D. V., & Herbert, T. T. (1999). The genesis of entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3), 29-46.

Brieger, S. A., & De Clercq, D. (2018). Entrepreneurs' individual-level resources and social value creation goals: The moderating role of cultural context. *International Journal of Entrepreneurial Behavior & Research*, 25(2), 193-216.

Bull, M. (2018). Reconceptualising social enterprise in the UK through an appreciation of legal identities. *International Journal of Entrepreneurial Behavior & Research*, 24(3), 587-605.

Callegari, B., Misganaw, B. A., & Sardo, S. (2022). Introduction to Rethinking the Social in Innovation and Entrepreneurship Studies. In *Rethinking the Social in Innovation and Entrepreneurship* (p. 1-24). Cheltanham, UK: Edward Elgar.

Carayannis, E., & Forbes, J. (2001). A pragmatic representation of systems engineering based on technological learning. *Technovation*, 21(4), 197-207.

Carayannis, E. G., Goletsis, Y., & Grigoroudis, E. (2018a). Composite innovation metrics: MCDA and the Quadruple Innovation Helix framework. *Technological Forecasting and Social Change*, 131, 4-17.

Carayannis, E. G., Grigoroudis, E., Campbell, D. F., Meissner, D., & Stamati, D. (2018b). The ecosystem as helix: an exploratory theory-building study of regional competitive entrepreneurial ecosystems as quadruple/quintuple helix innovation models. *R&D Management*, 48(1), 148-162.

Chell, E. (2007). Social enterprise and entrepreneurship: Towards a convergent theory of the entrepreneurial process. *International Small Business Journal*, 25(1), 5-26.

Cooke, P., Uranga, M. G., & Etxebarria, G. (1997). Regional innovation systems: Institutional and organisational dimensions. *Research Policy*, 26(4-5), 475-491.

Crupi, A., Liu, S., & Liu, W. (2022). The top-down pattern of social innovation and social entrepreneurship. Bricolage and agility in response to COVID-19: cases from China. *R&D Management*, 52(2), 313-330.

Curtis, T. (2008). Finding that grit makes a pearl: a critical re-reading of research into social enterprise. *International Journal of Entrepreneurial Behavior & Research*, 14(5), 276-290.

Dabbous, A., & Tarhini, A. (2019). Assessing the impact of knowledge and perceived economic benefits on sustainable consumption through the sharing economy: A sociotechnical approach. *Technological Forecasting and Social Change*, 149, 119775. <https://doi.org/10.1016/j.techfore.2019.119775>

Dakhli, M., & De Clercq, D. (2004). Human capital, social capital, and innovation: A multi-country study. *Entrepreneurship & Regional Development*, 16(2), 107-128.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301-31.

De Silva, M., & Wright, M. (2019). Entrepreneurial Co-creation: societal impact through open innovation. *R&D Management*, 49(3), 318-342.

De Silva, M., Gokhberg, L., Meissner, D., & Russo, M. (2021). Addressing societal challenges through the simultaneous generation of social and business values: a conceptual framework for science-based co-creation. *Technovation*, 104, 102268. <https://doi.org/10.1016/j.technovation.2021.102268>

Dequech, D. (2012). Post Keynesianism, heterodoxy and mainstream economics. *Review of Political Economy*, 24(2), 353-368.

Desmarchelier, B., Djellal, F., & Gallouj, F. (2020). Mapping social innovation networks: Knowledge intensive social services as systems builders. *Technological Forecasting and Social Change*, 157, 120068. <https://www.sciencedirect.com/science/article/pii/S0040162519315288>

Dosi, G. (1982). Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change. *Research Policy*, 11(3), 147-162.

Dosi, G., & Roventini, A. (2016). The irresistible fetish of utility theory: from "pleasure and pain" to rationalising torture. *Intereconomics*, 51(5), 286-287.

Edlund, L., & Korn, E. (2002). A Theory of Prostitution. *Journal of Political Economy*, 110(1), 181-214.

Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university-industry-government relations. *Research Policy*, 29(2), 109-123

European Commission (2010). *Europe 2020: flagship initiative innovation union*. Brussels: European Commission.

European Commission (2013). Social innovation research in Europe: Approaches, trends and future directions. Brussels: Directorate-General for Research.

Flink, T., & Kaldewey, D. (2018). The new production of legitimacy: STI policy discourses beyond the contract metaphor. *Research Policy*, 47(1), 14-22.

