

Innovation **Creative Friction or Complementarity**

Nielsen, Janni; Yaganeh, Suzanne; Bloch Rasmussen, Leif; Arcienaga, Antonio

Document Version Final published version

Published in: Proceedings of the Participatory Innovation Conference. PIN-C 2013

Publication date: 2013

License Unspecified

Citation for published version (APA): Nielsen, J., Yaganeh, S., Bloch Rasmussen, L., & Arcienaga, A. (2013). Innovation: Creative Friction or Complementarity. In H. Melkas, & J. Buur (Eds.), *Proceedings of the Participatory Innovation Conference. PIN-C* 2013 (pp. 233-240). Lappeenranta University of Technology. http://www.lut.fi/documents/27578/292022/PIN-C+2013_Proceedings_HQ.pdf/17fa385b-cc30-4ae4-82a6-59308a80d503

Link to publication in CBS Research Portal

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us (research.lib@cbs.dk) providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 04. Jul. 2025











Innovation: Creative Friction or Complementarity Janni Nielsen, Leif Bloch Rasmussen, Suzanne Yaganeh, and Antonio Arciénaga

Article in proceedings (Publishers version)

CITE: Innovation : Creative Friction or Complementarity. / Nielsen, Janni; Yaganeh, Suzanne; Bloch Rasmussen, Leif; Arcienaga, Antonio. Proceedings of the Participatory Innovation Conference. PIN-C 2013. ed. / Helinä Melkas; Jacob Buur. Lahti : Lappeenranta University of Technology, 2013. p. 233-240 (LUT Scientific and Expertise Publications). (Tutkimusraportit - Research Reports; No. 6).

DOI: <u>http://www.lut.fi/documents/27578/292022/PIN-</u> <u>C+2013_Proceedings_H0.pdf/17fa385b-cc30-4ae4-82a6-59308a80d503</u>

Uploaded to <u>Research@CBS:</u> December 2016







CEMS PIM

INNOVATION: CREATIVE FRICTION OR COMPLEMENTARITY

JANNI NIELSEN COPENHAGEN BUSINESS SCHOOL JANNI.NIELSEN@CBS.DK

LEIF BLOCH RASMUSSEN COPENHAGEN BUSINESS SCHOOL LBR.ITM@CBS.DK SUZANNE YAGANEH AALBORG UNIVERSITY SY@LEARNING.AAU.DK

ANTONIO ARCIÉNAGA UNIVERSIDAD LA PLATA, ARGENTINA AARCIENAGA@GMAIL.COM

ABSTRACT

This paper contributes to a theoretical discussion of creation of innovation with participants in, or outside, organisations. We address the creation of innovation with a complex theoretical understanding drawing on the Scandinavian and the Participatory Design tradition introducing two approaches to the processes of innovation. We ask if innovation can be initiated and enhanced looking at two collaborative approaches; participatory innovation (PIN) and cooperative innovation (COIN). We invite to dialogue and reflections on PIN's conflict and creative frictions on one side and COIN's complexity, complementarity in diversity and the didactic scaffolding of the innovation process on the other side. Our contribution focuses on the methods and practices for facilitation of co-creating activities between different groups leading to cooperation, and innovation in thinking.

INTRODUCTION

The understanding of innovation has changed with the global dynamics providing new conditions and

challenges within environmental issues and market possibilities. A subsequence of more intensive focus and research on innovation has brought new understanding to innovation also perceiving it as a social phenomenon, a team effort (Prahalad 2008), (Trott 2008), (McElroy 2002). The reason is that emphasis is put on the intangible role of relations, the way users, or stakeholders, interact in the process of innovation where knowledge sharing understanding and collaboration are key factors to the capability of innovation.

