Towards a theory of transformative social innovation: A relational framework and 12 propositions

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ABSTRACT

This paper responds to the need in innovation research for conceptual clarity and solid theory on social innovation (SI). The paper conceptualizes SI as changing social relations, involving new ways of doing, knowing, framing and organizing, and theorizes *transformative* social innovation (TSI) as the process of SI challenging, altering, or replacing dominant institutions in a specific social-material context. Three advances towards TSI theory are proposed. First, we reflect epistemologically on the challenges of theory-building, and propose an appropriate research design and methodology. Middle-range theory is developed through iteration between theoretical insights and comparative empirical study of 20 transnational SI networks and about 100 associated initiatives. Second, we synthesize various innovation theories and social theories into a relational framework that articulates the distributed agency and institutional hybridization involved. Third, we formulate twelve propositions on the emergence of SI initiatives, on the development of SI ecosystems, on institutionalization processes, and on the historical shaping of SI. The paper ends with a critical assessment of the advances made, also identifying further challenges for TSI theory and practice.

1. Introduction: towards transformative social innovation theory

The concept of social innovation (SI) has received much interest in recent years, both in research and policy (Pol and Ville, 2009; Cajaiba-Santana, 2014; Fougère et al., 2017; Avelino et al., 2019a). Previously discussed in scholarship on social economy, critical social studies and entrepreneurship (e.g. Laville et al., 2015; Moulaert and MacCallum, 2019), social innovation is entering innovation journals, in which the term is still less of a household term (Witkamp et al., 2011; van der Have and Rubalcaba, 2016). The growing interest in SI fits with the broader trend of increased innovation-theoretical engagement with innovation phenomena beyond the traditional focus on novel technologies and products. This speaks clearly from the empirical work on social enterprises (Vickers et al., 2017), living labs (Engels et al., 2019) and makerspaces (Halbinger, 2018), from the theorization of narrative perspectives on innovation (Garud et al., 2016; Strand et al., 2016), and

from reflections on the innovation society (Rammert et al., 2018; Godin and Vinck, 2017) and the associated innovation politics (Perren and Sapsed, 2013; Pfotenhauer and Jasanoff, 2017; Smith and Stirling, 2018). So far, SI scholarship amounts to an emerging body of theory and practice rooted in different social science disciplines (Moulaert et al., 2013; Marques et al., 2017; Moulaert and MacCallum, 2019), still characterized by 'conceptual ambiguity' (van der Have and Rubalcaba, 2016: 1923) and a plethora of new approaches and frameworks (Pol and Ville, 2009; Moulaert et al., 2017).

Currently there are widely shared ambitions to 'move the field forward' (Cajaiba-Santana, 2014), enhancing theoretical and conceptual coherence to better inform research, policy and practice (van der Have and Rubalcaba, 2016; Edwards-Schachter and Wallace, 2017). This need for coherence is to be balanced against the desirability of conceptual pluralism, reflecting the field's openness to experimentation at this stage (Moulaert et al., 2017). Nevertheless,

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clear needs for theoretical advancement can be identified on three distinct fronts. First, there are calls to move beyond anecdotal and fragmented empirical evidence (Jaeger-Erben et al., 2015; McGowan and Westley, 2017; Wittmayer et al., 2017), towards the development of generic insights on mechanisms and processes underlying SI dynamics and agency. Second, there is a challenge of scrutinizing the assumptions and claims regarding the empowering potentials of SI, as found in policy discourses (e.g. Hubert, 2010; Moulaert et al., 2017). Challenging the assumptions of SI as an unambiguous instrument (Haxeltine et al., 2017a; Schubert, 2018), various authors have called for more fundamental consideration of the associated 'shadow sides' of *dis*empowerment (Swyngedouw, 2005; Avelino et al., 2019a; Fougère and Meriläinen, 2019) and 'capture' by vested interests (Jessop et al., 2013; Pel and Bauler, 2017). Considering especially the persistence and systemic complexity of current societal challenges (Grin et al., 2010), SI cannot be taken as a 'panacea'. Hence, there is, thirdly, a need for deeper theorization of the dynamic interactions between SI initiatives and broader processes of innovation and transformative change (Murray et al., 2010; North, 2014; Unger, 2015; Lévesque, 2016; Marques et al., 2017; Westley et al., 2017; Domanski et al., 2019).

Taking these calls for 'solidified', 'empowering', and 'transformative' SI theory together, this paper presents advances towards a middle-range theory of transformative social innovation (TSI). Whilst having been informed by contemporary debates on transformative social change (Jasanoff, 2004; Sewell, 2005; Wright, 2010) and especially transformative innovation (Grin et al., 2010; Geels, 2010; Garud and Gehman, 2012; Fagerberg, 2018; Hekkert et al., 2020), these theoretical advances have also been grounded in a broad empirical evidence basis. We focus on the following research questions: *To what extent, how, and under which conditions do social innovation processes contribute to transformative change? How are social innovation networks, initiatives, and individuals (dis)empowered in these processes?*

We answer these research questions at three different levels of inquiry. First, we reflect epistemologically on the challenges of theory-building, and propose an appropriate research design and methodology (Section 2). Second, we develop a conceptual framework for TSI that starts from a relational ontology. We conceptualize social innovation in terms of changing social relations, and transformative change as the process of challenging, altering, or replacing dominant institutions in a specific socio-material context. Four sets of key TSI relations are distinguished: between individuals within SI initiatives, between SI initiatives and networks, between SI and institutional change, and between SI and the socio-material context (Section 3). Third, these key TSI processes are elaborated in the form of twelve empirically-grounded theoretical propositions (Section 4). We conclude with a critical assessment of the theoretical advances made, and identify challenges for further TSI research and practice (Section 5).

2. Methodology: an iterative research design for middle range theory

TSI theory needs to be grounded in contemporary debates on transformative change. Whilst sustainability transitions research (Grin et al., 2010) has become an established research strand, proposals for 'mission-oriented' innovation systems (Hekkert et al., 2020) and 'transformative innovation policy' (Schot and Steinmuller, 2018) are indicating other new avenues for innovation policy. Before adding yet another label, it is important to consider the abundant innovation insights already available (Fagerberg, 2018). Moreover, social transformation has also been studied through lenses other than 'innovation', such as co-production (Jasanoff, 2004) structuration (Sewell, 2005), institutional imagination (Unger, 2015) or 'real utopias' (Wright, 2010). Situating the quest for transformative social innovation amidst similar research efforts, it becomes clear that the theory-building needs to confront a range of recurring methodological and

meta-theoretical challenges. As detailed in Haxeltine et al., (2017a) and Pel et al., (2017a), this notably involves methodological pitfalls of single-case particularism, unwarranted teleological projections, downplaying of distributed agency, and negligence of process dynamics. In response to these pitfalls, our TSI theory-building has been guided by a relational conceptual framework (Cf. Section 3) and by the following key methodological choices.

First we have considered the pervasive single-case particularism in SI research, reaching beyond the reliance on evocative exemplars (Cf. Jaeger-Erben et al., 2015; Callorda Fossati et al., 2017). Especially transformation-oriented SI researchers have urged to look beyond the intricacies of single innovation journeys (Lévesque, 2016), and to systematically compare larger numbers of cases (Howaldt et al., 2016; McGowan and Westley, 2017). We have followed similar argumentations in transitions research for the development of generic, middle-range theory (MRT) understandings of the dynamics and agency in societal transformation processes (Geels, 2007; 2010). Tried and tested in the social sciences (Hedström, 2005), MRT development starts with a basic empirical understanding of the phenomenon under study, followed by an iterative process of alternating between theoretical abstractions, general empirical statements, and validations and refinements through empirical data. We have applied such an approach in a four-year international project, comparing in-depth case studies on 20 networks and 100 initiatives across 27 countries. As indicated in Section 4.1 (Table 1), the sample of initiatives comprised a wide spectrum of alternative economies, sustainability-oriented collectives, and moves towards 'open source' collaboration.

Second, regarding the need to account for the processual character of innovation (Garud and Gehman, 2012), we followed the pioneering work of Moore et al., (2012) and Westley et al., (2017) in the reconstruction of TSI as highly dynamic processes. This requires analytical sensitivity to different phases and turns in SI processes, and to the changing relations between situated innovation agency and broader processes of social transformation (Lévesque, 2016). This process-oriented mode of investigation has been pursued in 20 in-depth case studies (each addressing the translocal SI networks and two of their local initiatives), and has been elaborated further through a database of 'critical turning points', describing the development processes of approx. 75 SI initiatives (Pel et al., 2017b). Comprising relatively contemporary initiatives, the empirical studies covered on average about two decades.