Ford, R., Walton, S., Stephenson, J., Rees, D., Scott, M., King, G., Williams, J., & Wooliscroft, B. (2017). Emerging energy transitions: PV uptake beyond subsidies. *Technological Forecasting and Social Change*, 117, 138-150.

Fougère, M., & Meriläinen, E. (2021) Exposing three dark sides of social innovation through critical perspectives on resilience. *Industry and Innovation*, 28(1), 1-18.

Fu, P., Sarpong, D., & Meissner, D. (2022). Recalibrating, reconfiguring, and appropriating innovation: a semantic network analysis of China's mass innovation and mass entrepreneurship (MIME) initiatives. *The Journal of Technology Transfer*, 47, 1506-1523. <https://doi.org/10.1007/s10961-021-09878-x>.

Gaglio, G., Godin, B., & Pfotenhauer, S. (2019). X-Innovation. *NOvation: Critical Studies of Innovation*, 1(2019), 17-17.

Gallouj, F., Rubalcaba L., Toivonen M., & Windrum P. (2018). Understanding social innovation in services industries. *Industry and Innovation*, 25(6), 551-569.

Gedajlovic, E., Honig, B., Moore, C. B., Payne, G. T., & Wright, M. (2013). Social capital and entrepreneurship: A schema and research agenda. *Entrepreneurship Theory and Practice*, 37(3), 455-478.

Geels, F. W. (2010). Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research Policy*, 39(4), 495-510.

Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399-417.

Godin, B. (2015). Social innovation: From scheme to utopia. In B. Godin (Ed.), *Innovation contested: The idea of innovation over the centuries* (p. 122-133). London: Routledge.

Goss, D. (2005). Entrepreneurship and 'the social': Towards a deference-emotion theory. *Human Relations*, 58(5), 617-636.

Havránek, T., Stanley, T. D., Doucouliagos, H., Bom, P., Geyer-Klingenberg, J., Iwasaki, I., Reed, W. R., Rost, K., & Van Aert, R. C. M. (2020). Reporting guidelines for meta-analysis in economics. *Journal of Economic Surveys*, 34(3), 469-475.

Hechavarria, D. M., & Brieger, S. A. (2020). Practice rather than preach: cultural practices and female social entrepreneurship. *Small Business Economics*, 58, 1131-1151.

Hernández-Carrión, C., Camarero-Izquierdo, C., & Gutiérrez-Cillán, J. (2017). Entrepreneurs' social capital and the economic performance of small businesses: The moderating role of competitive intensity and entrepreneurs' experience. *Strategic Entrepreneurship Journal*, 11(1), 61-89.

Hoogendoorn, B. (2016). The prevalence and determinants of social entrepreneurship at the macro level. *Journal of Small Business Management*, 54, 278-296.

Huybrechts, B., & Nicholls, A. (2012). Social entrepreneurship: Definitions, drivers and challenges. In C. K. Volkmann, K. O. Tokarski & K. Ernst (Eds.), *Social entrepreneurship and social business* (p. 31-48). Gabler Verlag.

Ibáñez, M. J., Guerrero, M., Yáñez-Valdés, C., & Barros-Celume, S. (2022). Digital social entrepreneurship: the N-Helix response to stakeholders' COVID-19 needs. *The Journal of Technology Transfer*, 47(2), 556-579.

Kimmitt, J., & Muñoz, P. (2018). Sensemaking the 'social' in social entrepreneurship. *International Small Business Journal*, 36(8), 859-886.

Kleinhempel, J., Beugelsdijk, S., & Klasing, M. J. (2022). The changing role of social capital during the venture creation process: A multilevel study. *Entrepreneurship Theory and Practice*, 46(2), 297-330.

Kohler, T., & Chesbrough, H. (2019). From collaborative community to competitive market: The quest to build a crowdsourcing platform for social innovation. *R&D Management*, 49(3), 356-368.

Korsgaard, S., & Anderson, A. R. (2011). Enacting entrepreneurship as social value creation. *International Small Business Journal*, 29(2), 135-151.

Kuhlmann, S., & Rip, A. (2018). Next-generation innovation policy and grand challenges. *Science and Public Policy*, 45(4), 448-454.

Kupferberg, F. (1998). Humanistic entrepreneurship and entrepreneurial career commitment. *Entrepreneurship & Regional Development*, 10(3), 171-188.

Kwon, S. W., & Arenius, P. (2010). Nations of entrepreneurs: A social capital perspective. *Journal of Business Venturing*, 25(3), 315-330.