The new child in the street is *collaborative innovation*, sometimes referred to as university-industry collaboration (Chen 2008), but most often described as cross-sectorial (Hipp 2012). One of the more interesting approaches is Participatory Innovation (PIN) coined by Jacob Buur in connection with the creation of SPIRE (Sønderborg Participatory Innovation Research), which is both multidisciplinary and cross-sectorial including a theatre and its actors. PIN is founded on close collaboration with SMEs and has a strong foundation in understanding users, not only as consumer, but also as producers. PIN takes people's practices and needs as starting point to generate business opportunities and innovation is understood as unfolding of new meanings. Cooperative Innovation (COIN) is another approach and it has grown out of research based education focusing on entrepreneurship and innovation (Ortiz, Herlau, Rasmussen 2006). It also has a multi stakeholder approach and the focus is understanding of the stakeholders; the organization, the task, the client, the context. The model has been further developed in an EU-Latin America cooperation.

The PIN conferences represent a new scientific topic still in the making, and there is a need for theoretical reflections, empirical studies and dialogue to qualify the field. With the aim of inviting to open dialogue and contributing to a theoretical framework, we explore the

233

differences between the two approaches and their understanding of the innovation process by mapping out the diversity through analysis.

We start out with a presentation of PIN, which has been documented in several publications and is the grounding of the PIN conferences. This is followed by a presentation of COIN, which we take as the perspective from which we enter the dialogue. We introduce the theoretical frame and the didactic design which scaffolds the cooperative process. We continue by explaining the empirical setting and then move into the analysis. The analysis allows us to conceptualize our findings and in a final discussion we reflect of the differences. PIN collaboration is founded on theatre and participants (actors/researchers/audience) (Buur and Larsen 2010), and on a priori set design tasks among students from different cultures (Sproedt 2012). The advantage of this approach is that it allows for iterative unfolding of the empirical process and accounts for the development of the concept of innovation. Also COIN is cross cultural. Working with cooperative innovation in a real life context, in Argentina in the case reported here is a constituting factor for the unfolding of the process. The scaffolding by a didactic model invites to iterative progression of the innovation process.

PARTICIPATORY INNOVATION

PIN identifies ways for industry and public sector to expand innovation through the participation of stakeholders - both on a strategic level, in methods and day-to-day interactions. PIN's perspective is the organization, but Buur and Matthews (2008) argue innovation cannot come solely from within an organization. It happens 'in the 'breaking of the waves' between people outside and people inside - because 'they have different stakes and perspectives' (Buur 2011). Buur and Sproedt (2011) propose participatory innovation as a cross-disciplinary "integrated process to user-driven innovation when applying user-centred development practices in the industry where key points are co-creation, sense-making and market orientation aiming to generate knowledge and business opportunities".

Buur comes from the Scandinavian IS tradition also drawing on traditions from Participatory Design (PD). PIN mirrors the ideal of collaboration and dialogue as the foundation for development, but PIN is defined to seek; "to combine the strength of PD and design anthropology while expanding towards a market orientation" (Buur and Matthew 2008). This is a radical change from PD, which constitutes the new paradigm of collaborative innovation. It is the double purpose of PIN with a dedicated market activity that takes 1) people's practices and needs as starting point to generate 2) business opportunities in the form of product and services.

These issues also herald radical changes from the traditional Scandinavian co-operative approach of user

driven innovation. A strong market orientation and management are addressed by Buur and Larsen (2010), at the same time maintaining users as point of departure inviting them to participate. This takes the authors right back into the Scandinavian traditions, but seems to embed a dilemma in relation to PD and the Scandinavian approach. Users are invited because of their understanding of the market, because it contributes to product development. Management is addressed when pointing out the uncertainty and complexity of the innovation process. The authors argue for less management acknowledging that management may lead to conflicts and friction; "innovation as a social phenomenon with a high degree of uncertainty and complexity requires more relating and less managing to use conflict as a resource by turning the friction between different knowledge traditions into creative friction" (Buur and Sproedt 2010). Hence they see conflict as a creative resource, and address this focusing on the quality of conversation. They ask which interactions seem to bring about innovation and approach the question from an understanding of the key concepts in PIN; collaboration and dialogue as *crossing* intentions and creation of friction. They talk of creative friction, and see it as the core in the innovation process.