Third, our preliminary theoretical reviews highlighted the need to avoid substantivist assumptions about SI initiatives and networks and to adopt a relational mode of inquiry instead (Emirbayer, 1997). SI initiatives have been studied as embedded collective actors: Whilst being locally rooted, they also tend to be translocally connected through SI networks (Greiner and Sakdapolrak, 2013; Pel et al., 2019, Avelino et al., 2019b). Their societally innovative actions take place in contexts of dynamic 'arenas of development' (Jørgensen, 2012) and 'strategic action fields' (Fligstein and McAdam, 2011). Furthermore, we have focused on the ways in which SI initiatives are re-negotiating organizational and institutional boundaries; much social innovation takes place in the hybrid institutional sphere (Nicholls and Murdock, 2012; Anheier et al., 2018).

Grounded in a MRT approach, the research design was thus informed by a relational awareness of *emergent* innovations, *embedded* agents, and *dynamic* transformation processes. This research design was implemented within a four-year research project, where researchers from 12 research institutes collaborated in the comparative study of 20 SI networks and 100 associated initiatives. Similar to the theory development approach of Fligstein and McAdam (2011), the MRT development procedure took place through iterative formulations of propositions, as steadily solidifying explanations about TSI processes. The iterative theory-building comprised three distinct phases of interplay between empirical evidence and conceptual development, each supported through theory-building workshops and exchanges between

Table 1

Overview of Social Innovation networks and local manifestations studied.

Name of SI network	Short description of translocal network	Local manifestations
Ashoka	Network for support to social entrepreneurs	Hungary, Germany, France, Poland
Basic Income (Earth Network)	Connects people committed to basic income & fosters discussion	Germany, Netherlands, Switzerland, Canada
Co-housing	Co-operative organizations for affordable, inclusive housing	Argentina, Germany, Uruguay
Credit Unions	Different types of members-owned credit cooperatives	Spain, Belgium, Italy, Denmark, UK
DESIS	Network for design for social innovation and sustainability	Brazil, Italy, Portugal
European Network of Living Labs	Human-centric, user-driven, real-life experimentation for innovation	UK, Netherlands, Tunisia, Belgium, Finland
FABLABS	Digital fabrication workshops open to local communities	UK, Netherlands, Argentina
Global Ecovillage Network	Connects intentional communities and other eco-communities	Portugal, Germany, Netherlands, Germany, UK
Hackerspace	User driven technological hardware and software workshops	UK, Argentina
Impact Hub	Global network of urban hubs for social entrepreneurs	Netherlands, Brazil, Austria, UK
INFORSE	International network of sustainable energy NGOs	Belgium, Denmark, Spain, France
Living Knowledge Network	Network of science shops & other community-based research entities	Romania, Denmark, UK, Germany, Hungary
Participatory Budgeting	Communities & municipalities reinventing the use and distribution of public money	Netherlands, Brazil
RIPESS	Network for the promotion of social solidarity economy	Belgium, Romania, Switzerland, Brazil
Seed Exchange Network	Defending seed freedom for integrity, self-organisation & biodiversity	USA, Australia, Austria, Switzerland, Hungary, Spain
Shareable	Action and connection hub for urban sharing initiatives	Spain, Netherlands, USA, Greece, Italy
Slow Food	A model of sustainable production and consumption of food that enhances biodiversity, wellbeing and community	Germany, Spain, Mexico, USA, Italy
Time Banks	Networks of reciprocal service exchange using time as currency	UK, Spain, USA, UK, Japan
Transition Towns	Grassroots communities working on local resilience	Denmark, UK
Via Campesina	Aiming for family farming to promote social justice and dignity	Argentina, Hungary, Argentina, Chile, Uruguay

work packages. The three phases were marked by the completion of two batches of in-depth case studies, and a concluding meta-analysis through the database of 'critical turning points in TSI' (Pel et al., 2017b). Each phase of empirical study has been informed by the sensitizing concepts and emergent categories of successive phases in theory development. In turn, the empirical findings have informed the elaboration, refinement, or rejection of initial propositions. Alternating between conceptual synthesis and empirical specification, the precision of separate propositions has been weighed against the comprehensiveness of the overall set. For sake of clear presentation, Section 4 presents the twelve main propositions in largely ontological and empirical terms. Their theoretical and epistemological underpinnings are presented separately in Section 3.

3. A relational framework for transformative social innovation

3.1. A relational approach to TSI

Critically engaging with existing scholarship on innovation and transformation, we have developed a relational framework that integrates theoretical resources from a variety of relevant fields. SI agency is often attributed rather exclusively to certain actors, such as citizen's initiatives (Aiken, 2019) or social entrepreneurs (Kaletka et al., 2016). As underlined in contemporary scholarship on transformative innovation (e.g. Grin et al., 2010; Westley et al., 2017), it is more accurately understood however as being distributed across 'webs' or 'networks' of social and material relations. Adopting a relational ontology, this embedded and situated nature of agency in TSI processes is taken as a starting point. Relational approaches have been developed in many social science fields including sociology (Emirbayer, 1997), institutional theory (Lowndes and Roberts, 2013), actor-network theory and co-productionist understandings of society (Jasanoff, 2004; Chilvers and Longhurst, 2015; Chilvers and Kearnes, 2016).

Understanding SI through a relational perspective, we emphasize that it cannot be attributed exclusively to the achievements of individual innovation champions, or to particular social groups (Pel et al., 2019). Avoiding unwarranted assumptions about origins or driving actors, we define SI as a process of changing social relations. SI is a qualitative property of ideas, objects, activities or (groups of) persons, who can be considered to be socially innovative to the extent that they contribute to changing social relations. This definition breaks with the many teleological understandings of SI (Cajaiba-Santana, 2014), and

especially with those in which the 'social' refers to desirable purposes, designated beneficiaries and ideological programs (e.g. Hubert 2010; Moulaert et al., 2013; Unger, 2015). This normative idealism reproduces the 'pro-innovation bias' in innovation studies (Godin and Vinck, 2017), neglecting not only the innovation-theoretical insights on unintended consequences and path dependency but also the paradoxes and 'dark sides' of social change (Swyngedouw, 2005; Westley et al., 2017; Fougère and Meriläinen, 2019). We have therefore adopted a non-teleological, sociological focus on changing social relations (Jaeger-Erben et al., 2015; Rammert et al., 2018). In line with co-productionist understandings (Jasanoff, 2004) and accounts of socio-technical change (Geels, 2010), we conceive of those 'social' relations in a broad sense. Explicitly referring to socio-*material* relations that connect ideas, objects, activities and people (Chilvers and Longhurst, 2016; Pel et al., 2016), SI comprises both the cultural, political, psychological, economic as well as the technological, ecological and spatial dimensions. This relational approach emphasizes that social innovations comprise new ways of doing (practices, technologies, material commitments), organizing (rules, decision-making, modes of governance), framing (meaning, visions, imaginaries, discursive commitments) and knowing (cognitive resources, competence, learning, appraisal) (Haxeltine et al., 2015; Chilvers and Longhurst, 2016).

The relational perspective highlights distributed agency. In order to gain insights into the underlying empowerment processes (Cf. Section 1), we have studied local SI initiatives, their translocal networks, and their constituent individuals. SI initiatives and networks are key trailblazers of SI, but they are transient, fragile entities. Their collective agency is permanently under negotiation (Wittmayer et al., 2019). Locally rooted and transnationally connected, SI initiatives are crucially empowered through their embedding in broader SI 'ecosystems' (Pel et al., 2019). So whilst accounting for individual agency and empowerment, the relational understanding does take innovators and innovations as collectively produced and socially constructed entities: Whether a practice is understood as 'innovative' or not, depends on its contrast with normal practices in a certain societal context (Jaeger-Erben et al., 2015; Godin and Vinck, 2017; Pel and Kemp, 2020). Whilst challenging 'dominant institutions', SI initiatives are simultaneously drawing on and reproducing the complex constellations of rules and cultures involved (Lowndes and Roberts, 2013). And instead of reducing TSI to revolutionary actions against monolithically conceived 'institutions' or 'systems', it is considered to take place *through* them, i.e. through a diversified institutional landscape of multiple and

intertwined 'action fields' or 'arenas'.