Landry, R., Amara, N., & Lamari, M. (2002). Does social capital determine innovation? To what extent? *Technological Forecasting and Social Change*, 69(7), 681-701.

Lazear, E. P. (2000). Economic Imperialism. *The Quarterly Journal of Economics*, 115(1), 99-146.

Lee, R., Tuselmann, H., Jayawarna, D., & Rouse, J. (2019). Effects of structural, relational and cognitive social capital on resource acquisition: A study of entrepreneurs residing in multiply deprived areas. *Entrepreneurship & Regional Development*, 31(5-6), 534-554.

Lee, S., Lee, H., & Lee, C. (2020). Open innovation at the national level: Towards a global innovation system. *Technological Forecasting and Social Change*, 151, 119842. <https://doi.org/10.1016/j.techfore.2019.119842>

Lehner, O. M., & Kansikas, J. (2012). Opportunity recognition in social entrepreneurship: A thematic meta analysis. *Journal of Entrepreneurship*, 21, 25-58.

Leydesdorff, L. (2000). The triple helix: an evolutionary model of innovations. *Research Policy*, 29(2), 243-255.

Leydesdorff, L., & Meyer, M. (2006). Triple Helix indicators of knowledge-based innovation systems: Introduction to the special issue. *Research Policy*, 35(10), 1441-1449.

Lie, M., & Sørensen, K.H. (1996). Making technologies our own? Domesticating technology into everyday life. In R. Ling, R. & P. E. Pedersen (Eds.), *Mobile Communications: Renegotiation of the Social Sphere* (p. 1-30). Springer.

Linton, J. D. (2009). De-babelizing the language of innovation. *Technovation*, 29(11), 729-737.

Lundvall, B.-Å. (2007). National innovation systems – analytical concept and development tool. *Industry and innovation*, 14(1), 95-119.

Lundvall, B.-Å. (2013). Innovation studies: A personal interpretation of "the state of the art". In J. Fagerberg, B. R. Martin & E. S. Andersen (Eds.), *The future of innovation*

studies: Evolution and future challenges (p. 21-70). Oxford: Oxford University Press.

Mair, J., & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), 36-44.

Malerba, F., & Brusoni, S. (Eds.). (2007). *Perspectives on Innovation*. Cambridge University Press.

Markard, J., & Truffer, B. (2008). Technological innovation systems and the multi-level perspective: Towards an integrated framework. *Research Policy*, 37(4), 596-615.

Mazzucato, M. (2018). *Mission-oriented research & innovation in the European Union*. Brussels: European Commission, Directorate-General for Research and Innovation. <https://op.europa.eu/en/publication-detail/-/publication/5b2811d1-16be-11e8-9253-01aa75ed71a1/language-en>.

Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*, 23(6), 603-612.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group* (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of Internal Medicine*, 151(4), 264-269.

Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). *Social innovation: What it is, why it matters and how it can be accelerated*. Oxford: Skoll Centre for Social Entrepreneurship.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). *The open book of social innovation*. London: Nesta.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.

Nelson, R. R. (2011). The Moon and the Ghetto revisited. *Science and Public Policy*, 38(9), 681-690.

Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Harvard University Press.

Neumeyer, X., Santos, S. C., & Morris, M. H. (2019). Who is left out: exploring social boundaries in entrepreneurial ecosystems. *The Journal of Technology Transfer*, 44(2), 462-484.

Nicholls, A., & Cho, A. H. (2006). Social entrepreneurship: The structuration of a field. In A. Nicholls (Ed.) *Social entrepreneurship: New models of sustainable social change* (pp.99-118). New York: Oxford University Press.

Paredes-Frigolett, H. (2016). Modeling the effect of responsible research and innovation in quadruple helix innovation systems. *Technological Forecasting and Social Change*, 110, 126-133.

Pel, B., Haxeltine, A., Avelino, F., Dumitru, A., Kemp, R., Bauler, T., Kunze, I., Dorland, J., Wittmayer, J. M., & Jørgensen, M. S. (2020). Towards a theory of transformative social innovation: A relational framework and 12 propositions. *Research Policy*, 49(8), 104080. <https://doi.org/10.1016/j.respol.2020.104080>

Pittz, T. G., Intindola, M. L., Adler, T., Rogers, S., & Gard, C. (2019). Collaborating smartly: the role of open strategy in absorptive capacity. *Journal of Small Business Management*, 57(4), 1595-1615.

