

## Business Development in Interfirm Collaborations: Proposing a Theory of Social Creativity in Service Networks

Jean-Paul Peronard

Aarhus BSS, Department of Business Development and Technology,  
Aarhus University, Denmark.

Jacob Brix

Department of Learning and Philosophy,  
Aalborg University, Denmark.

---

### Abstract

Recent research has determined that new perspectives concerning business development and innovation are needed in the service network literature. In response, we propose a conceptual, theory-building study that sheds light on the following research question: ‘How can we mobilize actors in a service network and create ideas for interfirm collaborations that aspire to deliver business development and innovation?’. To answer this question, we build a new theory by introducing social creativity into the service network literature, which represents a new contextual arena. Our study’s key contribution is the creation of a normative theory of ‘social creativity in service networks’. The theory explains how to design and organize an event (or a series of events) in which service network actors can convene to create new ideas that stimulate business development and innovation.

**Keywords:** service networks, social creativity, business development; innovation; loosely coupled systems.

---

### Introduction

Advances in the marketing literature have placed service networks – defined as “*two or more organizations, that in the eyes of the customer, are responsible for the provision of a connected overall service experience*” (Tax, McCutcheon and Wilkinson, 2013, p. 455) – at the forefront of the service research agenda (see also Ostrom et al., 2010). With a customer-centric definition, service networks exist whether we welcome them or not, and a business owner might be part of a customer-perceived service network with other (group of) actor(s) without knowing it (Tax, McCutcheon and Wilkinson, 2013). Because service networks emerge as loosely coupled systems in the minds of customers (Orton and Weick, 1990), the choice facing actors in a service network is whether they want to proactively identify and exploit the benefits of understanding the full extent of their customers’ service experience (van Riel et al., 2013). However, because research on service networks is still in its early stages (Ostrom et al., 2010), it remains unclear how service providers can identify customers’ desires for an extended service encounter and exploit this knowledge. Tax, McCutcheon and Wilkinson (2013) argue that identifying and coordinating the services needed to

fulfill customer expectations are at the center of such an endeavor, but these scholars do not account for how the identification and coordination processes can be operationalized. This leads us to pose the following question: *“How can we mobilize actors in a service network and create ideas for interfirm collaborations that aspire to deliver business development and innovation?”*

Multiple theoretical perspectives can be utilized to provide answers for such question. In this paper, we delve into the literature on social creativity to find inspiration. Our interest in this theoretical lens stems from the research of Sonnenburg (2004), who writes that *“Owing to their synergetic potential of knowledge and their diversity human beings can often find better solutions for complex situations in collaboration than by working on their own”* (Sonnenburg, 2004 p.255). More recently, the importance of the social view on creativity was echoed by Glăveanu and Lubart (2014): *“Social interactions play a key formative, regulatory, motivational and informational role in relation to creative work. From ‘internalized’ to ‘distant’, other people are an integral part of the equation of creativity calling for a de-centring of the creative self and its re-centring in a social space of actions and interactions”* (Glăveanu and Lubart, 2014 p.29). Hence, there is an increasing interest in how socially oriented creativity can be used to stimulate idea generation in relation to business development and innovation. According to Duysters, De Man and Wildeman (1999); Henneberg, Gruber and Naudé (2012) and Tax, McCutcheon and Wilkinson (2013), this need for increased creativity is also relevant for service networks. These scholars’ arguments are essentially threefold: An increase in social creativity can lead to 1) the creation of new market understandings, 2) the generation of more novel ideas, and 3) the identification of new service packages – all which are known features to stimulate business development and innovation. However, it is not sufficient to introduce a concept such as social creativity into a new contextual setting and hope that success occurs automatically (Baruah and Paulus, 2009).

### **Purpose and goal of the study**

The *purpose* of our study is to discuss how service networks, as a new context, can benefit from the introduction of social creativity and improve the competitive advantage of service network actors. The *goal* of our study is to conceptualize and explain how service network actors can design and organize activities that stimulate social creativity in practice. We argue that this is an important endeavor because service network actors together have to both recognize new opportunities and develop these into activities that support and benefit the value propositions of each other’s business models. To guide our study, we ask following process-related questions:

1. *What is a service network?*
2. *What is social creativity?*
3. *How does social creativity relate to the service network context?*

By providing answers to these questions, our study provides the following contributions to the call for research on new knowledge for business

development and innovation in service networks established by Morgan, Deeter-Schmelz and Moberg (2007); van Riel et al. (2013) and Tax, McCutcheon and Wilkinson (2013). Our main contribution is the creation of a normative theory of 'social creativity in service networks' that explains how to design and organize an event (or a series of events) in which service network actors can convene to create new ideas that stimulate business development and innovation. In addition, we echo the findings of Sonnenburg (2004) and Glăveanu and Lubart (2014) by reinforcing the importance of relying on social creativity to create novel ideas. Finally, our theory of 'social creativity in service networks' might be applicable for business development and innovation in other contexts that act as loosely coupled systems (Orton and Weick, 1990).

The study will proceed as follows. First, we review the literature on service networks to identify and frame the contextual boundary for our theory building (Whetten, 1989; Colquitt and Zapata-Phelan, 2007). Second, we identify and review the theoretical building blocks of social creativity as well as establish how the elements of the theory are connected. Third, we utilize the review of the service network literature and the theoretical building blocks of social creativity to discuss and build the theory of 'social creativity in service networks'. Fourth, we present the implications and the limitations of our study, and finally the conclusion.

### Literature review

Our effort to conceptualize how social creativity can stimulate business development and innovation for service network actors represents a theory-building approach (Colquitt and Zapata-Phelan, 2007). This is argued because we explore and discuss the relationship between two hitherto unrelated phenomena: *service networks* and *social creativity*. To guide the literature review in this bold endeavor, we utilize Whetten's (1989) recommendations to support us in our theory-building approach. According to Whetten (1989), a theoretical contribution has to respond to following key questions: "*What does the theory consist of?*", "*How are these elements related?*" and "*Why are these elements related like this?*". These questions are answered in the literature review of social creativity. Moreover, Whetten (1989) explains that questions pertaining to "*Who is part of the process?*", "*Where is it occurring?*" and "*When is it happening?*" assist in setting the temporal and contextual boundaries of the theory. These questions are answered in the following.

### The service network as a contextual and temporal boundary

As stated in the introduction, a service network emerges when "*two or more organizations, that in the eyes of the customer, are responsible for the provision of a connected overall service experience*" (Tax, McCutcheon and Wilkinson, 2013, p. 455). What makes a service network unique compared to other types of inter-organizational networks is the customer-centric definition. This leads to the following challenge of service networks that has not been fully covered by

research: How can an organization know, *if* it is part of a service network, with *whom* it is in a perceived service network, and *why* this cluster of organizations is part of the service network in the mind(s) of the customer(s) (Morgan, Deeter-Schmelz and Moberg, 2007; Tax, McCutcheon and Wilkinson, 2013). Hence, to answer the question “*Where is the service network?*”, it is possible to establish that the service network is present in the mind(s) of the customer(s). Because we cannot read the minds of users or customers, we assert that a few fundamental questions can be used to search for and identify possible service network actors:

- *To which customer/user activity do we want to deliver exceptional service?*
- *With what other organizations would we need to collaborate to deliver exceptional service covering the entire activity?*

These questions can lead to the creation of a shortlist of potential service network co-actors that can be invited to join an informal business development meeting where declarations of interest for further collaboration are on the agenda.