One of the very interesting methods of PIN is improvisational theatre where participants reflect upon the actions of others followed by reflection on the play and the invitation to contribute with suggestions some of which are acted out in the theatre. The data capture is video recorded verbal dialogues, which are analysed using conversational interaction analysis. *Innovation is understood as the creation of new meaning* and the seed of innovation is in the conflict. Managing this conflict as creative friction – they argue - invites *unfolding of new meanings*, hence *innovation*.

COOPERATIVE INNOVATION

CO-operative INnovation (CO-IN) is, like PIN, also embedded in the historically developed Scandinavian tradition of cooperation. CO-IN draws on the PentaHelix model with participants from the enterprises, public authorities, engaged citizens, researchers, but COIN also includes Non-Governmental Organizations (NGOs) and public institutions each representing complementarity perspectives. It has a strong foundation in regional and local development (Bach, Nielsen, Bruun de Neergaard and Rasmussen, 2011), and has been further unfolded in a EU-Latin America collaboration on regional and local sustainable market development innovation (Nielsen, Yaganeh and Rasmussen 2013). In CO-IN there are three constituting factors: regional and local focus, cross-sectorial and multidisciplinary participation, and the didactic design as a frame for the cooperation for *innovation* understood as a *change* of thought.

FRAMING COOPERATIVE INNOVATION

The environmental and economic crisis is global. The economic tsunami and its consequences on a global scale must be addressed by a complexity a richness and a diversity in approaches and conceptualizations. New data access draws our attention Ostroms' theory of knowledge as commons, which is essential for the economic theory developed. Hess & Ostrom (2005) points out the change from fitting the world into simple theoretical models to new more complex frameworks: "contemporary research on the outcomes of diverse institutional arrangements for governing common-pool resources (cPrs) and public goods at multiple scales builds on classical economic theory while developing new theory to explain phenomena that do not fit in a dichotomous world of "the market" and "the state" (ibid). The convergence of financial circles of upturns and downturns calls for methods to develop new ways of supporting regional industries and the ever-changing labour markets and societies. Bruntland's (1987) encouragement to 'Think global, act local' is a strong support of the idea of incorporating a multiple perspective in the innovation process that still stands.

LITERATURE AND THEORY

CO-IN builds on complexity, from stakeholders, organizations, objectives, client, contexts and users. To capture this complexity, Bohr's (1958) principle of complementarity may be of help. It refers to his famous study of light. Bohr discovered that light is both particle and wave. One cannot eliminate the other; they exist side by side, though an observer cannot study both at the same time. They are complementary perspectives which both contribute to completing a description of the phenomenon; even they may logically exclude each other. "In fact, data ... simply supplement each other and can be combined into a consistent picture of the behaviour of the object under investigation."

This concept of complementary is important in a multiperspective project, because of the diversity of participants, their different walks of life, knowledge and competences. This requires openness for careful reflection and investigation to allow the complementarity to unfold. In the cross-sectorial, multidisciplinary projects the interaction needs to create space for the enhancement of the explicit and the tacit, for contradictions and paradoxes as the cooperation unfold. It is in this meeting in 'bordering spaces' that innovation may grow.

In an analysis of collaborative practices Muller (2003) talks about a third space, the hybrid realm. He suggests that in the boundary region between two domains there is a region of "overlap, or hybridity that contains an unpredictable and changing combination of attributes of each of the two bordering spaces". Muller has borrowed the concept of hybridity from Bhabha's (1994) work on location of culture. Bhabha's area of concern was colonization, in which natives find themselves caught between their own traditional culture and the new

imposed culture of their colonizers. In their effort to survive they continually negotiate and re-create their identities, while, at the same time creating a new hybrid, or a third culture. Building on cultural complexity, we use the concept of *the space-in-between* to understand cooperative innovation as the unfolding relation between the diversity of stakeholders resulting in the unfolding of a common ground.

A pre-requisite for interacting in the third space is communication and listening to, understand the "other". In his theory of communicative action Habermas (1986) introduces the distinction between life-world and its communicative action and system-world and strategic action. The communicative action is a true dialogue between rational arguing participants in terms of comprehension, truth, rightness, and trustworthiness. In true dialogue there are, <u>ideally</u>, no hidden agendas, and the participants meet with open minds and with the understanding that the best argument will win.