3.2. Four key sets of relations in TSI processes

In order to move from the general theoretical framing towards specific propositions, we identified four 'clusters' of key socio-material relations. Distinguishing (interlinked) relations at different aggregation levels, they unpack the dynamics and agency of TSI processes into specific constituent processes:

1) **Relations within SI initiatives:** how SI initiatives and their members seek to develop empowering collectives (Section 3.3).
2) **Relations in network formation:** how they seek to form broader networks (Section 3.4).
3) **Relations to institutional change:** how they seek to challenge, alter or replace dominant institutions whilst also being shaped by those (Section 3.5).
4) **Relations to the socio-material context:** how these attempts at transformation are being shaped by broader changes in the socio-material context (Section 3.6).

For each set of relations, we formulated three propositions (Section 4). Fig. 1 schematically summarizes the four clusters and the 12 propositions.

3.3. Relations within SI initiatives

Whilst focusing on broader changes in society, TSI theory should account for (dis)empowerment processes as they play out across the individual, group, initiative, and network levels (Cajaiba-Santana 2014; Avelino et al., 2019a). These micro-level processes involve individual behavior, but also the development of collective action and the formation of SI initiatives with organizational forms empowering their members (Haxeltine et al., 2017b; Moulaert et al., 2017). Importantly, these social relations within initiatives need to be linked to wider TSI processes: Explanations are needed of why SI initiatives emerge in particular eras and contexts.

Aiming for a relational rather than individualist understanding of TSI empowerment, social psychology insights are particularly important. They help account for the reasons that individuals have to join SI initiatives, for their collective development of shared identities and visions of change, and for the organizational forms through which SI initiatives may provide satisfactory environments for their individual members. Empowerment is not a fixed state, but rather a dynamic process (Rappaport, 1987; Zimmerman et al., 1992; Perkins and Zimmerman 1995). It depends on various enabling conditions that allow individuals and groups to generate and maintain the psychological and motivational resources to pursue goals that matter to them. Enabling conditions include certain qualities of interpersonal relations, organizational forms that support autonomous motivation, and the articulation of a common identity. At the individual level we frame empowerment as the process by which people gain the ability to act on goals that matter (Sen, 1985, 1999; Alkire, 2005, 2007). Building on self-determination theory, empowerment is conceptualised in terms of the satisfaction of basic psychological needs, such as autonomy, relatedness and autonomy (Baumeister and Leary, 1995; Ryan and Deci, 2000; Grouzet et al., 2005). In addition to the satisfaction of the basic psychological needs for autonomy, relatedness and competence, the belief in the ability to achieve goals requires the actual experience of achieving some degree of impact, the development of meaning (Bandura 2000; Thomas and Velthouse, 1990) and resilience (for a more elaborate explanation, see Avelino et al., 2019b). The interpersonal relations negotiated (e.g. open communication, or an attitude of experimentation) and the organizational forms developed by SI initiatives (e.g. sharing circles, cooperatives) in part serve to satisfy these needs, which further shapes motivations and agency. These social-psychological insights help to clarify the well-documented capacity of SI collectives to meet the needs of their members and stakeholders (e.g. Moulaert et al., 2013). SI initiatives often strive to create spaces where individuals can feel empowered, whilst simultaneously striving for collective empowerment.

3.4. Network formation processes

SI is often ascribed to the achievements of creative social entrepreneurs (Kaletka et al., 2016), progressive social movements (Laville, 2016), 'grassroots' actors (Seyfang and Smith, 2007), or indeed the SI initiatives as described in the previous subsection. On the other hand, much contemporary theory on innovation, social movements, governance and socio-technical transitions rather underlines the distributed, networked agency involved. Our relational perspective takes this distributed agency seriously. Just as SI initiatives are understood as emergent collectives of individuals, it is acknowledged similarly that SI initiatives are themselves embedded in and empowered through broader constellations of actors. Network formation processes are indeed crucial links in any theory of transformation-oriented innovation (Fagerberg, 2018). A balanced account is therefore needed of the SI 'ecosystems' (Kaletka et al., 2016) that form around our focal actors, the SI initiatives.

As already speaks from the various similar metaphors of 'rhizomically' spreading SI networks (Scott-Cato and Hillier, 2010) or SI 'niches' (Witkamp et al., 2011), such SI 'ecosystems' have been conceptualized through various schools of thought. Our conceptualization of SI ecosystems combines three accounts, each emphasizing particular aspects of the empowering networks (Pel et al., 2019). A first important dimension of the SI ecosystems resides in the communities that they tend to be rooted in, as underlined in work on grassroots innovation (Seyfang and Smith, 2007), on community-based initiatives (Aiken 2019) and on government-civil society co-creation (Voorberg et al., 2015). The formation of these local networks revolves around the need of SI initiatives to gain access to resources (Koppenjan and Klijn, 2004; Avelino, 2017). Local governments, NGOs, civil society organizations, unions and universities (Dorland et al., 2019) can provide resources like accommodation, subsidies, legitimacy, and a certain critical mass of membership. This local embedding can be empowering or disempowering, depending on the changing opportunities afforded by ever-dynamic 'arenas of development' (Jørgensen, 2012) and action fields (Fligstein and McAdam, 2011).

Second, the SI ecosystems also have a clear translocal dimension. Reflecting on their limited radius of action, their 'ten square miles surrounded by reality' (North 2014), SI initiatives also tend to become aware of their belonging to broader social struggles or social movements (Laville, 2016). As articulated through the notions of 'translocal assemblages' (McFarlane, 2009), SI initiatives generally combine their local embeddedness with translocal and transnational connectivity (Greiner and Sakdalpolrak, 2013, Avelino et al., 2019b). Important empowerment consists in the development of collective political voice, shared identities, and shared narratives of change (Wittmayer et al., 2019). Third, SI ecosystems involve more than the local embedding and the translocal alignments with peers. Beyond these rather immediate supportive networks, there are also the more extensive networks of societal discourses. As highlighted in relational geography, literature on policy mobilities (Temenos and McCann, 2013), social movement studies (Kelly Garrett, 2006) and STS (Jasanoff, 2004), SI network formation also takes place through the broader circulation and resonance of ideas. This discourse formation also comprises the socio-material development of communication infrastructures (Pel and Backhaus, 2020).