To answer to the question “*When is a service network established?*” we might think about at least two scenarios: Are we talking about a *recurring phenomenon* or a *temporary unique event*? An example of a recurring phenomenon could be ‘weekly soccer training for adolescents’. Here a service network can be represented by collaboration between 1) providers of public transportation to and from the arena, 2) the soccer club providing training, and 3) the arena’s cafeteria serving a healthy snack for the youngsters after training finishes. When the youngsters leave training, their dirty football laundry is picked up by 4) a local dry-cleaner, who makes sure that the clothes are clean for the next training. A service network that emerges because of a temporary unique event – and afterwards most likely dissolves – could be explained by the following example. A local community invites a popular band to give a concert in the community hall. Here the temporary service network would comprise 1) transportation to and from the concert by both public and private organizations (busses and taxis), 2) tickets to the concert payed to the organizers, 3) a private security firm to make sure everything runs smoothly with ticket control, 4) the offering of food and beverages before, during and after the concert, and 5) special prizes on hotel and motel rooms in connection with the concert. These examples demonstrate that service network actors can easily be connected and assist each other in creating a good experience for the customers. What the examples also demonstrate is that there is no formal authority in a service network (Ostrom et al., 2010). Consequently, the governance structure becomes a result of the interaction between the actors who have identified each other as potential collaborators, which makes the service network equivalent to a loosely coupled system (Orton and Weick, 1990). Hence, to answer the question of who is part of the service network, we claim that this kind of network emerges as the actors become aware of each other’s existence in the full customer experience. This includes collaborations between the public and private sectors (van Riel et al., 2013). In

addition, an organization can function as an actor in multiple service networks if the organization relies on more than one customer base.

Based on the current literature, we assume that service networks consist of four defining characteristics. First, they are a *customer-centric* approach to service provision, in which multiple interdependent service arrangements create complementary value to consumers (van Riel et al., 2013; Patricio et al., 2011). Second, they are a *systems level value-in-use* approach because each actor has one or more service elements that allow for extended customer experiences when linked together with other actors' service elements (Carroll, Whelan, and Richardson, 2010; van Riel et al., 2013). Third, it is an *open innovation process* different from traditional service development because the service network actors create new joint activities without complete ownership or control of resources in the collaboration (Tax, McCutcheon and Wilkinson, 2013). Fourth, service networks appear and regenerate themselves as a *self-emerging process* of combining and recombining services from different organizations (van Riel et al., 2013; Tax, McCutcheon and Wilkinson, 2013).

In sum, the concept of service networks challenges the dominant view in service marketing that customer value is primarily related to the focal provider and not to other complementary services, although they are part of the overall service experience as perceived by customers (van Riel et al., 2013). Here, Lusch and Vargo (2006) stress that if service providers themselves do not take a leadership role as a "resource integrator", then customers will be left to e.g., their smartphones and their search capabilities in creating their own shopping experience. According to Tax, McCutcheon and Wilkinson (2013), the understanding and provision of an overall service experience is the key driver of value creation for service networks; therefore, we argue that the proactive work of having service network actors assist each other in practice is worthwhile for organizations that are part of one or more service networks. To briefly respond to the questions posed by Whetten (1989) concerning the contextual and temporal boundaries of a theory – here a theory of social creativity in service networks – we determine the following: A service network is present in the mind(s) of the customer(s). The service network can emerge as a recurring phenomenon or a temporary unique event depending on the activities that group different organizations and their services together. The actors in the service network may change over time because the network itself changes dynamically as the actors become aware of each other's existence in the full customer experience.

In the next section, we delve into the literature on social creativity to discuss 'what it is', 'how the content of the theory is connected', and 'why the content is connected as it is' (Whetten, 1989). After presenting answers to these questions, we discuss how social creativity can be stimulated in service networks to support business development and innovation for service network actors (Henneberg, Gruber and Naudé, 2012; Tax, McCutcheon and Wilkinson, 2013).

### **Social creativity: What is it?**

We begin the review of social creativity by establishing “what it is” (Whetten, 1989). One of the pioneers in social creativity was Georg Simmel (1858-1918). According to Simmel, social creativity occurs when people exchange cultural and social aspects of life while using their individual mental capacities to interpret information and make sense of it (see e.g., Harvey 2014). In line with this, Parjanen (2012) stresses that “*social interactions between individuals trigger new interpretations and new discoveries of distant analogies that the individuals involved could not have generated by thinking alone*” (Ibid, p. 113). The key focal point of social creativity is thus the connection between the individuals taking part in the creative process and the context in which they are to be creative (see also Sonnenburg, 2004; Glăveanu and Lubart, 2014). Hence, social creativity occurs when individuals meet and work together to create novel and useful ideas.

### **Social creativity is constituted by four building blocks**

In the following sections, we identify the theoretical building blocks of social creativity. This enables us to answer of “what” the theory consists (Whetten, 1989). The theoretical building blocks we identify are *openness*, *inquisitiveness*, *translation*, and *temporality*. In the discussion of each building block, we find different key behavioral features that might either stimulate or hamper creativity. The discussion enables us to answer to questions related to “how and why” the building blocks are connected (Whetten, 1989). The last part of the review contains a summary of the discussion. First, we start by discussing the importance of openness in social creativity.

#### ***Openness: Acceptance of uncertainty and interaction with others***

According to Senge (1990), openness is a characteristic of the relationships people have with each other. It concerns situations where people are willing to suspend certainty and let individual thinking influence the mutual relationship. Such a relationship is essential for acquiring the needed “synergy of many” in the creative process (Benkler, 2006). In our literature search, we identify three central aspects of openness that affect creativity: *Tolerance for divergence*, *accessibility to people*, and *externalization*.

The first aspect of openness is the collective *tolerance for divergence*. This involves both the value of seeking and stimulating divergent thinking without peer pressure and without requirements to find a single best solution (McCrae, 1987; Amabile, 1995; Amabile, 1996). This is argued because studies show that the level of creativity increases with the perception of freedom to choose how to accomplish a given task (Amabile et al. 1996), and because formalized control can hamper creativity in social settings (Brix and Jakobsen, 2013). In addition, studies show that for social creativity to develop, there must be tolerance of doubt (Hampden-Turner, 1999; Locke, Golden-Biddle and Feldman, 2008), ambiguity (Zenasni, Besancon and Lubart, 2008), and even tolerance for failure because

these provide an opportunity to reflect and learn if the outcome of the process does not turn out as expected (Fischer et al., 1993; Brix, 2015). In addition, Nemeth and Ormiston (2007) found that stable membership groups mistook their groups to be more creative than was actually the case. In fact, their study establishes a reverse pattern: A group with changes in membership produces significantly more creative ideas than a stable membership group does, arguably because information tends to be redundant in social groups containing strong ties (Granovetter, 1973).