The ideal communicative action requires that the dialogue process is a learning process where participants listen to each other, and hear with great care, interact, communicate and negotiate meaning which may lead to rearrangement, renewal or to fundamental reorganization of their understandings and perspectives. This implies that communicative acts – the dialogues - also provide the possibility to reflect and accommodate one's own understanding and goals in cooperation to those of the others and to reflect on one's own understandings and worldview. Hence the dialogue is a mutual learning process enabling changes in thoughts and the unfolding of a distributed cognition. With this concept Salomon (1997) argues that cognition is a social construct unfolding through common objective and embedded in a cultural environment leading to a creative usage of knowledge as commons (2005) hence leading to innovation.

METHODOLOGY AND EMPIRICAL DESIGN

The background for our research on innovation and entrepreneurship is participation in an EU funded collaborative project with Latin America. To drive cross-sectorial and multidisciplinary collaboration and the innovation of new ideas the project has made extensive use of innovation workshops. We report on a workshop, which ran over two days, with a total number of 24 participants, a minimum number of 17, out of which 15 participated in the whole workshop. Due to participants' other obligations the workshop was flexible, but continuity was secured by having three groups that all had a core of 3-4 members participating during the whole period of the workshop. The participants came from the business sector, public services, university research, Ministry of Technology and Innovation, university students and a concerned citizen.

The workshop was divided into two main sessions. First part was: Idea Generation, Conceptualization and

Visualization. The second part was: Reflection and Action (cf. table 1). The workshop was organized as a structured but flexible program around concepts and activities, which served as boundary objects for the cooperation. According to Star (1989) a boundary object is an analytical concept suggesting that objects are dynamic enough to adapt to individual and the groups' interpretations and the constraints of the many parties employing them, but also robust enough to maintain a common identity across understandings. This is essential when moving from individual work and one social world to collaborative work and different social worlds to reach common ground and develop collective minds.

In the qualitative study the following material was collected from each group and in the sequence listed: 1) individual list keyword, 2) list of common keywords from the group, 3) a collection of pictures illustrating each listed common keyword, 4) a digital story consisting of the picture and the common keyword transformed into a digital story, 5) a Mind Map [2] and finally 6) a framework for the business plan. The core in the study is the processes of innovation and the analysis focus on new issues introduced during the process; following new concepts, new ideas as well as changes and what is carried into the next step.

We first conducted a vertical analysis of each groups' products following the steps of the process. From pure registration of data we moved into questioning: What did the data say, how was it related to the content of the next set of data, what changes took place, what was carried over? In the final *vertical analysis* we looked at the original concepts and ideas and how did they change, or got lost, during the process. We then conducted a *horizontal analysis*. Again we follow the process step by step, but this time across all three groups and again focus is on concepts, ideas, iterations of these and what is lost, what is radically new.

THE DIDACTIC DESIGN

CO-IN addresses innovation by using the methodology of a *didactic model*, which moves participants from participation to cooperation. The model builds on the key concepts dialogue and complementarity that are embedded in the didactic design and potentially enhance and scaffold potential innovative processes. Tools are also data and knowledge drawn from the Internet and through these participants produce and reflect leading to changes in thinking, meta-reflection and knowledge construction. This paves the way for speech acts and cognition of complementary perspectives including contradictory perspectives, dilemmas and conflicts.

The didactic model constitutes, enhances and scaffolds cognitive, social, emotional and sensuous approaches to the world, hence in the cooperative process; innovation is understood as changes in thought processes. The didactic design brings together perspectives, activities and different media of expressions in a progression of steps. Through the design the participant is moved from a personal, individual perspective to a common, we perspective. This is scaffolding a process where reflection-in-action ties together the multiple ideas, concepts, emotions and actions.