3.5. Relations to institutional change

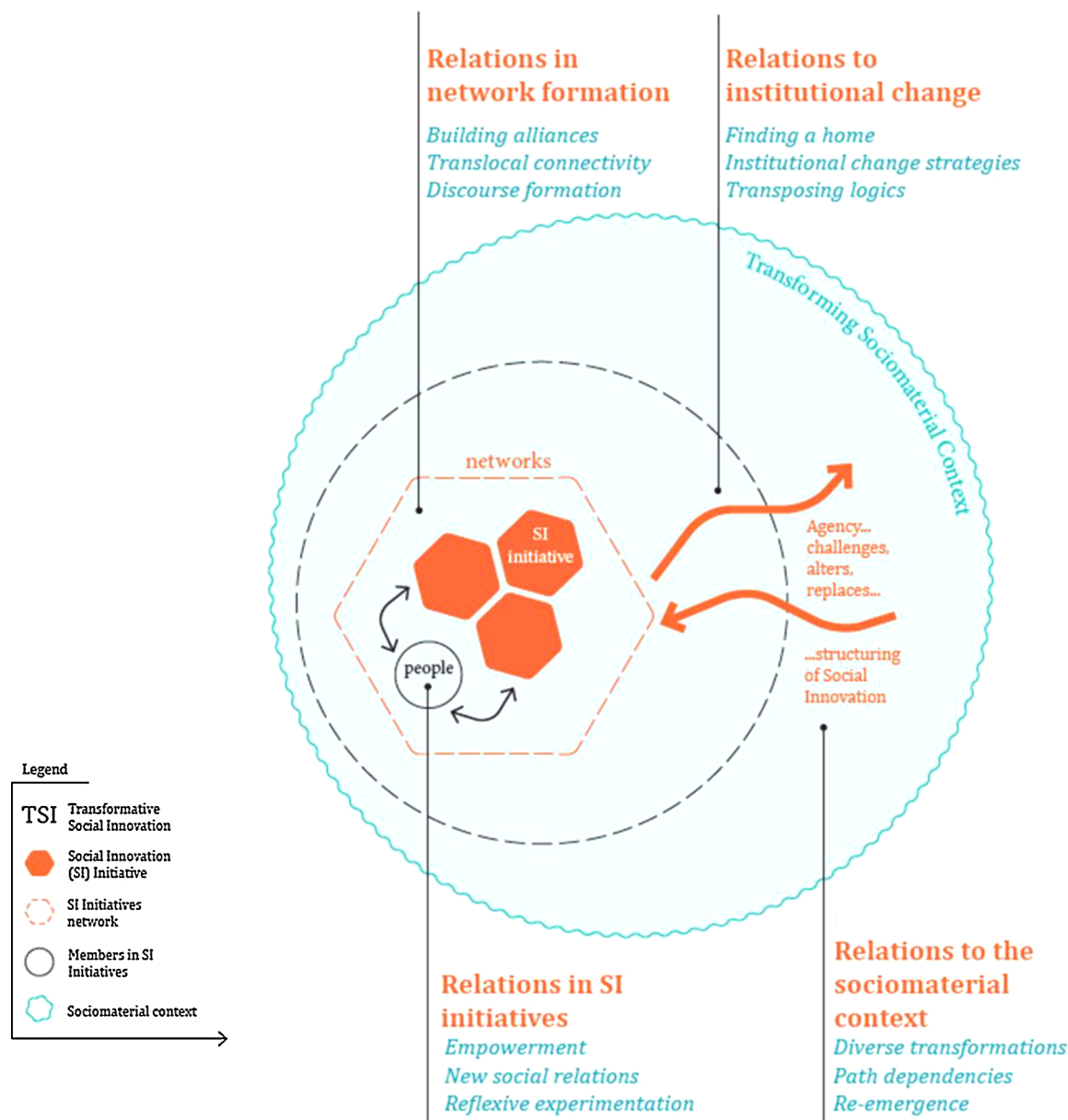Institutional dynamics are crucial in explaining SI processes

Fig. 1. Four sets of relations in TSI processes.

(Cajaiba-Santana, 2014; van der Have and Rubalcaba, 2016). Institutions provide prescriptions, cognitive models, identities, roles and arrangements (family, clubs, work organisations, platforms and communities) that help individuals to make sense of the world, identify options, and take action. Institutions stabilize the social relations, the ways of doing, organizing, framing and knowing, that SI initiatives seek to change (Cf. Section 3.1). As indicated in sustainability transitions research, accounts of *transformative* innovation need to develop an understanding of the dominant rule-sets in society (Grin et al., 2010; Geels, 2010), and related to that, an understanding of the processes through which radical alternatives can fit in with, and transform, incumbent structures (Smith and Raven 2012). Van der Have and Rubalcaba (2016:1933) have urged SI research to proceed in this direction. TSI theory should explain "how social innovators adapt their strategies to cope with the constraints of the institutional environment", and how social value creation opportunities are constructed through multi-stakeholder and multi-level institutional settings.

In line with our definition of SI in terms of social relations (and with Cajaiba-Santana, 2014), SI initiatives are aiming to change both formal

as well as *in*formal institutions: Challenging various developments of marketization and bureaucratization (Cf. Section 3.6), they target not only various organizational forms and institutional arrangements, but also the associated social norms and discourses. TSI is understood as a specific type of SI process that involves challenging, altering, or replacing the dominant institutions in a specific socio-material context. As this can happen to various degrees, not all institutional change can be considered as transformative change. Moreover, SI initiatives may only induce local, limited changes in particular institutions, whilst otherwise largely reproducing their institutional contexts. Understanding transformative change in terms of institutional change and changing societal rules, TSI theory does lack a clear account of substantive, material changes in the systems targeted for transformation – a limitation it shares with the institutionalist, rule-based system understandings in transitions research (Svensson and Nikoleris, 2018). On the other hand, TSI theory needs to account for the recursive relations between SI actors and institutions (Cajaiba-Santana, 2014), and for the associated institutionalization paradoxes. Literature on transformative SI displays an abundance of paradoxical phenomena, involving

exclusionary participation (Swyngedouw, 2005), 'institutional mimicking' (Dey and Teasdale, 2016), innovation capture and institutional isomorphism (Bauler et al., 2017), and dialectical cycles of institutionalizing and de-institutionalizing innovation (Westley et al., 2017).

In line with scholarship in institutional theory and organizational change, TSI theory acknowledges the 'embeddedness paradox': SI initiatives seek to transform institutions that they are simultaneously shaped by (Seo and Creed, 2002). Consistent with our overall relational approach, institutions are theorized as emergent, constantly negotiated sets of rules. Rather than as unmovable, monolithic blocks, a relational understanding conceives of institutions that are in constant flux (Emirbayer 1997). As Fuenfschilling and Truffer (2014) held against overly crude understandings of dominant 'systems', the institutionalization of SI should rather be situated in contexts of overlapping and intersecting institutional constellations, where different institutional logics (Thornton and Ocasio, 1999) clash or combine. Also following Sewell's (2005) transformation-oriented adaptation of structuration theory, TSI theory should reflect how there is often not one singular dominant institution guiding a particular aspect of social life. These very intersections provide strategic opportunities for actors promoting institutional change (Sewell, 1992; 2005). Insights from 'third phase' institutionalism (Lowndes and Roberts, 2013) and institutional entrepreneurship have further underlined how TSI processes should be conceived of as institutional 'bricolage', rather than as institutional design – actively drawing upon the resources and institutional footholds that often exist even in 'institutional voids' (Mair et al., 2012).

3.6. Relations to the broader socio-material context

Addressing the relation between SI and transformative change, TSI theorization needs to account for the broader societal trends and path dependencies that shape TSI processes (Lévesque, 2016). In line with the longitudinal studies of Moulaert and Ailenei (2005) and Westley et al., (2017), it should clarify why certain SI initiatives arise in certain eras and contexts, fade away, only to re-emerge in a different societal context. SI scholarship has brought forward certain accounts of evolutionary 'long waves' (Nicholls and Murdock, 2012; Moulaert and MacCallum, 2019), and the systems-evolutionary work on socio-technical transitions asserts itself for the analysis of relevant 'landscape' developments (Geels, 2002; Grin et al., 2010). On the other hand, the idea of such a quasi-deterministic structuration 'level' has been questioned (Jørgensen, 2012): The recognition of path dependency and dominating structures must be balanced against the relational awareness of the often highly contingent and fluid nature of societal transformation processes. In this regard we have drawn upon three sets of insights, namely 1) SI scholarship and accounts of societal transformation; 2) innovation theory and 3) transitions theory.

The recent emergence of various SI initiatives and SI policy discourses has been attributed to various broader societal trends and 'game-changing' developments (Avelino et al., 2019b). Presenting SI as a 'Big Society' project and governance instrument for addressing grand societal challenges, prominent policy visions (such as Hubert 2012) have been criticized for their silent reproduction of entrepreneurial-individualistic theories of change (Jessop et al., 2013) and neoliberal ideologies (Swyngedouw, 2005; Fougère et al., 2017). Laville (2016) points out how this betrays the historical roots of many SI initiatives in radical social movements. However, considering SI as a reaction to the oppressive, alienating and exclusionary effects of capitalist society can also be viewed as a reduction of SI's origins. With regard to the broader range of SI concerns about sustainable development, food sovereignty, self-sufficiency and local embeddedness, several other historical explanations have been proposed: The ICT revolution and the rise of the network society (Castells, 2011; Kelly Garrett, 2006); the rise of pervasive marketization (Sandel, 2012) and the rising demand for

autonomy; the shift towards the knowledge economy (Nicholls and Murdock, 2012) and the intensifying individual quests for purpose, belonging, and self-direction (Verhaeghe, 2012).