This leads to the second aspect; *accessibility to people* is what constitutes the “social” in social creativity. The study by Leenders, van Engelen and Kratzer (2003) establishes that networks where actors have easy access to each other are more likely to foster creativity. In particular, relations to heterogeneous others are rated as more creative (Perry-Smith, 2006). However, too frequent interactions may lead to groupthink (Janis, 1982) and a less creative environment to spark innovation (see Kratzer et al. 2004). These findings correspond well with the theory of structural holes, suggesting that the linkage of unconnected actors in a network may enhance creativity-related processes (Burt, 2009). According to Burt (2004), the relationships between individuals who cut across structural holes are particularly important for the quality of the network creativity. Consequently, what matters for making creativity unfold in the network is bridging relationships in such a way that contradictory and different information and interpretations in one part of the network are brought to the knowledge of other parts of the network. This may add value to the original idea because even the most trivial ideas for some individuals may represent valuable insight for others in the network (Burt, 2004). Hence, the central element in social creativity is not the source of a good idea, but rather the value produced throughout the entire network by the collective negotiation of meaning concerning the idea, regardless of its initiator.

Finally, the degree of openness is affected by *externalization*, regarded here as the development of boundary objects. According to Star and Griesemer (1989), boundary objects “*both inhabit several intersecting social worlds (...) and satisfy the informational requirements of each of them (...) and is a key process in developing and maintaining coherence across intersecting social worlds*” (Star and Griesemer, 1989, p. 393). According to Fischer and Giaccardi (2007), the externalization process supports the interplay of creative contributions by making the mental efforts of individuals more concrete and accessible for both personal and social reflection, e.g., in the shape of texts or drawings. It appears that, as the creative process develops, the externalization processes gradually change the boundary objects from abstract to more concrete and thereby arguably reduce openness. For instance, Zhang, Gloor and Grippa (2013) find that, over time, team members in creative projects become increasingly focused on the message content because their focus shifts from being open to becoming more disciplined (Csikszentmihalyi, 1999). Consequently, the externalization process will gradually hamper openness to change fundamental aspects of the

developed idea (creativity), and only if novel associations are provided can the creative process regain new energy and generate new solutions. The above discussion of openness leads to the following three propositions:

*Proposition 1: Tolerance for divergence is associated with increased creativity during idea creation in social settings.*

*Proposition 2: Higher accessibility of heterogeneous actors is associated with increased creativity during idea creation in social settings.*

*Proposition 3: Externalization processes clarify existing ideas instead of creating new ones.*

### ***Inquisitiveness: Instigating reflected inquiry***

To help service network actors not become stuck in the creative process, it is important that the organizer of such processes focuses on relevant facilitation activities, so participants can focus on creative thinking and the expansion of options (Jakobsen, 2015). According to Weick (2015), participants in collaborative settings can e.g., choose to “interrupt who is talking, to stay silent, to ignore, to affirm without warning, to attend, to mitigate, to reconcile, to cancel, or to close. Acts like these transform social circumstances into novel conversational texts and these texts then provide an enacted platform for further action” (Weick, 2015, p. 198). To facilitate a creative process and to stimulate the desired actions among the participants, the facilitator/consultant has to activate reflection among the network actors (Jakobsen, 2015). This particularly helps to 1) avoid “open closedness,” where people voice their views, but no one actually listens; 2) challenge close relations where individuals may hesitate to voice an upsetting argument; and 3) motivate individuals who may have difficulties communicating views constructively. Consequently, confrontation and discussion of meaning – what we refer to as inquisitiveness – can be a way to get out of this impasse. This is argued because different perspectives and viewpoints stimulate actors’ reflectivity and thereby increase the probability of creative solutions (Nemeth and Nemeth-Brown, 2003).

However, instigating reflected inquiry via confrontation is not to be regarded as a direct suppression: It involves the freedom, in a respectful atmosphere, to be skeptical, to disagree, and to engage in constructive dialogue with other participants, so the idea in question can be more thoroughly examined (Nemeth et al., 2004). This kind of critical inquiry stimulates creativity because it gets actors to think in new ways (Mucchi-Faina, Maass and Volpato, 1991) and motivates people to investigate matters more carefully (e.g., Amabile and Kramer, 2012) and perhaps reconsider the path they are exploring (De Dreu et al., 1999; Brix, 2015). According to Harvey (2014), such “creative collaborations reveal that creativity occurs through a dialectic negotiation and integration of stakeholders’ opinions and perspectives” (Harvey, 2014, p. 328). This is in line



with Csikszentmihalyi's (1990) flow theory. He argues that flow occurs when the challenge is equal to or slightly higher than the level of skill, suggesting that being challenged on one's viewpoints and interpretations through debate and even criticism increase social creativity. The above discussion on inquisitiveness leads to the following propositions:

*Proposition 4: Critical inquiries are associated with increased creativity in social settings.*

*Proposition 5: Confrontation with alternative views is associated with increased creativity in social settings.*

**Translation: Feed enactment and modifications**

The ability to translate information into new ideas is what makes people creative. This process of constructing and reconstructing meaning is called 'translation' in sociology (Latour, 2005; Callon, 1986). According to Latour, translation means "displacement, drift, invention, mediation, the creation of a link that did not exist before and that to some degree modifies two elements or agents" (Latour, 1988, p. 32). Consequently, translation concerns the association of, for instance, an idea between actors, and it translates into how network actors react to newness, confrontations, or unforeseen circumstances. Translation ranges from reactive and passive to proactive and enacting, and it implies doing something more than just disseminating or replicating communication (Weick, 2015) because of its "interpretative flexibility" (Bijker, 1995). Hence, we echo Latour's (2005) argument that a person can take a role as either a mediator or an intermediary. The *mediator* translates and generates new associations of an idea, whereas the *intermediary* only disseminates or replicates existing knowledge (Latour, (2005). A recent line of research has focused on creativity as an act of improvisation (see Montuori, 2003; Weick, 1998; Barrett, 1998). Just as the mediator is changing the message, the act of improvisation is picking up on something and creating instant variation. Improvisation thus favors risk, extemporaneity, and variation in interpretation, all of which resemble the process of creative thinking, in which ideas need to be sorted, examined, and refined (Weick, 1998). This perspective illustrates the importance of 'giving and taking' without becoming self-absorbed in one's own ideas or in defining a given outcome (Oliver, 2009), instead making sure that everyone participating is contributing to the process (Leonard and Straus, 1997).