Progres- sion	Point of View	Activity	Media and products	Development
Individual	Personal- point-of-view	Writing	Prose	Common ground
Individual	Personal- point-of-view	Analysis writing	List of Key Words	
Pair	Different- point-of-view	Telling and listening	Communication	
Group	We-point-of- view	Enter into dialogue and cooperation	Joint list of Key Words	
Group	We-point-of- view	Maintain dialogue and cooperation	Pictures and Words	Collective mind
Group	We-point-of- view	Collaborative design	Picture-story	
Plenary	We-point-of- view	Cooperative presentation	Picture-story	
Group	We-point-of- view	Cooperation and development	Mind Map	Collective action
Plenary	We-point-of- view	Cooperative presentation	Mind Map	1
Group	Collective Mind	Focusing and deciding	Framework for the business plan	

Table 1: The Didactic Model for scaffolding

POINT OF VIEW: FROM PERSONAL TO WE

Starting with a personal and engaging perspective, a "personal-point-of-view" (step 1 and 2) will ease the gradual move into group tasks and to a "we-point-ofview". During this process the participants have to address diversity in perspectives (step 3 and step 7) and relate these to the "we-point-of-view" (step 4-6 and 8-10). With this we address the essential challenge in cross-sectorial and multidisciplinary workshops: Participants come from different social worlds, with individual and often opposing, sometimes conflicting, or even incompatible points of view. The greatest challenge is to design activities that promote and enhance cooperation. The fundamental pre-requisite is to ensure that the individual participant can find her/him-self in the group perspective, which is the basis for the cooperation to unfold, for partnering to develop and to continually gain strength. This is where we find the foundation for a gradual growth of trust making the participants more sensitive to each other, and for the group perspective to unfold.

ACTIVITY

The focus on complexity is reflected in the activities the participants are asked to perform. The individual moves from written prose from an individual point-of-view, which s/he is then required to analyse and break down into to essential communicative keywords (step 1 and 2) the meaning of which has to be told to another participant and in return s/he has to listen to the other tell the meaning of their keywords (step 3).



Figure 1: Green group is collaborating on their picture story

This telling and listening between two/four people then serves as basis for the next activity, which is through dialogue and in collaboration to reach a common ground expressed in a joint list of keywords (step 4), and then on to visualizations and design of a picture story which they have to present to all workshop members (step 5, 6 and 7). The next assignment takes them back to language where they have to develop and present a Mind Map [10] (step 8 and 9), and in the final activity (step 10) they have to focus and make a decision discarding many ideas.

The aim of taking the participants through such different activities is to let them start out in their own life-world and system-world and gradually place them in positions where they have to deal with the life-worlds and systemic worlds of the others, and to reach common ground through the process. They need to bring their whole being into the interaction. Through the many and very different dialogues the didactic design opens for a richness and diversity and complementarity in perspectives contribute to completing a description of the phenomenon from which innovation may unfold. The stepwise moves through the many activities where ideas have been discussed over and again allow for new ideas to evolve, and the result is a re-addressing of assignments, changing, or radically re-formulating, perspectives and understandings.

MEDIA AND PRODUCT – FROM WRITTEN TO VERBAL TO VISUAL PICTURE STORIES AND BACK AGAIN Concurrently with the change-in-view, and the changing tasks the workshop products move from written, to verbal, to visual information and production, and back to a more formal product; a project which is a draft of an initial business plan. The objective is to integrate linguistic and visual data in participants 'actual *actions*' inviting their tacit knowing to come into play, enhancing the understanding unfolding and the process of bridging between linguistic knowledge and visual knowing. With this didactic design the objective is to open for and to capture complexity, interrelatedness and complementarity. This may also be used bridging the different methodological techniques. The complexity in products challenges the participants' cognitive approaches. They have to create the same, but with different methodological techniques and tools and this may enhance cooperation and the innovative processes.

ANALYSIS

COMMON GROUND - KEYWORDS

Each individual list of keywords was compared to the common list of keywords and overlaps of words were registered as well as new words added to their list. The focus of the analysis was construction of meaning.

One of our main concerns was to enhance collaboration through true communication allowing for trust to build. The first move from individual to common list of keywords was – to us – a rather worrying challenge. But to our surprise the groups needed very little time to find common ground and identify the common keywords. They simply had no problem in negotiation meaning and reaching common ground.