Posner, R. A. (1985). An economic theory of the criminal law. *Columbia Law Review*, 85(6), 1193-1231.

Rosenberg, N. (1982). *Inside the Black Box: Technology and Economics*. Cambridge: Cambridge University Press.

Ruebottom, T. (2013). The microstructures of rhetorical strategy in social entrepreneurship: Building legitimacy through heroes and villains. *Journal of Business Venturing*, 28(1), 98-116.

Schubert, C. (2019). Social innovations as a repair of social order. *NOvation: Critical Studies of Innovation*, 1(2019), 41-66.

Schumpeter, J. A. (2010). *The Nature and Essence of Economic Theory*. London: Transaction Publishers.

Shepherd, D. A., Sattari, R., & Patzelt, H. (2020). A social model of opportunity development: Building and engaging communities of inquiry. *Journal of Business Venturing*, 106033. <https://doi.org/10.1016/j.jbusvent.2020.106033>

Stevens, R., Moray, N., & Bruneel, J. (2015). The social and economic mission of social enterprises: Dimensions, measurement, validation, and relation. *Entrepreneurship Theory and Practice*, 39(5), 1051-1082.

Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy*, 42(9), 1568-1580.

Stirzaker, R., Galloway, L., Muhonen, J., & Christopoulos, D. (2021). The drivers of social entrepreneurship: agency, context, compassion and opportunism. *International Journal of Entrepreneurial Behavior & Research*, 27(6), 1381-1402.

Stornelli, A., Ozcan, S., & Simms, C. (2021). Advanced manufacturing technology adoption and innovation: A systematic literature review on barriers, enablers, and innovation types. *Research Policy*, 50(6), 104229. <https://doi.org/10.1016/j.respol.2021.104229>

Søraa, R. A., Nyvoll, P., Tøndel, G., Fosch-Villaronga, E., & Serrano, J. A. (2021). The social dimension of domesticating technology: Interactions between older adults, caregivers, and robots in the home. *Technological Forecasting and Social Change*, 167, 120678. <https://doi.org/10.1016/j.techfore.2021.120678>

Tatli, A., Vassilopoulou, J., Özbilgin, M., Forson, C., & Slutskaya, N. (2014). A Bourdieuan relational perspective for entrepreneurship research. *Journal of Small Business Management*, 52(4), 615-632.

Tödtling, F., & Trippl, M. (2005). One size fits all?: Towards a differentiated regional innovation policy approach. *Research policy*, 34(8), 1203-1219.

Urban, B. (2010). Entrepreneurship as a discipline and field of study. In B. Urban (Ed.), *Frontiers in Entrepreneurship* (p. 33-62). Berlin, Heidelberg: Springer.

van der Have, R. P., & Rubalcaba, L. (2016). Social innovation research: An emerging area of innovation studies? *Research Policy*, 45(9), 1923-1935.

Venugopal, S., & Viswanathan, M. (2019). Implementation of social innovations in subsistence marketplaces: a facilitated institutional change process model. *Journal of Product Innovation Management*, 36(6), 800-823.

Verleye, K., Perks, H., Gruber, T., & Voets, J. (2019). The long and winding road: Building legitimacy for complex social innovation in networks. *Journal of Product Innovation Management*, 36(6), 695-720.

Welter, F. (2011). Contextualizing entrepreneurship – conceptual challenges and ways forward. *Entrepreneurship Theory and Practice*, 35(1), 165-184.

Wiarda, M., van de Kaa, G., Yaghmaei, E., & Doorn, N. (2021). A comprehensive appraisal of responsible research and innovation: From roots to leaves. *Technological Forecasting and Social Change*, 172, 121053. <https://doi.org/10.1016/j.techfore.2021.121053>

Yakovlev, P. (2011). The economics of torture. In C. J. Coyne & R. L. Mathers (Eds.), *The handbook on the political economy of war* (p. 109-25). Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.

Yan, J., & Sorenson, R. (2006). The effect of Confucian values on succession in family business. *Family Business Review*, 19(3), 235-250.

Zafirovski, M. (1999). Probing into the social layers of entrepreneurship: Outlines of the sociology of enterprise. *Entrepreneurship & Regional Development*, 11(4), 351-371.

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24, 519-532.

Zinyemba, T., Pavlova, M., & Groot, W. (2020). Effects of HIV/AIDS on children's educational attainment: A systematic literature review. *Journal of Economic Surveys*, 34(1), 35-84.