Although translation concerns the process of creating meaning among collaborators, it always emanates from a focal person presenting a new idea (Peronard and Brix, in press). In such situations, the person providing the idea will try to convince other participants that they have mutual interests in the idea. According to Callon (1986), this translation process has four phases: 1) *problematization*, where a given problem is defined and possible solutions are suggested; 2) *interessement*, where actors are persuaded into alliances to resolve

the given problem; 3) *enrollment*, where actors are given a role in the program of action; and 4) *mobilization*, where support from relevant collective actors is ensured. This is a very fluid and open approach to translation processes in which creative processes can be identified by the participants and their interactions. This process can develop in two different directions, either towards *convergence* or towards *divergence*. In settings with a high degree of convergence – defined as “any one actor’s activity fits easily with those of the other actors, despite their heterogeneity” (Callon, 1992, p. 87) – actors are intensely coordinated “by relating things that were previously different” (Callon, 1980, p. 211), which provides stability and predictability. Divergence increases when new actors are added to the social setting. In this situation, translation becomes more difficult because each new actor holds different ambitions, interpretations and sentiments. The alignment among actors and the circulation of intermediaries become weaker as divergence increases, and this can potentially force the creative collaboration to dissolve. The above discussion on translation leads to the following propositions:

*Proposition 6: The number of ideas created in social settings increase as the participating actors improve their abilities to collaborate and translate new information into new business opportunities.*

*Proposition 7: Mediators create more ideas in social settings than intermediaries do.*

### ***Temporality: Time as a perception, orientation and event(s)***

In this section, we demonstrate how time can influence the individual person’s willingness to engage in and be a part of a socially creative environment. Following Hall (1966) and Jakobsen (2015), it is important to articulate issues of time when planning and executing a (series of) creative interaction(s) such as co-creation processes or ideational workshops. We divide the issue of time into three categories: 1) *time as a perception*, 2) *time as an orientation*, and 3) *time as an event or process*.

According to Mainemelis (2010), time perception can be viewed as a multifaceted phenomenon in creative processes. This multifaceted view consists of *linearity*, *cyclicity*, and *timelessness*. In the linearity view, time is considered an economic commodity with an irreversible timeline in which closure is an important end state to creativity. In this view, the creative process is often evaluated as either a successfully completed task or the wasted efforts of an unsuccessful one (see also de Mooij and Hofstede, 2011). The cyclicity view of time emphasizes the recurrence of multiple events. In this view, creativity can be thought of as progressing through an upward spiral, constantly using what has been established as good in the past as a point of departure for progress. In the timelessness view, creativity is defined as time passing without anyone feeling it because of the state of flow (Czikszentmihalyi, 1996; Mainemelis, 2010). This tri-

partition of time emphasizes that dialogue about the concrete planning and execution of the event(s), so the participants are aware of the purpose and goal of their efforts in relation to the coming event or process.

When studying time as an orientation, we divide the construct into time as past, present and future oriented and as poly-chronic or mono-chronic. First, we refer to the work of scholars Kluckhohn and Stodtbeck (1961). They discuss three time orientations in creative processes. Time with a *past orientation* values preservation and tradition, time with a *present orientation* values the 'here and now' and views the future as uncertain, and time with a *future orientation* involves planning for a better tomorrow. Dialogue about the time orientation thus assists the organizers of creative events to articulate the orientation of new ideas. Here McFadzean's (1998) *creative magnitude* can be helpful in planning the event and determining if the goal is paradigm-preserving ideas (past orientation), paradigm-stretching ideas (present orientation), or paradigm-breaking ideas (future orientation). In addition, Hall's (1966) view on the individual person's attitude towards time as being either *poly-chronic* or *mono-chronic* may influence whether actors are allowed to do several things simultaneously in the creative process. Here studies (Jakobsen, 2015) show that when people with different time orientations meet, it may, as different priorities collide, trigger misunderstandings, frustrations, and even conflict – which is non-stimulating for the creative process. Jakobsen (2015) exemplifies this as follows: Some people answer emails or the phone in the creative process because they are expecting 'an important message', while others find this disturbing and non-productive to the process.

Finally, Fischer et al. (2005) emphasize that social creativity – e.g., the process of co-creation – can be designed and organized in different forms. Here the notion of time as a process or event is important. Fischer et al. (2005) exemplify that social creativity can be 1) *serial*, being a process separated in events that build upon one another (like the cyclicity view); 2) *parallel*, being two or more processes that start separately and then synthesize at the end; or 3) *simultaneous*, being a process/event where all participants create different solutions at the same time.

Agreement about the issue of time can help synchronize members' behavior during opportunity recognition and development and time can be used to structure the purpose and goal of the event or series of events over time (Jakobsen, 2015). The above discussion on temporality leads to the following propositions:

*Proposition 8: Time pressure hampers creativity in social settings.*

*Proposition 9: The alignment of time perceptions is positively associated with increased creativity in social settings.*

**Review summary**

Because we argued in the introduction that an increase in social creativity can lead to business development and innovation for the actors in service networks, we now proceed to suggest a theory that can assist in organizing and managing this process strategically. First we outline the theory by following Whetten’s (1989) requirements for a theoretical contribution. Hereafter, we discuss the implications that emerge when social creativity (a known phenomenon) is taken into a service network setting (a new context) (Colquitt and Zapata-Phelan, 2007).

**Social creativity is...**

To answer the question ‘what is social creativity?’ our review establishes that social creativity is a process that occurs when individuals work together in a setting where novel and useful ideas can flourish (Paulus, 2000; Sonnenburg, 2004; Glăveanu and Lubart, 2014). The process of social creativity focuses on recognizing and developing new ideas via social interactions that enable 1) new interpretations of existing knowledge and/or 2) new discoveries of useful information that trigger new thought patterns.

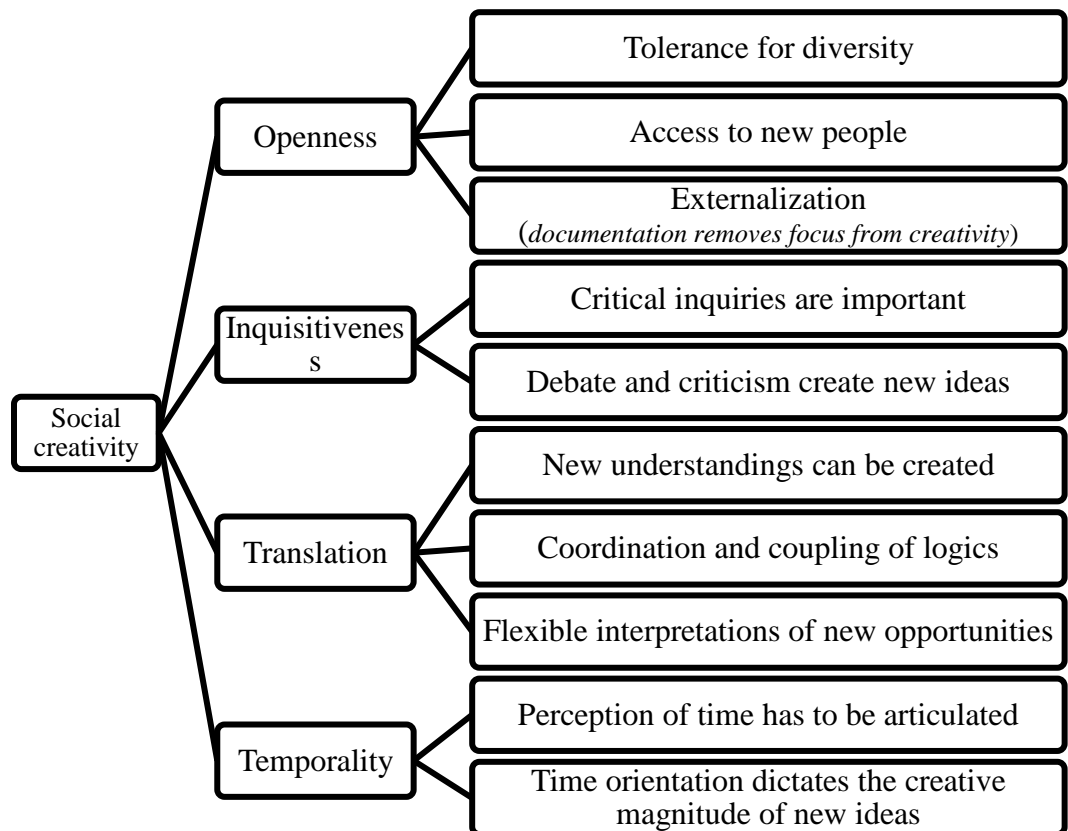


Figure 1. Requirements for social creativity to work  
 Source. Authors’ own development