Figure 2: Example of four individual lists of words and the resulting list of common words on top (Yellow group)

COLLECTIVE MIND PICTURES AND KEYWORDS

For the pictures the groups selected we used Panofsky's (1934/1972) model for analysis of pictures, and his three steps; pre-iconographic, iconographic and iconological. The analysis below explains the analytical concepts and serves to illustrate our analytical approach.



Figure 3: What is this?

Pre-iconographical is what we can identify because it holds familiarity. It is the mere registration of what is in a picture: a green trolley with one wheel in the right back visible. The trolley has a frame support in the front. There are two wire baskets, one holds a white box with the text BEBIDAS in black on a yellow background. The middle wire basket is protruding, holds a role of kitchen paper towels and a partly transparent box with a pink lid. On top are several colourful thermos, some with black lids, some with cups. The trolley stands on grey cobblestones, and in the back on red pavement is a partly visible person standing. In the *iconographical* analysis we draw on our cultural knowledge, e.g. of literary sources adding more information to the analysis. A few examples: The old green trolley is on wheels. It is a small street Café selling hot and cold beverage to pedestrians. The iconological analysis refers to the symbolic world and also deals with the intention of the photographer; why did she take the picture? What is it she wants us to see? Why did she include it in this article?

We will answer the last questions by including the title of the photo. Words add to the meaning of a picture, just as pictures add to the meaning of words. The title of the photo above is: *Entrepreneurship in Argentina*?

WORDS AND PICTURES - PICTURE STORIES

The groups then had to move into a new medium. They had to work with pictures, and with storytelling. Pictures talk to us in ways that are very different from those of words, and as Polanyi (1968) has described in the process of meaning construction tacit knowledge and tacit inferences play an essential role. This is why the task was included, it played on other cognitive processes than language, and invited senses and emotions to come into play. This would open for new ideas to evolve, new understandings to develop. This also being the weakness, as it could cause difficulties in the collaboration due to the many possible and individual and subjective interpretations the tasks opened for.

In the analysis we compare the original sequence of common key words with the sequence in the story and finally we analyse the story. In the stories the participants had to combine their words with another medium; pictures. Once done, they had to engage in storytelling and construct the picture story. What the analysis showed was that pictures influenced the original sequence of the keywords for all three groups. But also telling a story – placing images and words in traditional story telling structure requiring the groups to work in yet another medium, influenced the sequence. Below is an example of the picture story also created by the yellow group: HOW THE CAT MET RODIN.

Figure 4: Initial sequence of common keyword and the Picture story ILLUSTRATION CANNOT BE INCLUDED DUE TO COPYRIGHT

The story can be read mainly two ways, clockwise or anti-clockwise, or following the grey arrows crisscross. The *clock-wise reading* is: The cat is curios and search for knowledge. But to do that the cat needs to link with other "cats" that is to communicate and interact. Through the interaction and communication the cat is learning – from the teacher. The learning leads to reflection and thinking, which leads to development of new curiosity, and the cat starts all over again. The anti*clockwise* reading is: The cat is curious and contributes to development through bright ideas. The cat reflects and thinks about the ideas and brings them into a teaching / learning scenario. This leads to communication and interaction with other "cats", which leads to knowledge and a new curiosity. And the cat starts all over again. The picture story is a representation of the collective mind. A story where they not only inviting us to read the story forwards and backwards, but also crisscross. We leave it to the reader to tell the crisscross story, but the above remind us of proverb: "Curiosity killed the cat, satisfaction brought it back." With this contribution to the understanding of the story we have moved into Panofskys' iconological level.

COLLECTIVE ACTION

MIND MAP AND FRAMEWORK FOR THE BUSINESS PLAN

Where the Picture Story is a vision, the MindMap (2009) is a technique, which builds both on creativity and logic. It helps unfold the vision and map it out in a coherent system. MindMap consist of two steps: Mind is the conceptual unfolding of the project space and Map is, as the word says, the mapping of the space. For the innovation process to continue, the participants have to address real opportunities and actions, and the aim with the Mind Map and the Framework for Business Plan is to take the participants to the last step in the move from life-world and its communicative action to system-world and strategic action. In this last phase the participants address aims and goals, actions, actors, resources, external needs including economics and ICT. With this final scaffolding we have reached the last step in the didactic model, a plan for the collective action.