A second important conceptual insight pertains to the social construction of SI. Asserting the innovative agency of hitherto under-acknowledged groups (Smith and Stirling, 2018), SI is an emancipating concept. In current innovation society (Rammert et al., 2018), acknowledgement as socially innovative actor comes with legitimacy and policy support (Dey and Teasdale, 2016). Yet as pointed out in various critical accounts of innovation, the very recognition of innovativeness is contingent upon changing innovation imaginaries (Strand et al., 2016) in society, and on associated attitudes towards phenomena of imitation, re-invention and maintenance (Godin and Vinck, 2017). Accordingly, quite a broad range of practices could – in certain contexts – gain socially innovative significance (Jaeger-Erben et al., 2015), and SI can manifest through various kinds of agency (Pel and Kemp, 2020). A related third conceptual insight is TSI involves different kinds of path dependency and obduracy – it cannot be reduced to one particular crisis or form of social inequality. Rather in line with poststructuralist ontologies, accounts of transitions in socio-technical regimes and accounts of the co-production of social order (Jasanoff, 2004), TSI processes should be understood as unfolding within multi-dimensional, social-material societal structures. The resulting diversity of innovations and societal countercurrents may converge into 'deep' transitions (Schot and Kanger, 2018) or fundamental societal shifts like Enlightenment. Still, the relational understanding of TSI contexts underlines the continued relevance of 'diverse transformations', as theorized by Stirling (2011).

4. Twelve propositions on TSI processes

4.1. Empirical elaboration: twelve propositions

TSI dynamics and agency have been conceptualized through four constitutive sets of (inter)relations. This section presents their further elaboration in the form of twelve propositions, developed through interplay between theory and empirics (Cf. Section 2). The propositions are substantiated through comparative insights on our empirical studies of 20 translocal SI networks and 100 associated local manifestations. Table 1 provides an overview of the diversity of SI initiatives, also specifying the countries in which they were studied. The associated (comparative) empirical analyses have been laid down in case study reports, project deliverables and various conference papers and journal articles (e.g. Jørgensen et al., 2016; Haxeltine et al., 2017b; Pel et al., 2017c). Whilst keeping the empirical elaborations of the propositions deliberately concise, the underlying data-set can be characterized as follows:

- **SI types:** The 20 initiatives comprise a diversity of social innovations, covering a range of domains and policy fields. They have been selected as manifestations of three transformative discourses ('alternative economies', 'low impact living', 'open source'), linked to the game-changing developments of the financial crisis, climate change, and the ICT revolution (Jørgensen et al., 2016). The initiatives are often consisting of 'grassroots' activists and NGOs, but also involve various 'incumbent' actors from governments, universities and enterprises.
- **SI contexts:** The 20 networks have been studied in 25+ different countries. The project consortium was formed to complement European with primarily Latin American insights, and differentiate across the different welfare systems within the European Union. The diversity of countries has yielded important insights on relevant context factors, such as the institutional abundance in which many European SI emerges (Section 4.4) or the importance of pre-existing social ties and identities (Section 4.2). On the other hand, the focus on translocal networks has highlighted the linkages and

convergences across local/national contexts, and the shared contexts characterized by developments such as marketization and bureaucratization (Section 4.5).

- **External validity:** The sample of SI innovations shares the regular overrepresentation of successful and visible innovations. SI initiatives have been selected that displayed a certain translocal presence. Even if still developing, they all displayed pronounced and to a certain extent stabilized transformative ambitions. Furthermore, it is important to acknowledge a certain 'pro-innovation bias' (Cf. Godin and Vinck, 2017; Pel and Kemp, 2020) towards the progressive and uncontroversial initiatives. This follows from the aforementioned selection procedure along the three transformative discourses. Highly controversial or infamous cases (like e.g. the intelligence test antipsychiatry; or ethnic profiling) are not included. The empirical analyses have highlighted various phenomena of disempowerment, exclusion and co-optation, however. These 'dark sides' have informed our non-teleological SI understanding (Cf. Section 3.1).

In order to convey our relational understanding of TSI, we present the propositions through narrative accounts and empirical illustrations of the changing relations that characterize TSI processes. Following our conceptualization as presented in the previous section, we present propositions on processes within SI initiatives (Section 4.2), on processes of network formation (Section 4.3), on processes of institutional change (Section 4.4), and on longer-term developments in the socio-material context (Section 4.5).

4.2. Relations within SI initiatives

SI initiatives often start when a group of individuals come together to develop a common vision for social and institutional change, responding to perceived deficits or failures in current societal arrangements. Endorsing a set of alternative values, they set out to co-shape a reflexive and experimental space in which their vision may be realized as new social relations and configurations of practices (Proposition 1). As the SI initiative develops it provides a space in which these new values can take root, new interpersonal relations can be shaped and enabled (Proposition 2), and wherein both individual and collective empowerment can take place (Proposition 3).

Proposition 1. *SI initiatives provide spaces in which new or alternative values can be promoted and aligned with new knowledge and practices—in a process of reflexive experimentation that supports both members´ motivations and their moves towards collective 'success' and 'impact'.*

Members start out with enthusiasm for the novelty that the SI initiative proposes in terms of alternative values, relations and practices. As the initiative develops, keeping this original ethos 'alive' is important for maintaining members´ motivation and for the enabling of transformative agency. The Impact Hub, Global Ecovillage Network, Slow Food, Hackerspaces, FEBEA initiatives, and Transition Towns all explicitly emphasize the motivating role of a certain 'purity' of values. As their initiative develops, they consciously make according decisions regarding interpersonal relations and organizational forms. They actively shape rules and practices in ways that support the satisfaction of basic psychological needs for autonomy, relatedness and competence, which in turn contributes to maintaining motivation. Over and above this, they face internal tensions over differing intensity of members' commitment, distribution of responsibility and power, volunteering versus professionalization of work effort, openness and protection, governance and leadership, staying small or expanding, and tensions around new identities being inclusive or exclusive of certain social groups. Next to this, the pursuit of transformative goals within a dynamic and fluid institutional context necessitates adaptations and compromises. The various internal tensions are addressed through alternative forms of decision-making and communication such as

'sociocracy', mediation forums or the use of specially authorized working groups – in line with the values endorsed and the transformational aims pursued. Fostering interpersonal relations and developing organizational forms, SI initiatives maintain a recursive, dynamic relation between concerns over individual motivation and concerns over transformative societal impact. Their mutual social relations and organizational forms are therefore intensively subjected to experimentation and adaptation.

Proposition 2. *Manifesting new/alternative interpersonal relations is one pivotal way in which SI actors are able to create the right conditions to challenge, alter, or replace dominant institutions.*

TSI initiatives often have an explicit focus on changing interpersonal relations. They are both the object of, and vehicle for, societal change. Some emphasize direct interpersonal relationships (strongly so in ecovillages, less strongly in the DESIS 'labs' or in Credit Cooperatives), while others emphasize connectedness through the sharing of goods and physical and virtual spaces (e.g. Fab Labs, Impact Hubs, the sharing circles of the Shareable network). They develop explicit strategies to foster interpersonal relations based on values of transparency, trust, intimacy, empowerment and connection. Whilst satisfying members' relational needs, needs for autonomy and competence are addressed as well. These include the choice of specific legal forms and decision-making methods, conflict mediation mechanisms, as well as the (re)framing of social relations (e.g. the 'paid volunteerism' as a socially innovative mode of reciprocity, in the case of Timebanking).

Despite the explicit focus on changing social relations, there is a whole range of institutionalized relations that are reproduced and remain unchallenged in SI initiatives. Relations between men and women, or other issues related to gender, sexuality, race and ethnicity, remain relatively unchallenged across many SI initiatives that focus on socio-ecological or socio-economic issues. While they actively attempt to modify currently institutionalized relations, they also engage in confirming and reproducing those that remain out of focus.

Proposition 3. *People are empowered to persist in their efforts towards institutional change, to the extent that basic needs for relatedness, autonomy, and competence are satisfied, while at the same time experiencing an increased sense of impact, meaning, and resilience.*

People seek for a sense of belonging (being connected to others), autonomy (acting in accordance with our own values) and competence (generating and experiencing skill and mastery), as well as a sense of impact, meaning and resilience. SI initiatives that contribute to transformative change towards more innovative, sustainable, just and/or resilient societies, provide alternative ways for fulfilling these needs, thereby enhancing collective action and empowerment, and helping to overcome feelings of alienation, isolation or marginalization. Reflective experimentation within SI initiatives and the assigning of collective meanings contributes to the elaboration of a collective identity, as a key aspect of empowerment. This includes overcoming previously defined roles and relations among previously divided or co-existing social actors. Credit Unions, Slow Food, Impact hubs, and RIPESS, for example, bring politically divided actors such as religious and environmental organizations, farmers, chefs, and entrepreneurs together under a new collective identity, thereby re-configuring social relations and enabling collective agency. The inclusive-exclusive nature of new collective identities is best seen as a continuum, and how new identities become a linchpin and a vehicle for empowerment is an open question to be addressed in future research. Finally, as they encounter failure, people develop psychological and behavioral strategies that allow them to maintain the motivation to pursue their goals, and to take next steps. *Resilience* as the capacity to learn, adapt and recover from set-backs is also a key aspect of empowerment.