We establish that *social creativity consists of four theoretical building blocks*, which all include behavioral sub-themes that can positively stimulate the creative process if designed and organized properly. See figure 1. The content of figure 1 is further explained and summarized in table 1, in which we additionally establish the role of the organizer and the rules of engagement for participants in settings where social creativity is to be stimulated.

Table 1: Review Summary of Social Creativity. *Source:* Authors' development

Theoretical Building Block	Behavioral sub-theme	Role of the organizer	Rules of engagement for participants
<b>OPENNESS</b>	<b>Tolerance for divergence</b>	Facilitate an exploratory environment accepting divergent thinking where judgment is suspended. Failure and disappointment have to be viewed as sources of learning. Critical questioning is important to challenging assumptions and generating new insights	The actors/participants have to be open for novel suggestions and changes of existing routines. A constructive, critical mindset is important for gaining new insights and enabling discussions among the participants.
	<b>Access to new people</b>	Summitting individuals with heterogeneous backgrounds (e.g., educational and work experience) leads to more creative outcomes than inviting a homogeneous group of individuals. If multiple events are planned, then invite a few new people to avoid groupthink emerging over time.	The participants have to be patient in the process. Many people with different backgrounds will collaborate and this may take more time for the group to develop a mutual language and meaning about the potential of new ideas.
	<b>Externalization</b>	Depending on the time perspective (see below) of the event(s), the creative process moves from an open view on opportunities towards a more closed end product/service package as the group externalizes and makes the work on the new opportunity more disciplined and concrete, e.g., in form of texts or drawings. Ensure that the degree of openness is maintained as long as possible to generate as many	Participants are to remain open to opportunity recognition and ideation for an extended period of time. The purpose is not to jump to conclusions with the first good idea(s) and develop these; rather, the focus is on exploring and developing a portfolio of options for later development.

INQUISITIVENESS	Constructive confrontation	<p>opportunities as possible and to explore the potential of these.</p> <p>To stimulate new ideas, it is important that the facilitator and the participants make constructive, critical inquiries in the process. It is important to maintain a positive atmosphere in which opposing opinions and competing view can be explored to generate new insights and potentially new ideas. The organizer has to ensure that the positive atmosphere is maintained.</p>	<p>It is expected that participants challenge each other and their ideas/viewpoints. Moreover, it is important that participants listen to one another and do not simply confront each other. The purpose of the collaboration/co-creation is defined by a common goal.</p>
	TRANSLATION	Seeking new understandings	<p>The facilitation of interaction between participants is imperative. Social creativity is only social if people interact. The search for sensemaking between two or more logics provides the foundation for new insights and new ideas. Here, the mediation of ideas is important, where personal views are presented and communicated about the idea(s). The facilitator must strive to enable the participants as mediators and not as mere communication channels replicating the message(s).</p>
Improvisation		<p>Enable an environment in which the free flow of ideas is stimulated. Make sure that focus is on the process of generating ideas and not that of evaluating ideas.</p>	<p>A collaborative environment is needed and therefore participants have to be open to both help-giving and help-seeking behaviors.</p>
Convergent or divergent view		<p>Social creativity can be led as a convergent or a divergent process. Convergent processes maintain the status quo and add to what already exists, resulting in stability and predictability. Divergent processes lead to ideas that might cause larger changes to</p>	<p>The participants have to acknowledge that there is a difference between creative processes that are convergent and divergent in nature. If inspirations for larger changes are sought, then divergent processes are required. If inspiration for</p>

the participants' organizations and/or work tasks.

add-ons to existing business and work tasks are desired, then convergent processes are required.

**TEMPORALITY**

**Time as perception**

Be explicit about the purpose and goal of the event(s) in relation to the time spent by the participants. *What is in it for them, and what is in it for the organizer(s)?*

It is important to accept the view on time established by the organizer: If the purpose is to generate many ideas in e.g., event nr. 1 of 2, then judgment and personal opinions about what are good and bad ideas are not part of the process in the first meeting.

**Time as orientation**

When summing participants, it is important to articulate the time orientation of the process. Focus on generating ideas that 1) preserve the present, 2) stretch what is done in the present, or 3) break and rethink what is done presently. Moreover, it is important to articulate if it is acceptable to multitask in the process (poly-chronic perception) or not (mono-chronic perception).

When participating in a social creative event, it is important that the level of ambition (the creative magnitude) is understood by the persons joining to collaborate. If paradigm-breaking ideas are not desired, then the person might waste his/her time as well as interrupt the social interaction negatively.

**Time as event or process**

When inviting for an event or a series of events, it is important to articulate the plan (also cf. time as perception). Clarifying if the participants are to join an event or series of events assists in forming their attitudes and behaviors according to the purpose and goal of the event(s).

If accepting to join an event or a series of events in search for inspiration for business development and innovation, then participants have to ensure that they can take part in the entire process because social creativity requires commitment and priority to work.

Before answering the questions of *how* and *why* the four building blocks are related (Whetten, 1989), we need to specify the underlying assumptions of

network theory in which these building blocks are to be integrated. In this regard, it is widely accepted among network scholars that human behavior can be explained by the relationships established between and among individuals, rather than by the characteristics of the individuals themselves. Consequently, when studying networks, the main focus should be on a system's social relationships, as opposed to each individual belief or personalized meanings. Following this line of reasoning, we argue that the building blocks of "temporality" and "openness" represent the basic social structure of network creativity, *openness* because it emphasizes the structure of inclusion among the system's actors and their ideas (Senge, 1990) and *temporality* because it emphasizes the structure of social relationships (Granovetter, 1990; White, 1992). The building blocks "inquisitiveness" and "translation" are related to the "openness" and "temporal" building blocks because they emphasize the actions and behaviors with which actors have to comply to stimulate social creativity, *translation* because it emphasizes the active part of making sense out of the information presented by the other participants as well as communicating one's own viewpoints on the messages and *inquisitiveness* because it emphasizes the active part of stimulating divergent thinking in practice by challenging the *status quo*.

Hence, we claim that social creativity cannot live up to its full potential if one or more of the theoretical building blocks are removed from the design and organization of such a process. That is, they exist simultaneously and thereby establish a network space where individuals are free to participate, which is important for the unfolding of creative processes (Brix and Jakobsen, 2013; Jakobsen, 2015).