REFLECTIONS

CREATIVE FRICTION AND COMPLEMENTARITY

... "participatory innovation may be perceived as a threat to existing institutional set-ups and the knowledge that is justified there" argues Sproedt (2011), with a reference to Schumpeter who describes creative destruction as the recombination of existing resources for the creation of new ones (Schumpeter 1912/1934). Sproedt also concludes – as Buur and Larsen (2010); "such conflicts can be resources" and they conceptualize them as creative frictions. The PIN setting for the collaborative innovation framework and the constitution of cross-sectorial stakeholders sees the complexity and diversity as a source for conflict. Their approach is to manage it as a creative friction. Maintaining users as point of departure and users as participants (producers) - because of their knowledge of market (as consumers) seem to embed, in their writings, an ambivalence towards management. It seems almost as if innovation is self-organized resulting in autonomous occurrences of innovative ideas being born of conflict and friction.

CO-IN has dialogue and a didactic design as foundation. Together with the cross-sectorial and multidisciplinary perspectives, the model invites to reflection on one's own understandings and worldview, and it scaffolds the handling of the complexity. The structured process for introduction and contemplation invites complementarity in all its richness, and together with the pedagogical model, ensuring the gradual movement from an individual perspective towards multi-perspectives and common ground, in the final stages requiring explicit and collective choices. This is the success of the didactic design, when participants create a third culture opening for entrepreneurial space of future actions. The pre-requisite for this is changes in thought processes leading to innovation.

We suggest that the context for the development and implementation of the innovation models is the constituting factor. Buur (2008) argues from research where PIN is grounded in a business setting. Buur has an economic focus build into his model to shorten the way from idea generation to market. COIN argues for larger scale where the approach to innovation is to address cooperation from a cross-sectorial, cross cultural and multidisciplinary perspective in regional and local development. Besides, COIN understands value creation and economics differently; they lie in the creation of knowledge as commons.

The different goals with the initiated processes of innovations are not the only constituting factor. Another is the methodological framing. In PIN it is the improvisational theatre whereas in COIN it is the

didactic design scaffolding a process of cooperative learning, at the same time scaffolding the unfolding and construction of a cognitive process leading to knowledge as a commons. We do not really understand the way and the extent to which these two different methodological approaches constitute the process and our understandings. E.g. to us didactic scaffolding is not management, but an open method. The choice of means of expressions and products during the process enable flexibility in approaches and spaces for knowledge constructions and action. However, we can only reflect critically on our own design and theoretical frame to a certain extend. The approach embodies us – and we need eyes from outside to look in - and help us see the blind spots.

Let us end this paper with a question: Conflict and creative frictions is one way of approaching innovation processes, another and complementary approach is Didactic design and complementarity. But how is our understanding constituted by the metaphors we live by?

ACKNOWLEDGMENTS

This work reported on in this paper has been supported by EU funding of the EULASUR project: Grant no.: CSA CA 233467. To all the participants in our workshops: Thank you. This paper could not have been written without you. May kind winds blow you way.

REFERENCING

Andersen K. and Claus Bekker Jensen (1998) Visuel Mind Mapping, Mnemosyne Forlag.

Bach Martina Sophia, Nielsen Janni, Bruun de Neergaard Thea and Leif Bloch Rasmussen (2011) Mobilizing Local and Regional Knowledge for Innovation, PIN-C, 2011, p. 256-265.

Bhabha, H.K.(1994) The Location of Culture, London, Rutledge.

Bohr, N. (1958) Quantum physics and Philosophy: Causality and Complementarity, Reprinted in Bohr, N. (1985), pp. 40-49.

Buur, J. (2011) Participatory Innovation Conference http://spirewire.sdu.dk/proceedings/PINC-proceedingsweb.pdf

Buur, J. & Matthews, B. (2008) Participatory Innovation, in International Journal of Innovation Management (IJIM) Volume: 12. Issue: 3 pp. 255-273. DOI: 10.1142/S1363919608001996.