These dimensions of empowerment are fostered through a process of multi-layered community-building in both local SI initiative and translocal SI networks. The ability to deepen and expand community-

building is a pivotal condition for being able to persist in the face of dominant institutions. Slow Food initiatives deepen community by carefully choosing contexts in which diverse actors engage in discussions about a common vision, against the backdrop of the convivial sharing of food. They also organize local markets and events that are able to showcase positive impact. Fablabs are careful at facilitating an inclusive and non-judgmental environment in which people with different knowledge and expertise can come together to co-shape an ethos of knowledge-sharing and creativity. We now turn to their expanding efforts, through network formation.

4.3. Network formation processes

Even if SI initiatives manage to organize themselves as empowering collectives, the challenge remains to sustain themselves as viable social enterprises, open makerspaces or sufficiently stabilized circuits of mutual exchange. Weakly institutionalized and lacking resources, they seek to empower themselves through processes of *network formation*. The development of these SI 'ecosystems' includes the emergence of SI in more or less stable action fields (Proposition 4), the formation of translocal SI networks (Proposition 5), and discourse formation (Proposition 6). Network formation processes are generally empowering. Collaborating with and depending on other actors, SI initiatives also experience disempowering tendencies, however, involving fragmentation, mission drift and diminished autonomy.

Proposition 4. *The transformative impacts of SI initiatives depend greatly on the changing tensions within and stability of the action field(s) that they operate in.*

SI processes unfold through the interplay between SI initiatives and the broader actor constellations surrounding them. These actor constellations include the supportive SI ecosystems of NGOs, civil society organisations, foundations and other local allies. SI initiatives rely strongly on their local-regional roots, as speaks from their constitution as 'spaces', 'Towns', 'Hubs', 'Labs' or 'circles'. These organisational forms provide empowering network ties beyond the initiative in the narrow sense, creating 'shadow' systems of provision, enhanced knowledge resources, and increased civil society participation in new governance structures. Apart from these co-creation arrangements, initiatives such as the Transition Towns, Slow Food 'convivia', Ecovillages and sharing schemes exemplify the common reliance on existing community-based initiatives, collaborative structures and cultural ties.

Beyond these supportive SI 'ecosystems', SI initiatives operate in action fields that also feature various 'incumbent' actors, and actors that stabilize the prevailing social relations: Regulatory bodies, public agencies, businesses, educational institutions, and the various platforms, networks and collaboration agreements. The balance of power between these actors can be firmly settled for long periods of time, but is continuously negotiated. Within these action fields, SI initiatives typically encounter the full range between affirmative-collaborative responses, resistance, and co-optation. For instance, social enterprises working on the social inclusion of 'people at a distance from the labor market' (RIPESS) have typically hovered between radical, emancipation-focused, values-driven alternative enterprises, and on the other hand business-like, efficiency-driven stepping stone arrangements – geared primarily towards employability and regular jobs. Translated and molded by SI initiatives, their SI ecosystem but also by various incumbent and intermediary actors, this 'work insertion' concept evolved within the tense and dynamic action field. Individual social enterprises were thus forced to continuously adapt their operations to subsequent policy arrangements. The relevance of the instability of action fields also speaks from the changing legal statuses of housing cooperatives in e.g. Argentina, from the cyclical rise and decline in the basic income debate, from the various re-emergences of Timebanks in different forms in different contexts, and from the subtle ways in which maker-spaces are positioned as FABLABS, Hackerspaces or Repair

Cafes.

Proposition 5. *Translocal networks are a key source of empowerment for local SI initiatives.*

SI initiatives tend to empower themselves and gain access to resources through their local roots and their embeddedness in local SI 'ecosystems', but their network formation is rarely limited to these local roots. They also tend to be empowered by their participation in translocal networks of like-minded initiatives. This network formation can take place through different developmental trajectories, i.e. through combinations of local actors collaborating across borders and international networks that seek to spawn or draft new affiliates. The transnational SI networks are shaped through various empowerment mechanisms, including funding, legitimacy, knowledge sharing, learning, peer support, visibility and identity. Whilst involving significant interaction, the translocal SI networks generally involve limited degrees of formalization and exchange of material resources. Rather than forming fully integrated translocal organizations, SI initiatives are developing interlinkages on top of their basic constitution as relatively locally oriented cooperatives, 'labs', associations, time banks, sharing circles, or social enterprises. In some cases these units grow to urban-level or regional-level groups or federations of initiatives, and in some cases they grow into strongly integrated transnational actors. The Ecovillages, Transition Towns, Slow Food, Impact Hub, Living Labs, Living Labs and FabLabs have formed significantly integrated translocal network organizations.

The translocal networks are particularly important for a) the development of translocal 'critical mass'; b) the construction of translocal political voice; c) the development of translocal collective identity (as materialized in brands and logos), and d) knowledge exchange. These empowerment mechanisms remind of the multi-dimensional nature of social innovation. SI involves new ways of doing and organizing, but also new ways of framing and knowing, and the translocal connections amongst SI initiatives can empower on each of these dimensions.

Proposition 6. *Discourse formation and its mediation through communication infrastructures crucially enhances the reach of SI network formation.*

The network formation of SI initiatives comprises more than the local embedding and the transnational connectivity. SI initiatives, and especially their narratives of change and the new social relations that they promote, can also be empowered through wider processes of discourse formation. As indicated by the ICT revolution, this discourse formation is strongly shaped by the socio-material evolution of communication infrastructures.

The RIPESS network on the solidarity-based economy exemplifies how transnational networking can create collective identities across different practices, creating critical mass, visibility and acknowledgement within broader society. Against the neoliberal dominant belief that There Is No Alternative, the construction of a 'solidarity-based economy' makes visible that alternatives *do* exist. Discourses on 'Slow Food', 'Sharing', 'Participatory Budgeting' and 'Science Shops' similarly circulate widely. Showing the ubiquity and viability of the SIs promoted, these activities exemplify how the continuous revolution in communication infrastructures crucially enhances the reach of SI network formation. Si initiatives actively work towards such broad 'resonance' through global mappings of local initiatives, as showed by RIPESS, the Global Ecovillage Network, Shareable and the Participatory Budgeting networks. These mapping exercises, learning platforms, discussion sites and social media circuits are not only a matter of dissemination. They also imply more complex dynamics of translation, the diversification of new knowings and framings, and the creation of 'hype'. This also comes with rather disempowering tendencies towards fragmentation and blurring of messages: The BIEN network on the unconditional basic income shows efforts to stabilize the communication dynamics, structuring the societal debate through clear definitions and organized scholarship on what the basic income amounts to, and on

its possible transformative effects.

4.4. Institutionalization processes

The transformative ambitions of SI initiatives consist in their attempts to challenge, alter or replace dominant institutions. This involves the rather ambivalent search for an institutional home (Proposition 7), the development of a repertoire of institutional entrepreneurship (Proposition 8), and the conscious combination of institutional logics into institutional hybrids (Proposition 9).

Proposition 7. *SI initiatives need to find an institutional home in order to access vital resources; this often entails a balancing against the desire for independence from (critiqued) dominant institutions.*

SI initiatives — and the SIs that they promote — have a fragile existence in society. They tend to exist as not yet institutionalized collectives, and not yet (fully) normalized social relations. Lacking the empowering resources that dominant institutions do have (societal recognition and legitimacy, trust relations with other actors, financial resources, and capacities for learning and knowledge consolidation), SI initiatives need to actively find or create an *institutional home*. This poses challenges in terms of available time and resources. Moreover, it involves the balancing of contradictory strivings for stability versus freedom: SI initiatives' quests for an institutional home are accompanied with reservations against formalization, 'colonizing' forms of instrumental rationality, and the reproduction of oppressive forms of social organization.