#### ***A service network is...***

To answer 'who is part of the process?', 'where it is occurring?' and 'when it is happening?' (Whetten, 1989), our review establishes the following: Service networks are a cluster of different organizations acting as a loosely coupled system (Orton and Weick, 1990) that offers complementing services to certain activities that are present in the mind(s) of the customer(s). The actors may change over time because the network itself changes dynamically as the activity or the behavior of the user/customer change, or as the actors become aware of each other's existence in the full customer experience. The service network can emerge as a recurring phenomenon or a temporary unique event depending on the activities that group different organizations and their services together. Hence, a service network can emerge and dissolve because of a unique event or it can emerge and be recreated as the needs of the users/customers change.

#### **Discussion and Implications**

##### ***Designing and organizing social creativity in service networks***

Because the service network is a loosely coupled system (Orton and Weick, 1990) that is dynamic in both the contextual and the temporal elements of the theory (Whetten, 1989), it is not possible to draw a fixed organizational structure or



diagram for the participants (Burton, Obel and Håkonsson, 2015). Instead, we need to recognize that a service network is constituted by organizations with complementing services where membership among the actors change and where the network itself develops recurrently or dissolves after a unique event. Consequently, in the following, we argue that the four building blocks of social creativity can act as design parameters for the activities used to stimulate the creation of new ideas for business development and innovation among the service network actors. See figure 2.

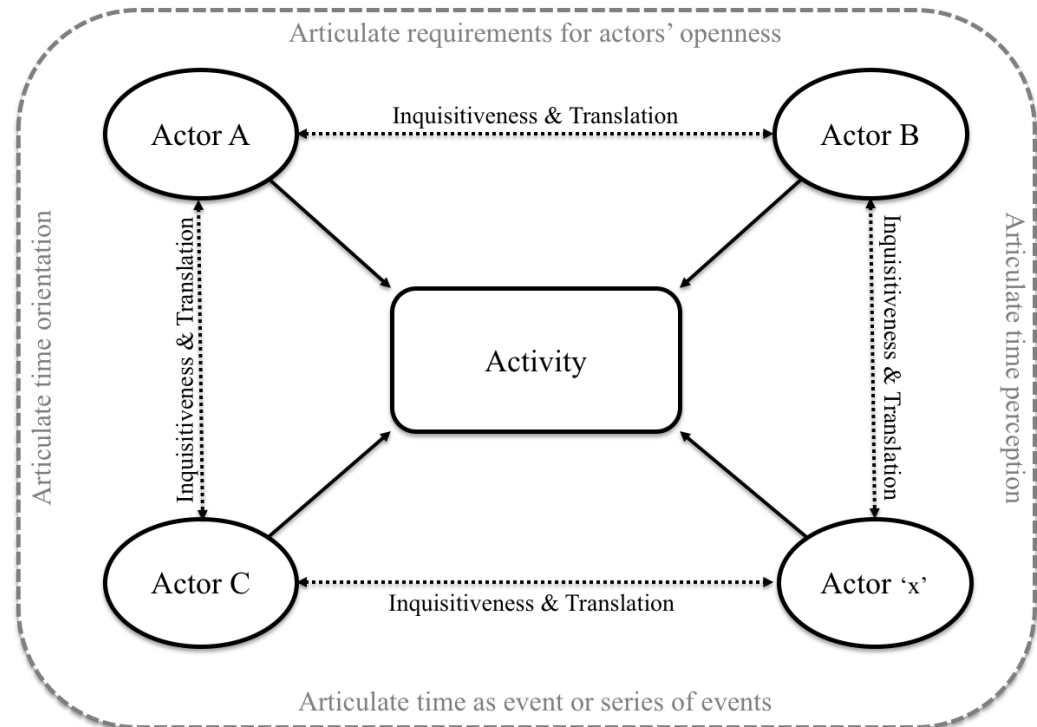


Figure 2.: Stimulating social creativity in service networks  
Source: Authors' development

Our theory of social creativity in service networks asserts that participants in the network are brought together by an *activity* as a key motivator for collaboration. When searching for and identifying potential co-actors in a service network (see section one in the literature review for further explanation), the actors can be invited and summited to, e.g., a workshop focusing on increasing customer/user value through service collaborations. It is for such a setting that our theory is prescribed.

**Temporal and contextual boundary of social creativity in service networks**

The building block *temporality* can be used to articulate the *time orientation* of the creative process and thus make explicit the ambitions of the creative magnitude (McFadzean, 2003). Hence, it can help explain to the participants if the requested ideas are to be of an incremental or more radical nature

(Jakobsen, 2015). Moreover, the purpose and goal of the participation in *the event or series of events* has to be articulated to the participants, so time misperception does not lead to unnecessary time pressure (Amabile, 1996; Brix and Jakobsen, 2013). Finally, *time as perception* can be used to articulate if the participants are to be completely focused on the process (mono-chronic time view) or allowed to, e.g., be online during the process (poly-chronic time view). According to the literature review, articulating these temporal elements can assist in enabling a creative setting where the participants can focus on the process(es) and the purpose and goal of the process(es).

The building block *openness* is important to use as a design parameter when seeking to stimulate creative behavior in social settings (Senge, 1990; Paulus, 2000). Here the organizer has to make explicit to the participating actors that tolerance for diversity is a key facilitator of creating new insights. In social creativity, judgment has to be suspended for as long time as possible to explore new ideas (Brix and Jakobsen, 2013). In addition, an open mindset towards paradigm stretching and breaking ideas (McFadzean, 2003) is desired. If the service network is based on a recurrent activity where the actors' participation is more stable compared to a service network based on a unique event, it is important that new individuals are invited to participate in the event, so groupthink (Janis, 1982) might be challenged. Finally, the link between the "temporality" and the "openness" building blocks is the alignment of the planned *externalization process* and the purpose and goal of *the event or series of events*. Hence, the organizer should explain if the participating actors are required to document new ideas and make decisions about potential collaborations at the end of the workshop or if the purpose is to explore many new opportunities and further develop these without decision making (Jakobsen, 2015).

### ***Actions and behaviors needed to create new ideas for business development and innovation***

The building blocks of "inquisitiveness" and "translation" represent the actions and behaviors that have to be stimulated in the creative setting where new ideas are to be created. These building blocks represent the process-related elements of the theory, explaining *how to act* in e.g., a workshop where the service network actors meet to collaborate and explore new business opportunities.

*Translation*, as proxied by the participants' ability to make sense out of new information, concerns the interaction between the participating actors and their 'interpretative flexibility' (Bijker, 1995) of each other's personal viewpoints concerning new ideas. Moreover, the importance of collective sensemaking (Weick, 2015) is imperative to reflect how a given idea might benefit all or most of the service network actors. Here it is important to stress that the actors act as *intermediaries* of the information that is shared, so their personal views are made explicit to the other actors – and taken into consideration (Latour, 2005). Hence, it is important that everyone contributes to the process (Leonard and Straus, 1997). Finally, the notions of *divergence* and *convergence* are important to

articulate among the actors, so their perception and mindset are aligned with the temporal and contextual setting created to enable social creativity.