Buur, J. and Larsen, H. (2010) The quality of conversations in participatory innovation in *CoDesign*: International Journal of CoCreation in Design and the Arts, 6:3, 121-138, Taylor & Francis.

Buur and Sproedt (2010) Managing or Relating? A Case of Games in User-Driven Innovation. InnovationSocial CapitalGamesComplex Responsive Processes.

Buur, J. and Sproedt, H. (2010) Proceedings of the 11th International CINet Conference, Zurich, September 2010.

Bruntland, G. H. (1987) 'Our Common Future. Report of the World Commission on Environment and Development' UN report.

Bødker S, Ehn P, Sjögren D. and Sundblad, Y. (2000) Co-operative Design – perspectives on 20 years with 'the Scandinavian IT Design Model, report CID-104 (Centre for User Oriented IT Design) KTH, Royal Institute of Technology, Stochholm, Sweden, Keynote presentation at NordiCHI 2000, Proceedings.

Chen, Yu-Shan (2008) The Driver of Green Innovation and Green Image – Green -Core Competence, in *Journal of Business Ethics*, 81, p. 531-543, Springer.

Habermas, J. (1986) The theory of communicative action, vol. 1 (T. McCarthy, Trans). Cambridge.

Hess, C. and Ostrom, E. (2005) Introduction: An Overview of the Knowledge Commons, in Hess and Ostrom (eds) *Understanding Knowledge As a Commons*, MIT press.

Hipp, C. (2010) Collaborative innovation in services, in Faïz Gallouj (Ed.) *The Handbook of Innovation and Services: A Multi-Disciplinary Perspective,* Edward Elgar pub. p. 318-341.

McElroy, M.W. (2002) Social Innovation Capital. Journal of Intellectual Capital, 3(1), 30-39.

Muller, M. J. (2003). PD - The third space in HCI in The HCI Handbook: Fundamentals, Evolving Technologies and Emerging Applications' in Jacob , J. A. and A. Sears, Eds. *Human Factors and Ergonomics*. L. Erlbaum Associates, Hillsdale, NJ, 1051-1068.

Nielsen J., Yaganeh S. and L.B. Rasmussen (2013) Design of Cooperative Processes of Innovation, Dubai Conference on Entrepreneurship, Innovation and Development, January 30-31,WASET. Nielsen, J., Dirckinck-Holmfeldt, L. and Danielsen, O. (2003) Dialogue Design – with mutual learning as guiding principle in *International Journal of Human-Computer Interaction*, volume 15 (1), pp. 21-40, Lawrence Erlbaum Associates, Inc.

Ortiz, R. R.; Herlau, H.; Rasmussen, L B. (2006) Philosophical Inquiry into Social Informatics – Methods and Uses of Language' In Berleur, J.; Nurminen, M.I; Impagliazzo (eds.): *Social Informatics: An Information Society for All?*, Springer, p.417-430.

Panofsky, E. & Panofsky, G. (1934/1972) Studies in Iconology: Humanistic Themes in the Art of the Renaissance, Icon Editions, 1972.

Polanyi, M. (1968) Logic and Psychology, *American Psychologist*, journal, volume 23 p. 27-43.

Prahalad, C.K. and Krishnan, M.S. (2008) The New Age of Innovation, Driving Co-Created Value Through Global Networks. McGraw Hill.

Salomon, Gavriel (1997) Distributed Cognitions, Psychological and educational considerations, Cambridge University Press.

Schumpeter, J.A. (1912/1934) Theorie der wirtschaftlichen Entwicklung. Leipzig: Dunker und Humbolt. English translation published in 1934 as 'The Theory of Economic Development'. Cambridge, MA: Harvard University Press.

Sproedt, H.(2012) Play, Learn Innovate, Grasping the Social Dynaics of Participatory Innovation, BoD.

Star, S.L. and Griesemer, J.R. (1989) Institutional Ecology, Translations and Boundary Objects: Amateurs and Professionals, in *Berkley's Museum Vertebrate Zoology*, 1907-39. Social Studies of Science, 1989, 19:287, Sage (downloaded 21 Nov. 2011).

Trott, P. (2008) Innovation Management and New Product Development (4ed.) Prentice Hall.