The importance of institutional homes is exemplified by the Basic Income, Participatory budgeting and Credit Unions cases. Some socially innovative social relations cannot exist without firm consolidation in formal institutions. The former two indicate how SI may entail institutional innovation, calling for administrative embedding and democratic legitimization. The latter indicates needs of accreditation, and licenses to operate. Furthermore, even the otherwise rather self-supporting ecovillages require a certain anchoring through planning permissions, construction rules, ownership structures et cetera. On the other end of the spectrum there are the institutionally rather 'light' network structures of the seed exchange networks and the sharing circles. Actual institutional homelessness is generally avoided, however. After years of illegal, informal existence, key SI activities of the Argentinean housing cooperatives resided in the development of favorable planning frameworks – 'building without bricks'. More generally, many SI initiatives seek at least some degree of institutional 'shelter'. Finding such shelter in universities, the anarchist FABlabs and Hackerspaces exemplify how 'light' institutional structures satisfy longings for institutional homelessness. The Impact Hubs and the various social enterprises associated with RIPESS display similar institutional nomadism. Experimenting with various legal forms, they tailor the organizational form that fits best with their SI missions – sometimes involving clusters of organizations (companies, foundations, associations).

Proposition 8. *In order to bring about institutional change, SI initiatives need to combine different forms of institutional entrepreneurship, and proactively adapt these strategies in response to changing circumstances.*

Other than militant social movements, activists undertaking 'direct action', or guerrillas, socially innovative agency tends to seek or acquiesce into co-productive relations with the dominant institutions that they challenge, and to be more intertwined with them. Accordingly, SI initiatives are heavily involved in the paradoxes of institutional change. Engaging in institutional 'bricolage' rather than in institutional design, the more successful SI initiatives can be seen to form strategic repertoires comprising several of the following elements:

- **Providing local alternatives** that supplement existing institutional arrangements. The Timebanks and the sharing circles of Shareable and the Seed exchange network are typical examples of such

development of shadow systems.
- **Advocacy, lobbying and protesting** to raise awareness and promote reform or replacement. Beyond the immediate development of alternative practices, many SI initiatives and especially their networks engage in this form of political agency. Instructive examples are the INFORSE network on sustainable energy, and the RIPESS network-of-networks on the solidarity-based economy.
- **Embedding into existing institutional arrangements.** Some SI amounts to comprehensive replacement of institutional arrangements, such as the basic income proposed by BIEN, other to more or less comprehensive altering of institutions (such as Participatory Budgeting, or the ethical banks of FEBEA). Furthermore, many SI concepts contain elements that can be transposed and inserted into existing institutional arrangements. The sharing economy promoted by the Shareable Melbourne provides a good example, finding its way into municipal visions and planning.
- **Building a 'platform' and movement for institutional change.** Emerging as a diverse manifold of initiatives, there is a need for shared identity and unified political voice to gain a place in the institutional landscape. The development of shared narratives of change and political voice are particularly important tasks of the translocal networks, but similar work is done through local federations and networks. RIPESS and Impact Hubs are telling examples of networks of alternative economies.
- **Engaging with processes of cultural change.** Next to strategies targeting formal institutions, institutional entrepreneurship can also take place at the level of norms, values and lifestyles. Slow Food is an example, existing first and foremost as a 'cultural movement'. Its narrative and practices are carefully designed to emphasize the importance of preserving traditional values in connection with food.

Proposition 9. *SI initiatives reconsider and reconfigure the broader institutional logics in which dominant institutions are embedded, by learning across different institutional logics and by reinventing, recombining and transposing specific elements from one institutional logic to another.*

SI initiatives confront not only established institutions in isolation but also the different institutional logics that shape established institutions. SI initiatives emerge in the context of different institutional logics, e.g. 'market', 'state', or 'community' logics. As they develop, SI initiatives 'travel' and learn across different institutional logics, thereby reinventing, recombining and transposing of different institutional elements from one institutional logic to another, possibly resulting in hybrid institutional forms. A SI initiative is often born out of a partnership or other form of cooperation between (actors representing) different institutional logics, and sometimes itself emerges as a hybrid institutional entity.

Time banks emerged in Japan, motivated by concerns for the time demands on women, especially from elderly parents. The model of time-based exchanges played into societal changes such as more women in the workforce, earlier male retirement (through economic recession and redundancy), longer life expectancy, and an aging population. Later manifestations came to challenge the traditional institutions of Japanese society much more than the first initiatives, and thus over time adopted a more critical stance to the dominant cultural logics of Japanese society. Time banks have spread to many other countries, including the UK where a different dynamic is observable. Time banks in the UK was granted a permission for benefit claimants to work via time banking, which constituted a small but important change in dominant logics; Time bank initiatives in the UK are also working closely with healthcare experts in efforts to rethink good health care, thereby embedding time banking into a new institutional context.

By embedding in translocal networks, and by visiting and learning from initiatives in other geographic contexts, SI initiatives are able to distance themselves from (some of) the institutional logics in their own

context, which enables them to become aware of and question the institutional context in which they are geographically located, and transpose institutional elements from one context to another.

4.5. The shaping of TSI by the socio-material context

The emergence of SI initiatives, the formation of SI networks and the dynamics of SI institutionalization are all shaped by broader developments in their socio-material context (Proposition 10). A particular implication of this is that SI practices acquire their 'innovative' significance only against the background of a transforming context (Proposition 11). The path dependency of the socio-material context gives rise to structures of dominance, yet there is no single source of dominance that 'drives' contemporary SI initiatives. The promotion of new social relations is undertaken along diverse normative directions (Proposition 12).

Proposition 10. *The rise of SI initiatives and their particular transformative ambitions are strongly shaped by the historical development of the wider socio-material context.*

The socio-material context shapes the particular forms of SI that emerge in a particular era and setting. SI initiatives and networks bear the imprints of contextual developments like the rise of the internet age (developing social media strategies, promoting 'open source' practices), the network society (pursuing societal transformation through institutional hybrids), disenchantment with the marketization of society (promoting various forms of alternative, 'humanized' alternatives to neoliberal approaches to economy), and various other trends such as critiques of bureaucratization and alienation, demographic changes, environmental concerns, and individualization – and the associated personal searches for purpose, belonging, and self-determination.

The latter particularistic, personal motives (the relatedness afforded by Ecovillages and various other new forms of community; the enhanced individual autonomy pursued through the Basic Income; the competence development facilitated by makerspaces) are important backgrounds for the emergence of SI initiatives. They show how the socio-material context is not only relevant in terms of oppressive structures and opportunities for action - it also shapes the individuals' motivations to pursue particular transformative goals through particular forms of individual or collective agency. The transformative goals of SI initiatives typically flow from combinations between general social critiques (about capitalism, the environmental crisis, loss of social cohesion) and more immediate desires to satisfy psychological and material needs. For example, the modernist, entrepreneurial connotations of 'innovation' are widely mistrusted amongst SI initiatives. Whilst some see innovation and the associated market-based logics as a means to social value creation (e.g. Ashoka, Impact Hubs and some social entrepreneurship initiatives from the RIPESS network), others take a negative stance: The focus on production and progress has exploitative tendencies, and invites managerialist understandings of social change (Timebanks, INFORSE, Slow Food, Ecovillages, Fablabs, Hackerspaces). But also on a more personal level, members of SI initiatives question whether the pursuit of 'innovation' is compatible with values of co-operation, autonomy, trust, democracy and collective ownership.

Proposition 11. *SI initiatives are only innovative against the background of an evolving socio-material context. Activities of innovating and inventing present but one historical appearance of SI, next to other less conspicuously innovative activities of re-invention, advocacy, and maintenance.*

Practitioners and the societal actors they are involved with are often ambivalent about the 'innovative' nature of supposed SI activities. Next to elements of experimentation and innovation, many of them display elements of re-invention, advocacy and maintenance. SI activity can be found in many places, beyond the obvious circles of innovation-minded actors, experimenting activities, and future-oriented action. The 'SI' initiatives actually display a wide range of activities: The experimenting attitude and the 'innovation society' ethos of the makerspaces and the

Living Labs; the reassertion of traditional practices and values of Slow Food and Seed exchange initiatives; the evangelizing, advocating and maintenance of no longer that 'new' practices (the lobbying for Social Economy and Co-housing); and the adopting, importing, and re-combining of innovations (DESIS on alternative design practice, the Impact Hubs and Science Shops as innovation platforms).