*Inquisitiveness*, as proxied by the actors' attitude and behavior related to (positively) confront each other, also represents an important part of the creative setting (Nemeth and Nemeth-Brown, 2003). The purpose of focusing on *instigating critical inquiry* among actors is to break existing thought patterns and create new insights (Brix and Jakobsen, 2013; Weick, 2015). This kind of critical inquiry stimulates creativity because it gets actors to think in new ways (Mucchi-Faina, Maass and Volpato, 1991) as well as motivates the actors to investigate matters more carefully during the externalization process (e.g., Amabile and Kramer, 2012; De Dreu et al., 1999).

### **From new ideas to business development**

Because our theory is customer centered (Tax, McCutcheon and Wilkinson, 2013) acting on a systems level (van Riel et al., 2013) in a loosely coupled system without any formal power relationship (Orton and Weick, 1990), the creative process requires a high degree of self-initiative among the participating actors. Someone has to identify and summit relevant co-actors before the loose couplings can lead to new ideas that inspire business development. Here the process of designing and organizing a creative event (e.g., a workshop or a series of workshops) might be improved by relying on a dedicated facilitator/consultant, so the process(es) are managed and led according to the determined purpose and goal (Jakobsen, 2015). If this process is managed successfully, the introduction of social creativity in service networks can lead to business development by the participating actors because the customers/users experience is improved by increased market understanding (Duysters, De Man and Wildeman, 1999), new valuable ideas to the actors (Henneberg, Gruber and Naudé, 2012), and the development of new service experiences to the users and customers (Tax, McCutcheon and Wilkinson, 2013).

### **Limitations and Further Research**

We recognize the following limitations to our study: First, the purpose of the study is to build a theory and not to test the theory in practice (Colquitt and Zapata-Phelan, 2007). We invite scholars and development consultants to utilize this theory in a service network setting and 1) report feedback on the outcomes, and 2) further elaborate or amend the proposed theory. Second, in the first section of the literature review, we briefly suggest how an organization can identify co-actors in a service network. We recognize that our suggestion is based on general heuristics and not empirical evidence. We echo the call for further research on establishing processes for identifying service network actors by Tax, McCutcheon and Wilkinson (2013). Third, we do not delve into a discussion of inviting customers or users into the events/workshops aimed at creating ideas for business development for service network actors. We acknowledge that customer feedback is imperative when evaluating new ideas. Without the

customers' or users' input, the service network actors might create offerings based on speculations and not actual needs.

### Conclusion

The goal of our study was to conceptualize a theory that could enable service network actors to use social creativity to design and organize an event – or a series of events – that stimulates business development and innovation in practice. We initiated the study by asking the following question: “*How can we mobilize actors' social creativity in a service network and create ideas for interfirm collaborations that aspire to deliver business development and innovation?*” The answer to the question is as follows:

First, we assert that potential service network co-actors can be identified by asking two operational questions: 1) *For which customer/user activity do we want to deliver exceptional service?* and 2) *With what other organizations would we need to collaborate to deliver exceptional service covering the entire activity.* Answering these questions can lead to the identification of a shortlist of potential service network co-actors that can be used to gain an expression of interest or non-interest in a joint collaboration.

Second, because a service network emerges as a loosely coupled system, it is imperative to design and organize the event (or series of events) appropriately so that the actors who choose to participate in the process know 1) what is expected from them, 2) the temporal view on the joint collaboration, and 3) the purpose and goal of their socially creative actions and behaviors. We argue that this design and organization can be executed by relying on the insights presented in the ‘discussion and implications’ section above. If such an event is completed successfully, it will most likely lead to business development for the participating actors and improved customer value.

Finally, we propose that our ‘theory of social creativity in service networks’ could be applied to stimulate business development in other loosely coupled systems besides the service network setting, e.g., in co-creation workshops organized by local governments. Empirical studies are needed to support this claim.

### References

- Alvarez, S. A., and Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 11-26.
- Amabile, T. M. (1995). Attributions of creativity: What are the consequences?. *Creativity Research Journal*, 8(4), 423-426.
- Amabile, T. M. (1996). *Creativity in context: The social psychology of creativity*. Boulder, CO: Westview.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., and Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1184.
- Amabile, T., and Kramer, S. (2012). How leaders kill meaning at work. *McKinsey Quarterly*, 1, 124-131.
- Barrett, F. J. (1998). Coda—creativity and improvisation in jazz and organizations: Implications for organizational learning. *Organization Science*, 9(5), 605-622.

- Baruah, J., and Paulus, P. B. (2009). Enhancing group creativity: the search for synergy. *Research on Managing Groups and Teams*, 12, 29-56.
- Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. Yale University Press, United States.
- Bijker, W. E. (1995). *Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change*, MIT Press, Cambridge.
- Brix, J. (2015). Fail forward: Mitigating failure in energy research and innovation, *Energy Research & Social Science*, 7, 66-77.
- Brix, J., & Jakobsen, H. S. (2013). Corporate creativity: introducing the Creative Idea Solution© framework. *International Journal of Innovation and Learning*, 13(4), 388-405.
- Burt, R. S. (2004). Structural holes and good ideas. *American Journal of Sociology*, 110(2), 349-399.
- Burt, R. S. (2009). *Structural holes: The social structure of competition*. Harvard University Press, United States.
- Burton, R. M., Obel, B., and Håkansson, D. D. (2015). *Organizational design: A step-by-step approach*. Cambridge University Press, United States.
- Callon, M. (1980). Struggles and negotiations to define what is problematic and what is not. In *The social process of scientific investigation* (pp. 197-219). Springer, Netherlands.
- Callon, M. (1986). The sociology of an actor-network: The case of the electric vehicle. In *Mapping the dynamics of science and technology* (pp. 19-34). Palgrave Macmillan UK.
- Callon, M. (1992). *The Dynamics of Techno-Economic Networks*, in M. Callon (ed.) *Technological Change and Company Strategies*, London: Academic Press
- Colquitt, J. A., and Zapata-Phelan, C. P. (2007). Trends in theory building and theory testing: A five-decade study of the Academy of Management Journal. *Academy of Management Journal*, 50(6), 1281-1303.
- Csikszentmihalyi, M. (1990). The domain of creativity. In M.A. Runco and R.S. Albert (Eds.). *Theories of Creativity* (pp. 190–212). Newbury Park, CA: Sage
- Csikszentmihalyi, M. (1999). 16 Implications of a Systems Perspective for the Study of Creativity. In *Handbook of creativity* (pp. 313-335). Cambridge University Press.
- De Dreu, C. K. W.; Harinck, F.; Van Vianen, A. E. M., Cooper, C.L. (Ed); Robertson, I.T. (Ed). (1999). Conflict and Performance in groups and organizations, *International review of industrial and organizational psychology*, Vol. 14 (pp. 369-414). New York, NY, US: John Wiley and Sons Ltd.
- Duysters, G., De Man, A. and Wildeman, L. (1999), "A Network Approach to Alliance Management", *European Management Journal*, 17, 2, 182-187
- Fischer, G., and Giaccardi, E. (2007). Sustaining social creativity. *Communications of the ACM*, 50(12), 28-29.
- Fischer, G., Giaccardi, E., Eden, H., Sugimoto, M., and Ye, Y. (2005). Beyond binary choices: Integrating individual and social creativity. *International Journal of Human-Computer Studies*, 63(4), 482-512.
- Fischer, G., Nakakoji, K., Ostwald, J., Stahl, G., and Sumner, T. (1993). Embedding critics in design environments. *The Knowledge Engineering Review*, 8(04), 285-307.
- Glăveanu, V. P., and Lubart, T. (2014). Decentering the creative self: How others make creativity possible in creative professional fields. *Creativity and Innovation Management*, 23(1), 29-43.
- Granovetter, M.S. (1973) The strength of weak ties, *American Journal of Sociology*, 78(6) pp.1360-1380
- Granovetter, M.S. (1990) The myth of social network analysis as a special method in the social sciences, *Connections*, 13(1-2), pp.13-16
- Hall, E. T. (1966). *The hidden dimension*, Doubleday Publishers, New York
- Hampden-Turner, C. (1999). Control, chaos, control: A cybernetic view of creativity. *Social Creativity*, 2, 17-32.
- Harvey, S. (2014). Creative synthesis: Exploring the process of extraordinary group creativity.

- Academy of Management Review*, 39(3), 324-343.
- White, H. C. (1992). *Identity and control: A structural theory of social action*. Princeton University Press.
- Henneberg, Gruber and Naudé, (2012). Services networks: concept and research agenda. *Industrial Marketing Management*, 42(1), pp. 3-8.
- Jakobsen, H.S. (2015) *The art of planning and executing workshops* [in Danish], Invencis Publishing, Aarhus, Denmark
- Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascoes* (Vol. 349). Boston: Houghton Mifflin.
- Kluckhohn, F. R., and Strodtbeck, F. L. (1961). *Variations in value orientations*. Greenwood Press, Westport, USA
- Kratzer, J., Leenders, O. T. A., and Van Engelen, J. M. (2004). Stimulating the potential: Creative performance and communication in innovation teams. *Creativity and Innovation Management*, 13(1), 63-71.
- Latour, B. (1988). *The Pasteurization of France followed by irreductions*. Harvard University Press, Cambridge
- Latour, B. (2005). Reassembling the social-an introduction to actor-network-theory. *Reassembling the Social-An Introduction to Actor-Network-Theory*, by Bruno Latour, pp. 316. Foreword by Bruno Latour. Oxford University Press.
- Leenders, R. T. A., Van Engelen, J. M., and Kratzer, J. (2003). Virtuality, communication, and new product team creativity: a social network perspective. *Journal of Engineering and Technology Management*, 20(1), 69-92.
- Leonard, D., and Straus, S. (1997). Putting your company's whole brain to work. *Harvard Business Review*, 75, 110-122.
- Locke, K., Golden-Biddle, K., and Feldman, M. S. (2008). Perspective-making doubt generative: Rethinking the role of doubt in the research process. *Organization Science*, 19(6), 907-918.
- Mainemelis, C. (2010). Stealing fire: Creative deviance in the evolution of new ideas. *Academy of Management Review*, 35(4), 558-578.
- McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258.
- Montuori, A. (2003). The complexity of improvisation and the improvisation of complexity: Social science, art and creativity. *Human Relations*, 56(2), 237-255.
- Morgan, F., Deeter-Schmelz, D., and Moberg, C. R. (2007). Branding implications of partner firm-focal firm relationships in business-to-business service networks. *Journal of Business and Industrial Marketing*, 22(6): 372-382.
- Nemeth, C., and Nemeth-Brown, B. (2003). Better than individuals. In Paulus, P. B. and Nijstad, B. A. (eds.) *Group creativity: Innovation through collaboration*, (4), 63-84. Oxford University Press, New York.
- Nemeth, C. J., Personnaz, B., Personnaz, M., & Goncalo, J. A. (2004). The liberating role of conflict in group creativity: A study in two countries. *European Journal of Social Psychology*, 34(4), 365-374.
- Nemeth, C. J., and Ormiston, M. (2007). Creative idea generation: Harmony versus stimulation. *European Journal of Social Psychology*, 37(3), 524-535.
- Orton, J. D., and Weick, K. E. (1990). Loosely coupled systems: A reconceptualization. *Academy of Management Review*, 15(2), 203-223.
- Ostrom, A. L., Bitner, M. J., Brown, S. W., Burkhard, K. A., Goul, M., Smith-Daniels, V., Demirkan, H., and Rabinovich, E. (2010), "Moving Forward and Making a Difference: Research Priorities for the Science of Service", *Journal of Service Research*, 13(1), 4-36.
- Peronard and Brix (in press). Sensemaking in collaborative networks: Creating and balancing activities in open business models, *International Journal of Entrepreneurship Innovation Management*, X(Y), 000-000.
- Parjanen, S. (2012). Experiencing creativity in the organization: from individual creativity to collective creativity. *Interdisciplinary Journal of Information, Knowledge, and Management*,

- 7, 109-128.
- Paulus, P. (2000). Groups, teams, and creativity: The creative potential of idea generating groups. *Applied Psychology*, 49(2), 237-262.
- Perry-Smith, J. E. (2006). Social yet creative: The role of social relationships in facilitating individual creativity. *Academy of Management Journal*, 49(1), 85-101.
- Pinho, N., Beirão, G., Patricio, L. and Fisk, R (2014). Understanding value co-creation in complex services with many actors. *Journal of Service Management*, Vol. 25(4), pp.470 - 493
- Senge, P. M. (1990). *The art and practice of the learning organization*. New York: Doubleday.
- Sonnenburg, S. (2004). Creativity in communication: A theoretical framework for collaborative product creation. *Creativity and Innovation Management*, 13(4), 254-262.
- Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science*, 19(3), 387-420.
- Tax, S. S., McCutcheon, D., and Wilkinson, I. F. (2013). The service delivery network (SDN) a customer-centric perspective of the customer journey. *Journal of Service Research*, 16(4), 454-470.
- van Riel, A. C., Calabretta, G., Driessen, P. H., Hillebrand, B., Humphreys, A., Krafft, M., and Beckers, S. F. (2013). Consumer perceptions of service constellations: implications for service innovation. *Journal of Service Management*, 24(3), 314-329.
- Whetten, D. A. (1989). What constitutes a theoretical contribution?. *Academy of Management Review*, 14(4), 490-495.
- Weick, K. E. (1998). Introductory essay—Improvisation as a mindset for organizational analysis. *Organization Science*, 9(5), 543-555.
- Zenasni, F., Besançon, M., and Lubart, T. (2008). Creativity and tolerance of ambiguity: An empirical study. *The Journal of Creative Behavior*, 42(1), 61-73.
- Zhang, X., Gloor, P. A., and Grippa, F. (2013). Measuring creative performance of teams through dynamic semantic social network analysis. *International Journal of Organisational Design and Engineering*, 3(2), 165-184.

**Acknowledgements.** We wish to thank our colleagues at Aarhus University and Aalborg University for valuable feedback on earlier versions of this manuscript. We also appreciate the feedback we got on the first full version of the manuscript from the faculty at the Lally School of Management at Rensselaer Polytechnic Institute in Troy, New York.

**Corresponding author:**

Jacob Brix can be contacted at: [brix@learning.aau.dk](mailto:brix@learning.aau.dk)