The novelty and the 'transformative' character of activities, discourses, initiatives and actors is socially constructed. Innovative significance and identity are rather transient and relational properties, acquired through the changing frames of (SI) policy discourses, through researchers' understandings of innovation, and more generally through changing innovation imaginaries and narratives in society: The age-old concept of the Basic Income can become a social innovation 'hype' today, after having been discarded as an unrealistic utopia only yesterday. This has practical implications: In the context of the current 'innovation society', acknowledgement as 'social innovation' can lead to vital access to resources. SI initiatives therefore need to find adequate ways to navigate the social construction of SI, whilst SI policies need to be attentive to the broader range of SI activities that exists beyond the manifest, conspicuous forms of it.

Proposition 12. *Evolutionary diversity is an integral element of TSI processes, reflecting the historical diversity of the transformative ambitions of SI initiatives and the diverse motivations of the people involved in them.*

TSI processes involve diverse transformations based on different social relations, values and ideas of progress. Next to the SI pursuing forms of 'new economy' (Ashoka, Time Banks, Credit Unions), others combine economic and environmental-sustainability goals (Global Ecovillage Network, Transition Network, Slow Food, Via Campesina, INFORSE), the democratization of science and education (Living Knowledge, DESIS), efforts towards a more inclusive society (Timebanks, Basic Income), or the development of new ways of governance and collaboration (Makerspaces, Participatory Budgeting, Impact Hub).

Even if several of these transformative ambitions can be appreciated as attempts to roll back the 'marketization' or 'bureaucratization' of many aspects of social life, they cannot be reduced to that. They differ in institutional forms, ways of funding, modes of collaboration, and indeed in the kinds of (new) social relations promoted. The coherence and alignments in transformative ambitions across diverse SI networks is therefore an important aspect of TSI processes. Accordingly, some initiatives seek to develop unity, 'critical mass' and ideological convergence through the formation of networks-of-networks (RIPESS, Shareable, the OIDP network on participatory governance). On the other hand, the BIEN network on the unconditional basic income exemplifies how there are also SI initiatives that seek to avoid 'blurring' of their transformative ambitions, considering consistency and ideological independence as prerequisites for transformative impact. The overall evolution of TSI is therefore likely to display a mixture of convergence and parallel co-existence.

5. Discussion and conclusion

Aiming to meet calls for solid, empowering and transformative SI theory, this study has been guided by two research questions: *To what extent, how, and under which conditions do social innovation processes contribute to transformative change? How are social innovation networks, initiatives, and individuals (dis)empowered in these processes?* (Section 1). The questions have been answered through advances on three levels of insight:

First, we have clarified the need for well-considered research designs and methodologies (Section 2). The development of adequate TSI understandings involves methodological challenges of particularism, unwarranted teleological projections, downplaying of distributed agency, and negligence of process dynamics. The middle-range approach has reached beyond anecdotic insight and particularism, whilst

the relational framework and the process-theoretical approach respond to the emergent, distributed and institutionally hybrid characteristics of TSI phenomena. Regarding current calls for 'moving the field further' (Cajaiba-Santana, 2014), these considerations of ontologically appropriate and coherent investigation strategies provide important methodological underpinnings.

Second, we have addressed the frequent calls for conceptual clarification. Our relational framework for TSI theory (Section 3) has firmly grounded SI research in the recent state-of-the-art on innovation, system transformation and institutional change. The framework accounts for key sources of complexity such as the semi-coherence of institutional structures, the fluid arenas of distributed innovative agency, the co-existence of transformation processes with different directionalities, the co-production of innovations in ways of doing and knowing, and the intertwinement between individual and collective empowerment. Importantly, the relational ontological framing has provided a meta-theoretical platform for paradigmatic interplay across disciplines: Helping to connect social psychology with various accounts of networked innovation, it has deepened our analyses of empowerment in TSI processes.

The conceptual framework has been elaborated, third, into a set of twelve propositions on TSI processes (Section 4). Informed through intensive interplay between theoretical insights and case study evidence on a 20 SI networks and 100 SI initiatives, these propositions unpack TSI into a range of interlinked processes on different levels of aggregation: individual and collective empowerment within SI initiatives, network formation, institutional change, and changing societal framework conditions. The presented typologies and specifications of process dynamics help to grasp TSI as a complex, multi-level phenomenon. They can be appreciated as significant advances towards empowering TSI theory.

Rather than positioning a full-fledged middle-range theory on TSI dynamics and agency, these contributions provide a set of advances towards and foundations for theory development. Whilst providing generic insights across a wide range of social innovation practices and institutional constellations, the propositions stop short of identifying chains of causality. This in part reflects the still nascent state of this TSI theory-building effort. More fundamentally, however, it also reflects the difficulty to build explanatory theory on transformation processes through relatively contemporary empirical case studies, and through a relational mode of theorizing that refrains from strong assumptions on levels, scales and system stability.

These limitations of the study indicate the following avenues for further TSI research. The first and most obvious follow-ups would be to work along the presented framing and methodology, testing and further refining the propositions. Distinguishing relevant phases and ideal-types, the current propositions easily generate further empirical questions on SI agency and dynamics. Second, and in line with the signaled limitations of relational approaches, there are good reasons to proceed along system-evolutionary lines of inquiry. It is worthwhile to expand the scope of analysis, both in temporal terms and in terms of aggregation level. Even if the present study builds on fairly elaborate empirical accounts of SI processes, historical case studies along the lines of Westley et al., (2017) can be recommended as longitudinal perspectives on processes of emergence, fading and re-emergence. It is similarly worthwhile to zoom out from the locally embedded SI initiatives, focusing instead on the broader SI 'ecosystems' of national welfare regimes and social policies, translocal networks, discursive structures and hegemonic socio-political contexts (Moulaert and Maccallum, 2019) that they form part of. Comparative analyses of wider societal acceptability, processes of minority influence and dynamics of opinion change could similarly support understanding of how a new "normal" becomes established. This would help towards the reconstruction of broader SI processes on the level of practice fields (Rabadjieva and Butzin, 2019), identifying TSI 'transition pathways' (Geels and Schot, 2007) or transversal, 'deep' transitions (Schot and Kanger, 2018). After all, the 20 SI

networks and 100 SI initiatives that were studied reflect not only different 'transformative discourses' (Section 4.1) - they also display various commonalities in terms of preferred organizational structures and institutional arrangements.

This research has also identified certain particularities of TSI that are difficult to grasp through macroscopic systems-evolutionary approaches, however. Our relational framework may be less clear on the substantive societal changes at issue (Svensson and Nikoleris, 2018), but it did sensitize our empirical investigations to the attendant paradoxes of institutional change. Throughout our case research, we encountered the well-known 'paradox of embedded agency' (Cf. Section 3.5) in different variations: Attempts at institutional transformation involving at the same time their reproduction, emancipating organizational forms introducing new asymmetrical power relations, unifying SI networks that simultaneously diffuse collective identities, and social practices counting simultaneously as 'socially innovative' and as 'restorative' ventures. These ambiguities and paradoxes mark the particular complexity of SI policy and practice (Cf. Swyngedouw, 2005; Dey and Teasdale, 2016; Stirling, 2016; Schubert, 2019). A third recommendation is therefore to investigate these TSI paradoxes, and to equip SI initiatives with the strategic repertoires to handle them. Such repertoires of institutional entrepreneurship start from a societal contradiction that pervaded our case-studies: Whilst appreciating the existing institutional structures that ensure societal efficiency and prosperity, many SIs emerge through shared longings for different institutional structures, and for social environments that better meet basic psychological needs of autonomy, relatedness and competence.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Bonno Pel: Writing - original draft, Writing - review & editing, Conceptualization, Methodology, Investigation. **Alex Haxeltine:** Writing - original draft, Writing - review & editing, Conceptualization, Project administration, Supervision. **Flor Avelino:** Writing - original draft, Writing - review & editing, Conceptualization, Investigation, Project administration. **Adina Dumitru:** Writing - original draft, Conceptualization, Investigation. **René Kemp:** Writing - original draft, Conceptualization. **Tom Bauler:** Writing - original draft, Writing - review & editing. **Iris Kunze:** Writing - original draft, Investigation. **Jens Dorland:** Writing - original draft, Methodology, Investigation. **Julia Wittmayer:** Writing - original draft, Methodology, Investigation, Project administration. **Michael Søgaard Jørgensen:** Writing - original draft, Methodology.

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None.

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